

MADYA (ALCOHOL) AND MADYAJA VIṢĀKTATĀ (Alcoholism and Alcoholic Poisoning)

LEARNING OBJECTIVES

- Madya, mada, madatyaya are three intermingling words.
- Gunas of madya - 10
- Madya (alcohol) is a remedy for madyottha rogas (diseases due to alcoholism)
- Madya has both guna and dosa
- Ojah has ten attributes opposed by ten attributes of madya.
- Mada is cittavismrti (descend in orientation of mind)
- Mada has three stages
 - Prathama mada
 - Madhyama mada
 - Trtiya mada
- Dhvamsaka and vikṣaya are duścikitsya
- Astang lavana is param agni sandipana

Introduction

In this chapter we shall consider three intermingling words :

- madya
- mada
- madātyaya

Madya (alcohol) is a *dravya* (substance) that causes *mada* (intoxication); *madātyaya* (alcoholism) is an illeffect of *madya* (alcohol) abuse.

Madya (alcohol) is described at length in the subject '*Bhaiṣajyakalpanā vijñāna*' under the chapter of '*sandhāna kalpanā*' (fermented products).

References

- Caraka Samhitā Cikitsāsthāna 24
- Suśruta Samhitā Uttarantra 47
- Aṣṭāṅga Hrdayam Nidānasthāna 6
- Aṣṭāṅga Hrdayam Cikitsāsthāna 7

Introduction to *Madya* (alcohol) and *Mada* (intoxication)

Nirukti (etymology) of *madya* (alcohol)

The word *madya* (alcohol) is derived from the root '*mad*' with '*yat*' as a suffix; i.e.

माद्यति जनोऽनेन इति ।

The one that intoxicates is '*madya*'.

Paribhāṣā (definition) of *Madakāri* (agents causing intoxication)

Sage Śārṅgadhara, an authority on Āyurvedic pharmaceuticals and author of book '*Śārṅgadhara Samhitā*', defines *Madakāri* (agents causing intoxication) as :

बुद्धिं लुम्पति यद्द्रव्यं मदकारि तदुच्यते ॥

तमोगुणप्रधानं च यथा मद्यं सुरादिकम् ।

Śa.S.Pū. 4.21-22

i.e. *dravyas* (agents), predominant in *tamo-guṇa*, causing loss of *buddhi* (intellect/ reasoning) are termed as *madakāri* (agents causing intoxication); examples are: *madya* (alcohol), *surā* (beer) etc.

Paryāya (Synonyms) of *madya* (alcohol)

Sage Amara Simha, in his work *Amarakoṣa*, has enumerated following synonyms for *madya* :

- *surā* (सुरा)
- *halipriyā* (हलिप्रिया)
- *hālā* (हाला)
- *parisruta* (परिस्तुत)
- *varuṇātma* (वरुणात्मजा)
- *gandhottamā* (गन्धोत्तमा)
- *prasannā* (प्रसन्ना)
- *irā* (इरा)
- *kādambarī* (कादम्बरी)
- *parisrutā* (परिस्तुता)

- *madirā* (मदिरा)
- *kaśyam* (कश्यम्)

Guṇa (properties) of madya with its merits & demerits
Sage Caraka, in the twenty-fourth chapter of *Cikitsāsthāna*, has enlisted ten *guṇas* (properties) of *madya* (alcohol); he says -

लघूष्णतीक्ष्णसूक्ष्माम्लव्यवाय्याशुगमेव च ।
रूक्षं विकृतिं विशदं मद्यं दशगुणं स्मृतम् ॥

CS.Ci. 24.30

- *laghu* (light)
- *uṣṇa* (hot)
- *tīkṣṇa* (sharp)
- *sūkṣma* (subtle)
- *amla* (sour)
- *vyavāyī* (quick in absorption)
- *āśuga* (quick in action)
- *rūkṣa* (dry)
- *vikāśi* (depressant) and
- *viśada* (non-slimy).

Merits of madya (alcohol)

As per Ācārya Caraka :

रोचनं दीपनं हृद्यं स्वरवर्णप्रसादनम् ।
प्रीणनं बृंहणं बल्यं भयशोकश्रमापहम् ॥
स्वापनं नष्टनिद्राणां मूकानां वाग्विबोधनम् ।
बोधनं चातिनिद्राणां विबद्धानां विबन्धनुत् ॥
वधबन्धपरिक्लेशदुःखानां चाप्यबोधनम् ।
मद्योत्थानां च रोगाणां मद्यमेव प्रबाधकम् ॥

CS.Ci. 24.62-64

Judicious consumption of *madya* (alcohol) is *rocana* (appetizing), *dīpana* (carminative), *hṛdya* (cardio-protective); it does *prasādana* (toning) of *svara* (voice) and *varṇa* (complexion); it is *prīṇana* (enlivening), *bṛṇhana* (nourishing), *balya* (strengthening) and abates *bhaya* (fear), *śoka* (grief) and *śrama* (fatigue); it invokes *svapna* (sleep) in those suffering from *naṣṭanidrā* (insomnia); it causes *vāgvibodhana* (initiation of speech) in *mūka* (dumb/timid); it helps *bodhana* (keeping awake) in those suffering from *atinidrā* (narcolepsy); it rids of *vibaddha* (constipation) in those *vibaddha* (constipated); it causes *abodhana* (insensitivity) towards *vadha* (death), *bandha* (imprisonment), *parikleśa* (misery) and

duḥkha (grief); *madya* (alcohol) is a remedy for *madyottha rogas* (diseases due to alcoholism).

Demerits of madya (alcohol)

As per Ācārya Caraka :

बहुद्रव्यं बहुगुणं बहुकर्म मदात्मकम् ।
गुणैर्दोषैश्च तन्मद्यमुभयं चोपलक्ष्यते ॥

CS.Ci. 24.26

Madya (alcohol) is made from various *dravyas* (drugs), it possesses many *guṇas* (attributes) and performs numerous *karmas* (actions) and it is *madātmaka* (intoxicating in nature); therefore, it has both *guṇa* (attributes) and *doṣa* (ill effects).

प्रेत्य चेह च यच्छ्रेयः श्रेयो मोक्षे च यत् परम् ।
मनःसमाधौ तत् सर्वमायत्तं सर्वदेहिनाम् ॥

मद्येन मनसश्चास्य संक्षोभः क्रियते महान् ।
महामारुतवेगेन तदस्थस्येव शाखिनः ॥

CS.Ci. 24.52-53

Subjects beneficial after death (i.e. in next life), subjects beneficial for present life, subjects supreme for attaining *mokṣa* (salvation) are all based on the *samādhi* (tranquility) of *manaḥ* (mind) of an individual. *Madya* (alcohol) is capable of inducing intense *saṅkṣobha* (agitation) in this *manaḥ* (mind) as a strong *māruta* (wind) agitates the tree on the river bank.

मद्ये मोहो भयं शोकः क्रोधो मृत्युश्च संश्रितः ।
सोन्मादमदमूर्च्छायाः सापस्मारापतानकाः ॥

यत्रैकः स्मृतिविभ्रंशस्तत्र सर्वमसाधुवत् ।
इत्येवं मद्यदोषज्ञा मद्यं गर्हन्ति यत्नतः ॥

CS.Ci. 24.56-57

Moha (illusion), *bhaya* (fear), *śoka* (grief), *krodha* (anger), *mṛtyu* (death), *unmāda* (insanity), *mada* (intoxication), *mūrcchā* (fainting), *apasmāra* (epilepsy) and *apatānaka* (convulsions) are due to consumption of *madya* (alcohol). Manifestation of *smṛtīvi-bhramśa* (memory impairment) is cause for all *asādhu* (anti-social/evil) deeds. Because of this, individuals with *madyadoṣa* (ill effects of alcohol) fervently denounce its consumption.

Contradictory attributes of madya and ojaḥ

Sage Caraka has enlisted ten attributes of *ojaḥ*; these are :

गुरु शीतं मृदु श्लक्ष्णं बहलं मधुरं स्थिरम् ।
प्रसन्नं पिच्छिलं स्निग्धमोजो दशगुणं स्मृतम् ॥

CS.Ci. 24.31

- *guru* (heavy)
- *śīta* (cool)
- *mṛdu* (soft)
- *ślakṣṇa* (smooth)
- *bahala* (dense)
- *madhura* (sweet)
- *sthira* (stable)
- *prasanna* (clear)
- *picchila* (slimy)
- *snigdha* (unctuous)

These ten attributes of *ojaḥ* (ओजः) are contradicted/opposed by ten attributes of *madya*; Sage Caraka quotes :

गुरुत्वं लाघवाच्चैत्यमौष्णादम्लस्वभावतः ।
 माधुर्यं मार्दवं तैक्षण्यात्प्रसादं चाशुभावनत् ॥
 रौक्ष्यात् स्नेहं व्यायित्वात् स्थिरत्वं श्लक्ष्णतामपि ।
 विकासिभावात्पैच्छिल्यं वैशद्यात्सान्द्रतां तथा ॥
 सौक्ष्म्यान्मद्यं निहन्त्येवमोजसः स्वगुणैर्गुणान् ।
 सत्त्वं तदाश्रयं चाशु संक्षोभ्य जनयेन्मदम् ॥

CS.Ci. 24.32-34

Guru (heavy) attribute of *ojaḥ* is neutralized by *laghu* (light) attribute of *madya* (alcohol).

Śīta (cool) attribute of *ojaḥ* is neutralized by *uṣṇa* (hot) attribute of *madya* (alcohol).

Madhura (sweet) attribute of *ojaḥ* is neutralized by *amla* (sour) attribute of *madya* (alcohol).

Mṛdu (soft) attribute of *ojaḥ* is neutralized by *tikṣṇa* (sharp) attribute of *madya* (alcohol).

Prasanna/prasāda (clear) attribute of *ojaḥ* is neutralized by *āsuga* (quick in action) attribute of *madya* (alcohol).

Snigdha (unctuous) attribute of *ojaḥ* is neutralized by *rūkṣa* (dry) attribute of *madya* (alcohol).

Sthira (stable) attribute of *ojaḥ* is neutralized by *vyavāyī* (quick in absorption) attribute of *madya* (alcohol).

Ślakṣṇa (smooth) attribute of *ojaḥ* is neutralized by *vikāśi* (depressant) attribute of *madya* (alcohol).

Picchila (slimy) attribute of *ojaḥ* is neutralized by *viśada* (non-slimy) attribute of *madya* (alcohol).

Bahala/sāndra (dense) attribute of *ojaḥ* is neutralized by *sūkṣma* (subtle) attribute of *madya* (alcohol).

Summary

• <i>Guru</i> (heavy) attribute of <i>ojaḥ</i> →	• neutralized by <i>laghu</i> (light) attribute of <i>madya</i> (alcohol)
• <i>Śīta</i> (cool) attribute of <i>ojaḥ</i> →	• neutralized by <i>uṣṇa</i> (hot) attribute of <i>madya</i> (alcohol)
• <i>Madhura</i> (sweet) attribute of <i>ojaḥ</i> →	• neutralized by <i>amla</i> (sour) attribute of <i>madya</i> (alcohol)
• <i>Mṛdu</i> (soft) attribute of <i>ojaḥ</i> →	• neutralized by <i>tikṣṇa</i> (sharp) attribute of <i>madya</i> (alcohol)
• <i>Prasanna/prasāda</i> (clear) attribute of <i>ojaḥ</i> →	• neutralized by <i>āsuga</i> (quick in action) attribute of <i>madya</i> (alcohol)
• <i>Snigdha</i> (unctuous) attribute of <i>ojaḥ</i> →	• neutralized by <i>rūkṣa</i> (dry) attribute of <i>madya</i> (alcohol)
• <i>Sthira</i> (stable) attribute of <i>ojaḥ</i> →	• neutralized by <i>vyavāyī</i> (quick in absorption) attribute of <i>madya</i> (alcohol)
• <i>Ślakṣṇa</i> (smooth) attribute of <i>ojaḥ</i> →	• neutralized by <i>vikāśi</i> (depressant) attribute of <i>madya</i> (alcohol)
• <i>Picchila</i> (slimy) attribute of <i>ojaḥ</i> →	• neutralized by <i>viśada</i> (non-slimy) attribute of <i>madya</i> (alcohol)
• <i>Bahala/sāndra</i> (dense) attribute of <i>ojaḥ</i> →	• neutralized by <i>sūkṣma</i> (subtle) attribute of <i>madya</i> (alcohol)

Similarities between *viṣa* (poison) and *madya* (alcohol)

As per Ācārya Caraka :

विषस्य ये गुणा दृष्टाः सन्निपातप्रकोपणाः ।
 त एव मद्ये दृश्यन्ते विषे तु बलवत्तराः ॥
 हन्त्याशु हि विषं किञ्चित् किञ्चिद्रोगाय कल्पते ।
 यथा विषं तथैवान्त्यो ज्ञेयो मद्यकृतो मदः ॥

Guṇa (attributes) of viṣa (poison) which cause *prakopa* (aggravation) of *sannipāta* (*tridoṣa*) are also seen in the *madya* (alcohol), the lone difference being, in *viṣa* (poison), these attributes are *balanattara* (more potent). *Viṣa* (poison) at times, causes demise, and at times, causes *roga* (disease) in the afflicted individual. So is the case with *mada* (intoxication) causing *madya* (alcohol).

Mada (intoxication)

Mada (intoxication) is an incoherent state of mind under the influence of *mada* (intoxication) causing agents termed as '*madakāri*'. Citing its features, Sage *Ādhamalla* quotes :

चित्तविस्मृति लक्षणो मदः ।

Mada (intoxication) is *cittavismṛti* (descend in orientation of mind).

Samprāpti (pathogenesis) of Mada (intoxication)

As per Sage *Caraka* :

दुर्बलं चेतसः स्थानं यदा वायुः प्रपद्यते ।
मनो विक्षोभयञ्जन्तोः संज्ञां संमोहयेत्तदा ॥
वितमेवं कफश्चैवं मनो विक्षोभयन्नुणाम् ।
संज्ञां नयत्याकुलतां विशेषश्चात्र वक्ष्यते ॥

CS.Sū. 24.28-29

Aggravated *vāyu* (*vāta*) assaults the *chetasaḥ sthāna* (abode of mind) which has become *durbala* (feeble/weak) and causes *vikṣobha* (irritation) of the *manah* (mind); this results in *sañjñā sammoha* (loss of consciousness/ stupor); so is the case with aggravated *pitta* and *kapha doṣas*.

Features of Mada (Intoxication)

As per *Ācārya Caraka* :

हृदे मद्यगुणाविष्टे हर्षस्तर्षो रतिः सुखम् ।
विकाराश्च यथासत्त्वं चित्रा राजसतामसाः ॥
कायने मोहनिदान्ता मद्यस्यातिनिषेवणात् ।
स मद्यविभ्रमो नाम्ना 'मद' इत्यभिधीयते ॥

CS.Ci. 24.39-40

The *hrdaya* (heart) is afflicted by undue drinking of *madya* (alcohol); on account of its *guṇas* (attributes) *madya* causes *harṣa* (elation), *tarṣa* (craving), *ratih* (enriched libido), *sukha* (pleasure) and varieties of *sattva vikāras* (psychic disorders) of *rājasa* (dynamic) and *tāmasa* (sluggish) nature; depending upon the mental attitude of the

individual, it climaxes in *moha-nidrā* (coma/ syncope). This *vibhrama* (psychic travesty) caused by *madya* (alcohol) is termed as *mada* (intoxication).

Classification of Mada (intoxication)

As per *Ācārya Caraka* :

पीयमानस्य मद्यस्य विज्ञातव्यास्त्रयो मदाः ।

प्रथमो मध्यमोऽन्यश्च लक्षणीस्तान् प्रचक्ष्महे ॥

CS.Ci. 24.41

Intake of *madya* (alcohol), results in three stages of intoxication; these are

- *prathama mada* (initial or first stage of intoxication)
- *madhyama mada* or *dvitiya mada* (middle or second stage of intoxication)
- *ṭṛtīya mada* or *uttama mada* or *antya mada* (last or third stage of intoxication).

1. Features of prathama mada

As per *Ācārya Caraka* :

प्रहर्षणः प्रीतिकरः पानान्गुणदर्शकः ।
वाद्यगीतप्रहासानां कथानां च प्रवर्तकः ॥
न च बुद्धिस्मृतिहरो विषयेषु न चाक्षमः ।
सुखनिदाप्रबोधश्च प्रथमः सुखदो मदः ॥

CS.Ci. 24.42-43

The *prathama mada* (initial or first stage of intoxication) is characterized by *praharṣaṇa* (elation), *prīti* (craving), appreciation of *guṇas* (attributes) of *pāna* (drinks) and *anna* (food), *vādyā* (music), *gīta* (songs), *prahāsa* (humour) and *kathā* (stories). It doesn't impair *buddhi* (intellect) and *smṛti* (memory) and doesn't diminish ability to perceive *viśayas* (sensory subjects); it results in *sukha* (peaceful) *nidrā* (sleep) and *prabodha* (arousal); this stage of *mada* is *sukhada* (conducive to happiness).

2. Features of madhyama mada or dvitiya mada

As per *Ācārya Caraka* :

मुहुः स्मृतिर्मुहुर्मोहो (५) व्यक्ता सज्जति वाङ्मुहुः ।
युक्तायुक्तप्रलापश्च प्रचलायनमेव च ॥
स्थानपानान्सांकथ्ययोजना सविपर्यया ।
लिङ्गान्येतानि जानीयादाविष्टे मध्यमे मदे ॥

CS.Ci. 24.44-45

Madhyama mada or *dvitīya mada* (middle or second stage of intoxication) is characterized by frequent fluctuation in *smṛti* (memory) and *moha* (stupor); his *vāk* (voice) becomes *avyakta* (inarticulate) and confused and there is *yukta pralāpa* (coherent speech) and *ayukta pralāpa* (incoherent speech) simultaneously; he trembles; his *sthāna* (stance), *pāna* (drinking), *anna* (eating) and *kathana* (speech) become *viparyaya* (altered). These are the *liṅga* (features) of *Madhyama mada* or *dvitīya mada* (middle or second stage of intoxication).

3. Features of *trīya mada* or *uttama mada* or *antya mada*

As per *Ācārya Caraka* :

तृतीयं तु मदं प्राप्य भग्नदार्विव निष्क्रियः ।
मदमोहावृतमना जीवन्नपि मृतैः समः ॥
रमणीयान् स विषयान् वेत्ति न सुहृज्जनम् ।
यदर्थं पीयते मद्यं रतिं तां च न विन्दति ॥
कार्याकार्यं सुखं दुःखं लोके यच्च हिताहितम् ।
यदवस्थो न जानाति कोऽवस्थां तां व्रजेद्बुधः ॥
स दूष्यः सर्वभूतानां निन्द्याश्चाग्राह्य एव च ।
व्यसनित्वादुदकं च स दुःखं व्याधिमश्नुते ॥

CS.Ci. 24.48-51

In the *trīya mada* or *uttama mada* or *antya mada* (last or third stage of intoxication), the person becomes *niškriya* (slothful) like a *bhagna-dāru* (wrecked tree) with his *mana* (mind) distressed with *mada* (intoxication) and *moha* (stupor); though alive, he resembles the dead; he fails to identify *ramaṇīya viṣaya* (pleasing subjects) and *suhṛt jana* (friends); he is soon deprived of all *rati* (pleasure) for which he had consumed alcohol; in this stage, the person falls short of discriminating *kārya* (rightful action), *sukha* (happiness) and *hita* (apt articles) from *akārya* (unrightful action), *duḥkha* (misery) and *ahita* (inapt articles) respectively. Ergo, no astute will ever like to place himself in such an *avasthā* (stage/ situation); he becomes *nindya* (condemned) and *agrāhya* (censured/ unacceptable) by all. As a natural consequence of this indulgence, he suffers from *duḥkha* (misery) and *vyādhi* (diseases) at all times.

Madātyaya (मदात्यय)

Synonyms of *Madātyaya*

- *Pānātyaya* (पानात्यय)

S. 510. I.P.C.: Misconduct in public by a drunken individual; punishable with imprisonment up to twenty four hours

Hetu (etiology) of *Madātyaya*

Sage *Mādhava*, author of *Mādhava Nidāna* - a celebrated work on pathological aspects of diseases, has briefly explained the *hetu* (etiology) of *madātyaya*; he quotes -

ये विषस्य गुणाः प्रोक्तास्तेऽपि मद्ये प्रतिष्ठिताः ।
तेन मिथ्योपयुक्तेन भवत्युग्रो मदात्ययः ॥ MN. 18.1

Nidāna-samprāpti (etio-pathogenesis) of *vātaja madātyaya*

As per *Ācārya Caraka* :

स्त्रीशोकभयभाराध्वकर्मभिर्योऽतिकर्षितः ।
रूक्षाल्पप्रमिताशी च यः पिबत्यतिमात्रयाः ॥
रूक्षं परिणतं मद्यं निशि निद्रां विहत्य च ।
करोति तस्य तच्छीघ्रं वातप्रायं मदात्ययम् ॥

CS.Ci. 24.89-90

Indulgence in *strī* (sex), *śoka* (grief), *bhaya* (phobia), *bhāra* (carrying of heavy loads), *adhva* (trekking) and similar actions; eating *rukṣa* (dry/fat free) and *alpa* (miniscule) quantity of food; drinking *rukṣa* (dry/dehydrating) and over fermented *madya* (alcohol) - these result in *atikārśya* (marked emaciation/ scrawniness) of a person; this leads to impaired *nidrā* (sleep) and *vātaja madātyaya* (alcoholism due to *vāta*) instantaneously.

Nidāna-samprāpti (etio-pathogenesis) of *pittaja madātyaya*

As per *Ācārya Caraka* :

तीक्ष्णोष्णं मद्यमम्लं च योऽतिमात्रं निषेवते ।
अम्लोष्णतीक्ष्णभोजी च क्रोधनोऽन्यातपप्रियः ॥
तस्योपजायते पित्ताद्विशेषेण मदात्ययः ।
स तु वातोल्बणस्याशु प्रशमं याति हन्ति वा ॥

CS.Ci. 24.92-93

Excessive indulgence in *madya* (alcohol) which is *tikṣṇa* (sharp), *uṣṇa* (hot) and *amla* (sour) by a person who resorts to *amla* (sour), *uṣṇa* (hot) and *tikṣṇa* (sharp) culinaries; who is *krodhī* (short tempered) & has a liking for *agni* (fire) and *ātapa* (sunlight) - these result in *pittaja madātyaya*.

Association of pitta-ja madātyaya with dominant kapha may result either in its pacification or death (of the person).

Madāna-samprāpti (etio-pathogenesis) of kaphaja madātyaya

As per Ācārya Caraka :

तरुणं मधुरप्रायं गौडं पैष्टिकमेव वा ।
मधुरस्निग्धगुर्वाशी यः पिबत्यतिमात्रया ॥
अल्प्यामदिवास्वप्नशय्यासनसुखे रतः ।
मदात्ययं कफप्रायं स शीघ्रमधिगच्छति ॥

CS.Ci. 24.95-96

Excessive indulgence in madya (alcohol) which is taruṇa (freshly made), madhura-prāya (sweetish in taste), made of guḍa (jaggery) or piṣṭa (flour of cereals) by a person habituated to madhura (sweet), snigdha (fat rich) and guru (heavy) culinarities; who abstains from vyāyāma (exercise) and resorts to divāsvapna (day sleeping), sukha (comforts) of śayyā (bed) and āsana (seats) - suffers from kaphaja madātyaya.

General symptoms of madātyaya

As per Sage Caraka :

शरीरदुःखं बलवत् संमोहो हृदयव्यथा ।
अरुचिः प्रतता तृष्णा ज्वरः शीतोष्णलक्षणः ॥
शिरःपार्श्वास्थिसन्धीनां विद्युत्तुल्या च वेदना ।
जायतेऽतिबला जृम्भा स्फुरणं वेपनं श्रमः ॥
ओविबन्धः कासश्च हिकका श्वासः प्रजागरः ।
शरीरकम्पः कर्णाक्षिमुखरोगस्त्रिकग्रहः ॥
छर्द्यतीसारहृल्लासा वातपित्तकफात्मकाः ।
भ्रमः प्रलापो रूपाणामसतां चैव दर्शनम् ॥
तृणभस्मलतापर्णपांशुभिश्चावपूरणम् ।
प्रधर्षणं विहंगैश्च भ्रान्तचेताः स मन्यते ॥
व्याकुलानामशस्तानां स्वप्नानां दर्शनानि च ।
मदात्ययस्य रूपाणि सर्वाण्येतानि लक्षयेत् ॥
सर्वं मदात्ययं विद्यात् त्रिदोषम् । CS.Ci. 24.101-107

General symptoms of madātyaya are :

- balavat duḥkha (excruciating pain) in śarīra (body)
- sammoha (stupor/ fainting)
- hṛdaya-vyathā (cardiac distress)
- aruci (anorexia)
- pratata trṣṇā (incessant thirst)

- śītoṣṇa-lakṣaṇa-jvara (fever characterized by cold and warmth)
- vidyutatulya vedanā (lightening pain) in śiraḥ (head), pārśva (flanks), asthi (bones) and sandhi (joints)
- distressing jṛmbhā (yawning), sphuraṇa (throbbing), vepana (twitching), śrama (fatigue), urovibandha (tightening of chest), kāsa (cough), hikkā (hiccough), śvāsa (dyspnoea/ asthma), prajāgara (insomnia) and śarīra-kampa (tremors)
- roga (ailments) afflicting the karṇa (ears), akṣi (eyes) and mukha (oral cavity)
- trikagraha (stiffness of sacro-iliac joint)
- chardi (vomiting), atisāra (diarrhoea) and hṛllāsa (nausea) due to vāta-pitta-kapha
- bhrama (giddiness)
- pralāpa (delirium)
- darśana (visualization) of asat rūpa (non-existent objects) {i.e. visual hallucination}
- sensation of body being wrapped by tṛṇa (hay), bhasma (ash), latā (climbers), parṇa (leaves) and pāmśu (dust/ sand)
- sensation of being dashed by vihaṅga (birds) due to bhrānta-cetaḥ (bewildered mind)
- svapna (dreaming) of vyākula (frightful) and aśasta (non-existent) objects.

Features of various kinds of madātyaya

1. Lakṣaṇa (features) of vātaja madātyaya

As per Ācārya Caraka :

हिककाश्वासशिरःकम्पपार्श्वशूलप्रजागरैः ।

विद्याद्बहुप्रलापस्य वातप्रायं मदात्ययम् ॥ CS.Ci. 24.91

Vātaja madātyaya (alcoholism due to vāta) is manifested by - hikkā (hiccough), śvāsa (dyspnoea/ asthma), śiraḥkampa (trembling of head), pārśvaśūla (pain in flanks), prajāgara (insomnia) and bahu-pralāpa (marked delirium).

2. Lakṣaṇa (features) of pittaja madātyaya

As per Ācārya Caraka :

स तु वातोल्बणस्याशु प्रशमं याति हन्ति वा ॥

तृष्णादाहज्वरस्वेदमूर्च्छतीसारविभ्रमैः ।

विद्याद्भरितवर्णतस्य पित्तप्रायं मदात्ययम् ॥

CS.Ci. 24.93-94

Pittaja madātyaya is manifested by - *trṣṇā* (morbid thirst), *dāha* (burning sensation), *jvara* (fever), *sveda* (sweating), *mūrcchā* (fainting), *vibhrama* (giddiness) and *harita-varṇa* (greenish discolouration) of the body.

3. Lakṣaṇa (features) of *kaphaja madātyaya*

As per Ācārya Caraka :

छर्द्यरोचकहृल्लासतन्द्रास्तैमित्यगौरवैः ।

विद्याच्छीतपरीतस्य कफप्रायं मदात्ययम् ॥ CS.Ci. 24.97

Kaphaja madātyaya is manifested by - *chardi* (vomiting), *arocaka* (anorexia), *hṛllāsa* (nausea), *tandrā* (fatigue), *staimitya* (timidity), *gaurava* (heaviness) and *śīta* (cold/ chills).

Table 12.1 Lakṣaṇas (features) of *vātaja, pittaja* and *kaphaja madātyayas*

<i>Vātaja madātyaya</i>	<i>Pittaja madātyaya</i>	<i>Kaphaja madātyaya</i>
<ul style="list-style-type: none"> • <i>hikkā</i> (hiccough) • <i>śvāsa</i> (dyspnoea/ asthma) • <i>śiraḥkampa</i> (trembling of head) • <i>pārśvaśūla</i> (pain in flanks) • <i>prajāgara</i> (insomnia) • <i>bahu-pralāpa</i> (marked delirium) 	<ul style="list-style-type: none"> • <i>trṣṇā</i> (morbid thirst) • <i>dāha</i> (burning sensation) • <i>jvara</i> (fever) • <i>sveda</i> (sweating) • <i>mūrcchā</i> (fainting) • <i>vibhrama</i> (giddiness) • <i>harita varṇa</i> (greenish discolouration) of the body 	<ul style="list-style-type: none"> • <i>chardi</i> (vomiting) • <i>arocaka</i> (anorexia) • <i>hṛllāsa</i> (nausea) • <i>tandrā</i> (fatigue) • <i>staimitya</i> (timidity) • <i>gaurava</i> (heaviness) • <i>śīta</i> (cold/ chills)

Dhvaṁsaka and *Vikṣaya*

Origin/initiation of *Dhvaṁsaka* and *Vikṣaya*

As per Ācārya Caraka :

विच्छिन्नमद्यः सहसा योऽतिमद्यं निषेवते ।

ध्वंसको विक्षयश्चैव रोगस्तस्योपजायते ॥

व्याध्युपक्षीणदेहस्य दुश्चिकित्स्यतमौ हि तौ ।

CS.Ci. 24. 199-200

Abrupt gulping of *madya* (alcohol) in excess after receding/ discontinuing it (for a period) results in two *rogas* (pathologies) viz. (1) *dhvaṁsaka* and (2) *vikṣaya*; these are *duścikitsya*

(difficult to cure) because *deha* (body) is already *kṣīṇa* (depleted/ scrawny) by previous drinking habit.

Signs and symptoms of *Dhvaṁsaka*

As per Ācārya Caraka :

श्लेष्मप्रसेकः कण्ठास्यशोषः शब्दासहिष्णुता ।

तन्द्रानिद्रातियोगश्च ज्ञेयं ध्वंसकलक्षणम् ॥ CS.Ci. 24.201

Dhvaṁsaka is manifested by *śleṣmapraseka* (profuse salivation), *kaṅṭhaśoṣa* (dryness of throat), *āśyaśoṣa* (dryness of mouth), *śabdāsahiṣṇutā* (intolerance to sound) and *atiyoga* (excess) of *tandrā* (lassitude) and *nidrā* (sleep).

Signs and symptoms of *Vikṣaya*

As per Ācārya Caraka :

हृत्कण्ठरोगः संमोहश्छर्दिर्द्विरंगरुजा ज्वरः ।

तृष्णा कासः शिरःशूलमेतद्विक्षयलक्षणम् ॥

CS.Ci. 24.202

Vikṣaya is manifested by *hṛdroga* (cardiac ailment), *kaṅṭharoga* (throat disorders), *sammoha* (stupor/ fainting), *chardi* (vomiting), *aṅgarujā* (malaise), *jvara* (fever), *trṣṇā* (morbid thirst), *kāsa* (cough) and *śiraḥśūla* (headache).

Treatment of *madātyaya*

Principles of treatment of *madātyaya*

As per Ācārya Caraka :

अधिकं तु यम् ।

दोषं मदात्यये पश्येत् तस्यादौ प्रतिकारयेत् ॥

कफस्थानानुपूर्व्या च क्रिया कार्या मदात्यये ।

पित्तमारुतपर्यन्तः प्रायेण हि मदात्ययः ॥

CS.Ci. 24.107-108

All kinds of *madātyaya* are due to *tridoṣas*; initially the *pratikāra* (treatment) of predominant *doṣa* should be done. If all the *doṣas* are equally aggravated, then the *kriyā* (treatment) should generally be initiated from the *sthāna* (abode) of *kapha*, followed by that of *pitta* and finally that of *māruta* (*vāyu*).

मिथ्यातिहीनपीतेन यो व्याधिरुपजायते ।

समपीतेन तेनैव स मद्येनोपशाम्यति ॥

जीर्णाममद्यदोषाय मद्यमेव प्रदापयेत् ।

प्रकांक्षालाघवे जाते यद्यदस्मै हितं भवेत् ॥

सीवर्धलानुसंधिन् शीतं सविद्धीन्धवम् ।
मातुलुंगार्द्रकोपेतं जलयुक्तं प्रमाणयित् ॥

CS.Ci. 24.109-111

mithyā atipāna hinapāna vyādhi sama madya
Justification for prescribing madya in madātyaya

As per Ācārya Caraka :

तीक्ष्णोनातिमात्रेण पीतेनाम्लविदाहिना ।
मद्येनान्नसोत्कलेदो विदग्धः क्षारतां गतः ॥
अन्तर्दाहं ज्वरं तृष्णां प्रमोहं विभ्रमं मदम् ।
जनयत्याशु तच्छान्त्यै मद्यमेव प्रदापयेत् ॥
क्षारो हि याति माधुर्यं शीघ्रमम्लोपसंहितः ।

CS.Ci. 24.112-114

Treatment of vātaja madātyaya

As per Ācārya Caraka :

मद्योत्किल्ष्टेन दोषेण रुद्धः स्रोतःसु मारुतः ।
करोति वेदनां तीव्रां शिरस्यस्थिषु सन्धिषु ॥
दोषविष्यन्दनार्थं हि तस्मै मद्यं विशेषतः ।
व्यवायितीक्ष्णोष्णतया देयमम्ले (न्ये) पु सत्वपि ॥
स्रोतोविष्यन्धनुमद्यं मारुतस्यानुलोमनम् ।
रोचनं दीपनं चाग्नेरभ्यासात् सात्त्वमेव च ॥
रुजः स्रोतःस्वरुद्धेषु मारुते चानुलोमिते ।
निवर्तन्ते विकाराश्च शाम्यन्त्यस्य मदोदयाः ॥

CS.Ci. 24.117-120

The madyotkilṣṭa doṣas (doṣas provoked by alcohol) obstruct the movement of māruta (vāta) in srotaḥ (bodily channels) and thereby result in tīvra vedanā (excruciating pain) in the śiraḥ (head region), asthi (bones) and sandhi (joints). Madya (alcohol) is selected over other amla (sour) substances for, specifically, viṣyandana (liquefaction) of doṣas due to its vyavāyi (quick in absorption), tikṣṇa (sharp) and uṣṇa (hot) attributes. Madya rids off the srotovibandha (obstruction in channels), helps anulomana (downward movement) of māruta (vāyu); it is rocana (appetizing), agnidīpana (carminative) and by abhyāsa (habituation) it becomes sātmya (apt). Removal of srotaḥrodha (obstruction to channels) and anulomana (downward movement) of māruta (vāyu) abates the rujah (pain) and vikāra (diseases) caused by madya (alcohol).

बीजपूरकयुक्ताम्लकोलदादिमर्षयुतम् ।
यवाभीहपुषाजाजीर्णगयेरावचूर्णितम् ॥
सन्नेहेः शक्तुभिर्युक्तमवदशीर्विरोचितम् ।
दद्यात् सलवणं मद्यं पैष्टिकं यातशान्तये ॥

CS.Ci. 24.121-122

For alleviation of vāta - piṣṭika madya (alcohol made from flour of cereals) triturated or mixed with bijapūraka, vṛkṣāmla, kola and dādima and sprinkled with cūrṇa (powder) of yavāni, hapuṣā, ajāḥi and śrīṅga-vera should be taken along with lavaṇa (salt).

With this madya (alcohol), the diet should be virocita avadamśa (tasty snacks) prepared of saktu (roasted flour of cereals) by adding sneha (ghṛta).

रागपाड्यसंयोगैर्विद्यैर्भक्तरोचनैः ।
पिशितैः शाकपिष्टान्नैर्यवगोधूमशालिभिः ॥
अभ्यंगोत्सादनैः स्नानैरुष्णीः प्रावरणीर्घनैः ।
घनैरगुरुपंकैश्च धूपैश्चागुरुर्घनैः ॥
नारीणां यौवनोष्णानां निर्दयैरुपगृह्णैः ।
श्रोण्यूरुकुचभरिश्च संरोधोष्णमुखावहैः ॥
शयनाच्छ्रदनैरुष्णीरुष्णीश्चान्तर्गहैः मुखैः ।
मारुतप्रबलः शीघ्रं प्रशाम्यति मदात्ययः ॥

CS.Ci. 24.132-135

Rapid praśamana (pacification) of māruta prabala madātyaya (i.e. vātaja madātyaya) is achieved by-

- consuming piṣita (meat), śāka (leafy vegetables), piṣṭānna (bakery items), yava (barley), godhūma (wheat) and śāli (rice) mixed with various bhak-tarocana (appetizing) rāga (prepared using juices of vṛkṣāmla, paruṣaka and jambu with adequate quantity of mustard, sugar and salt added to it) and śāḍava (prepared using sweet or citrus fruit juices mixed with small quantity of salt).
- abhyaṅga (massage), utsādana (anointing) and snāna (bathing) with uṣṇa (hot) ingredients
- ghana prāvarana (thick blankets)
- application of ghana paṅka (thick paste) of aguru
- dhūpana (fumigation) with aguru
- passionate embracing of nārī (women) having uṣṇatā (warmth) of yauvana (youth);

and also enjoyment of *uṣṇatā* (warmth) of their *śronī* (waist), *ūru* (thighs) and *kucabhāra* (hefty bosoms)

- usage of *uṣṇa* (warm) *śayana* (beds) and *ācchādana* (bedsheets)
- dwelling in *sukha* (comfort) of *uṣṇa antargṛha* (warm enclosed room).

Treatment of *pittaja madātyaya*

As per Ācārya Caraka :

भव्यखर्जूरमृद्धीकापरुषकरसैर्युतम् ।
सदाडिमरसं शीतं सक्तुभिश्चावचूर्णितम् ॥
सशर्करं शार्करं वा माद्वीकमथवाऽपरम् ।
दद्याद्बहुदकं काले पातुं पित्तमदात्यये ॥

CS.Ci. 24.136-137

Pittaja madātyaya is treated by gulping, in appropriate *kāla* (schedule), *śārkara madya* (alcohol made from sugar) or *mārdvīka madya* (alcohol made from grapes) added with *śārkara* (sugar) along with juice of *bhavya*, *kharjūra*, *mārdvīka* and *paraṣaka* or along with juice of *dādimā* (pomegranate) made *śīta* (cold) and sprinkled with *saktu* (roasted flour of cereals) and after diluting with excess of *udaka* (water).

आमाशयस्थमुत्क्लिष्टं कफपित्तं मदात्यये ।

विज्ञाय बहुदोषस्य दह्यमानस्य तृष्यतः ॥

मद्यं द्राक्षारसं तोयं दत्त्वा तर्पणमेव वा ।

निःशेषं वामयेच्छ्रीघ्रमेवं रोगाद्विमुच्यते ॥

CS.Ci. 24.141-142

Presence of *utkliṣṭa* (provoked) *kapha* and *pitta* in *āmāśaya* (stomach) or presence of excess of *doṣas* and if the patient is afflicted with *dāha* (burning sensation) and *trṣṇā* (thirst) - then he should be prescribed *madya* (alcohol), *drākṣārasa* (juice of grapes), *toya* (water) or *tarpaṇa* (refreshing liquid) followed by prompt *vamana* (emesis) to eliminate *doṣas* without any residue. This pacifies *pittaja madātyaya*.

शीतलान्यन्नपानानि शीतशय्यासनानि च ।

शीतवातजलस्पर्शाः शीतान्युपवनानि च ॥

क्षौमपद्मोत्पलानां च मणीनां मौक्तिकस्य च ।

चन्दनोदकशीतानां स्पर्शाश्चन्द्रांशुशीतलाः ॥

हेमराजतकास्यानां पात्राणां शीतवारिभिः ।

पूर्णाणां हिमपूर्णाणां दृतीनां पवनाहताः ॥

संस्पर्शाश्चन्दनार्द्राणां नारीणां च समारुताः ।
चन्दनानां च मुख्यानां शस्ताः पित्तमदात्यये ॥
शीतवीर्यं यदन्यच्च तत् सर्वं विनियोजयेत् ।

CS.Ci. 24.152-154

For *pittaja madātyaya* following *śīta* (cooling) measures are useful :

- *śītala annapāna* (cooling food and drinks)
- *śīta* (cool) *śayyā* (beds) and *āsana* (seats)
- *sparśa* (touch) of *śīta* (cold) *vāta* (wind) and *jala* (water)
- trotting in *śīta upavana* (cool parks)
- clothing of *kṣauma* (silk), *padma* (lotus), *utpala* (water lilly), *maṇi* (gems), *mauktika* (pearl)
- application of *śīta candanodaka* (cooled water mixed with sandalwood)
- enjoying *śītala candrāmśu* (cool rays of moon)
- touching *pātra* (vessels) made of *hema* (gold), *rajata* (silver) and *kāmsya* (copper) filled with *śīta vāri* (cold water) etc.

Priyaṅgvādi lepa

फलिनीसेव्यलोध्राम्बुहेमपत्रं कुटन्नटम् ॥

कालीयकरसोपेतं दाहे शस्तं प्रलेपनम् ।

CS.Ci. 24.159-160

Pralepana (anointment) of paste of *phalini*, *sevya*, *lodhra*, *ambu*, *hema* (*nāgakeśara*), *patra* and *kuṭannaṭa* triturated with juice of *kālīyaka* is beneficial for pacifying *dāha* (burning sensation).

Treatment of *kaphaja madātyaya*

As per Ācārya Caraka :

उल्लेखनोपवासाभ्यां जयेत् कफमदात्ययम् ॥

तृष्यते सलिलं चास्मै दद्याद्दहीबेरसाधितम् ।

बलया पृश्निपर्ण्या वा कण्टकार्याऽथवा शृतम् ॥

सनागराभिः सर्वाभिर्जलं वा शृतशीतलम् ।

दुःस्पर्शेन समुस्तेन मुस्तपर्पटकेन वा ॥

जलं मुस्तैः शृतं वाऽपि दद्याद्दोषविपाचनम् ।

एतदेव च पानीयं सर्वत्रापि मदात्यये ॥

निरत्ययं पीयमानं पिपासाज्वरनाशनम् ।

CS.Ci. 24.164-165

Kaphaja madātyaya is treated by *ullekhana* (emesis) therapy) and *upavāsa* (fasting therapy).

If the patient suffers from *trṣṇā* (thirst), then he should be made to gulp *salila* (decoction) of *brāhṛa*, *balā*, *prṣṇiparnī* or *kaṇṭakārī*. He may also be given the *śṛtaśītala jala* (boiled and cooled decoction) of all above quoted drugs along with *nāgara*.

The patient should be given *jala* (water) *śṛta* (boiled) with either *duḥsparśā* and *musta* or *musta* and *parpatāka* or *musta* alone for the *doṣa-pācana* (digestion of *doṣas*).

These mentioned drinks can be safely given in all kinds of *madātyaya* (alcoholism) for pacifying *trṣṇā* (thirst) and *jvara* (fever).

रूक्षोष्णान्नपानेन स्नानेनाशिशिरेण च ।
व्यायामलंघनाभ्यां च युक्त्या जागरणेन च ॥
कालयुक्तेन रूक्षेण स्नानेनोद्वर्तनेन च ।
प्राणवर्णकराणां च प्रघर्षाणां च सेवया ॥
सेवया वसनानां च गुरुणामगुरोरपि ।
संकोचोष्वासुखांगीनामंगनानां च सेवया ॥
सुखशिक्षितहस्तानां स्त्रीणां संवाहनेन च ।
मदात्ययः कफप्रायः शीघ्रमेवोपशाम्यति ॥

CS.Ci. 24.185-188

Kaphaja madātyaya achieves prompt *upaśamana* (pacification) by :

- consuming *rukṣa* (dry) and *uṣṇa* (warm) *annapāna* (foods and drinks)
- *snāna* (bathing) with *aśiśira* (hot) water
- *vyāyāma* (exercise)
- *langhana* (fasting)
- *jāgarana* (keeping awake at nights)
- usage of *rukṣa* (dry) articles, in appropriate *kāla* (schedule), for *snana* (bathing) and *udvartana* (anointing)
- *pragharṣaṇa* (rubbing) of body with drugs that promote *prāṇa* (life) and *varṇa* (complexion)
- *guru vasan* (heavy clothing)
- application of *aguru* paste etc.

Aṣṭāṅga lavaṇa

Contents :

सौवर्चलमजाजी च वृक्षाम्लं साम्लवेतसम् ।
त्वग्माम्परिचार्घ्यां शर्कराभागयोजितम् ॥
पुष्पकान्तवामपट्यांगम् । CS.Ci. 24.177-178

▪ <i>Sauvarcala</i>	-	1 part
▪ <i>Ajājī</i>	-	1 part
▪ <i>Vṛkṣāmla</i>	-	1 part
▪ <i>Amlavetasa</i>	-	1 part
▪ <i>Tvak</i>	-	1/2 part
▪ <i>Elā</i>	-	1/2 part
▪ <i>Marica</i>	-	1/2 part
▪ <i>Śarkarā</i>	-	1 part

All the ingredients mixed together is known as '*Aṣṭāṅgalavaṇa*'.

Phalaśruti (benefits)

अग्निसंदीपनं परम् ।

मदात्यये कफप्राये दद्यात् स्रोतोविशोधनम् ॥

एतदेव पुनर्युक्त्या मधुराम्लैर्द्रवीकृतम् ।

गोधूमान्यवानानां मांसानां चातिरोचनम् ॥

CS.Ci. 24. 178-179

'*Aṣṭāṅgalavaṇa*' is *param agni-sandīpana* (excellent promoter of digestive fire) and is indicated in *kaphaja madātyaya* for *sroto-viśodhana* (cleansing of body channels). Being *dravīkṛt* (thinned) with *madhura* (sweet) and *amla* (sour) ingredients, this formulation can be added to the *anna* (culinaries) of *godhūma* (wheat) and *yava* (barley) or of *māmsa* (meat) to make them *atirocana* (delicious).

Other formulations for treatment

of *kaphaja madātyaya*

- *Mṛdvīkā rāga* → CS.Ci. 24.180-181
- *Kāravī rāga* → CS.Ci. 24.182
- *Āmra rāga* → CS.Ci. 24.183-184
- *Āmalakī rāga* → CS.Ci. 24.185-188

Treatment of *sannipāta* *madāt-yaya*

As per Sage Caraka :

यदिदं कर्म निर्दिष्टं पृथग्दोषबलं प्रति ।

सन्निपाते दशविधे तद्विकल्प्यं भिषग्विदा ॥

CS.Ci. 24. 189

The *karmas* (therapeutic measures) quoted for *madātyaya* caused by individual *doṣas* should be carefully amalgamated by the wise *bhiṣak* (physician) for treating ten kinds of *madātyaya* caused by *sannipāta*.

Milk in madātyaya

As per Sage Caraka :

आभिः क्रियाभिः सिद्धाभिः ज्ञमं याति मदात्ययः ।
न चेन्मद्यविधिं मुक्त्वा क्षीरमस्य प्रयोजयेत् ॥

CS.Ci. 24.195

If previously mentioned measures fail, the physician should abort them and use *kṣīra* (milk) for its treatment.

संघनेः पाचनेदोषशोघनेः ज्ञमनैरपि ।

विषहन्त्य कफे क्षीणे जाने दीर्घत्वलाघवे ॥

तस्य मद्यविदग्धस्य वातपित्ताधिकस्य च ।

श्रीष्मोपतप्तस्य तरोर्वशा वर्षं तथा पयः ॥

CS.Ci. 24.196-197

Refraining from *madya* (alcohol) and resorting to *lāghana* (fasting therapy), *pācana* (digestives), *doṣa-śodhana* (elimination of *doṣas* by *vamana* etc.) and *śamana* (pacification measures) cause depletion of *kapha* and thus causing *daurbalya* (weakness/ frailness) and *lāghava* (lightness).

For this kind of patient who is *madya-vidagdha* (afflicted by alcohol) and has aggravated *vāta-pitta*, *payaḥ* (milk) is apt like the *varṣā* (rain) is for a *taru* (tree) tortured by *grīṣma* (summer / heat).

पयसाऽभिहृते रोगे बले जाते निवर्तयेत् ।

क्षीरप्रयोगं मद्यं च क्रमेणाल्पाल्पमाचरेत् ॥

CS.Ci. 24.198

After abatement of *roga* (disease) by *payaḥ* (milk) and gaining of *bala* (strength) by the patient, the *kṣīra* (milk) should gradually be tapered and *madya* (alcohol) gradually accustomed.

Treatment of *dhvaṁsaka* and *vikṣaya*

As per Sage Caraka :

तयोः कर्म तदेवेष्टं वातिके यन्मदात्यये ।

तौ हि प्रक्षीणदेहस्य जायेते दुर्बलस्य वै ॥

बन्धनयः सर्पिषः पानं प्रयोगः क्षीरसर्पिषोः ।

अभ्यंगोद्वर्तनस्नानान्यनपानं च वातनुत् ॥

CS.Ci. 24.203-204

As both these ailments (i.e. *dhvaṁsaka* and *vikṣaya*) appear in those having *prakṣīṇa deha* (emaciated body) and those who are *durbala* (frail/ weak) - their *karma* (treatment) should be similar to that of *vātika madātyaya*.

To abate the *vāta*, *basti* (enema therapy), *sarpiḥpāna* (intake of medicated ghee), *kṣīrasarpi* (milk and ghee), *abhyāṅga* (massage), *udvartana* (unctuous scrubbing), *snāna* (medicated bathing) and *vāta pacifying annapāna* (culinaries) should be resorted to.

Formulations from *Bhaiṣajya Ratnāvalī*

Table No. 12.2

Formulation	Dosage	Anupāna
1. <i>Śrikhaṇḍāsava</i>	12 - 25 ml BID	• water
2. <i>Punarnavādi ghṛtam</i>	5 - 10 gm. BID	• warm cow's milk
3. <i>Mahākalyāṇa vaṭī</i>	125 mg BID	• sugar, honey or butter
4. <i>Elādi guṭikā</i>	10 gm. BID	• cow's milk or green gram soup
5. <i>Aṣṭāṅga lavaṇa</i>	3 - 4 gm. BID	
6. <i>Phalatrikādyā cūrṇa</i>	3 - 4 gm. BID	• water

Pathyāpathya (Apt and inapt articles)(1) *Pathya* (apt articles) -As per Sage *Govindadāsa Sena* :

संशोधनं संशमनं स्वपनं लंघनं श्रमः ।

संवत्सरसमुत्पन्नाः शालयः षष्टिकैः सह ॥

मुद्गा माषाश्च गोधूमाः सतीना रागषाडवौ ।

एणतित्तिरिलावाजदक्षबर्हिशशामिषम् ॥

वेशवारो विचित्रान्नं हृद्यं मद्यं पयः सिता ।

तण्डुलीयं पटोलञ्च मातुलुगं परूषकम् ॥

खर्जूरं दाडिमं घात्री नारिकेलं च गोस्तनी ।

सर्पिः पुराणं कर्पूरं प्रतीरं शिशिरानिलः ॥

घारागृहं चन्द्रपादा मणयो मित्रसंगमः ।

क्षौमाम्बरं प्रियाश्लेषो गीतं वादित्रमुद्धतम् ।

शीताम्बु चन्दनं स्नानं सेव्यमेतन्मदात्यये ॥

BR. 22.34-3

Following articles apt in *madātyaya*

- *samśodhana* (purification therapy)
- *samśamana* (pacification therapy)
- *madya* (alcohol)
- *payaḥ* (milk)
- *sitā* (sugar)

- *svapna* (sleep)
- *raṅghana* (fasting)
- *śrama* (labour)
- one year old *śali*, *saṣṭhika*, *mudga*, *māṣa*, *godhūma*, *saṭha* etc.
- *rāga* (prepared using juices of *vrkṣāmla*, *paruṣaka* and *jambu* with adequate quantity of mustard, sugar and salt added to it)
- *śaḍava* (prepared using sweet or citrus fruit juices mixed with small quantity of salt)
- *amiṣa* (meat) of *eṇa*, *tilitri*, *lāva*, *āja*, *dakṣa*, *bāṁhi* and *śaśa*
- *veśavāra*
- *vicitra anna* (tasty food articles)
- *hrdya* (cardio-protective food articles)

- *taṇḍuliya*, *paṭola*, *mātuluṅga*, *paruṣaka*, *kharjūra*, *dādima*, *dhātrī*, *nārikela*, *gostani*
- *purāṇa sarpi* (aged ghee)
- *karpūra*
- *pratīra* (banks of river)
- *śīsira anila* (cool breeze)
- *dhārāgrha*
- *candrapāda*
- *maṇi* etc.

Vocabulary related to *madya* and *mada*

Following words are related to *madya* and *mada* -

- *madakṛt*
- *madaghnaḥ*
- *madajananam*
- *madavināśinī*
- *madāpahaḥ*
- *madāvaham*
- *madyavikāranut* etc.

Alcohol & Alcoholism

Features

- The term 'Alcohol' refers to - Ethyl alcohol (C_2H_5OH)
- It is a colourless, transparent, volatile liquid with characteristic spirituous odour and a burning taste.
- It is included under category of 'inebriant cerebral poisons' (i.e. those producing intoxication).
- Alcohol is used as a drink, as a solvent (for resin, fat etc.) and also as an antiseptic.

Approximate percentage of alcohol in various beverages

• Rum	50 - 60%
• Brandy	40 - 45%
• Whisky	40 - 45%
• Gin	40 - 45%
• Port	20%
• Champagne	10 - 15%
• Wine	10 - 15%
• Beer	4 - 8 %

(II) *Apathya* (inapt articles) -

As per Sage *Govindadāsa Sena* :

स्वेदोऽञ्जनं धूमपानं नावनं दन्तघर्षणम् ।

ताम्बूलञ्चेत्यपथ्यं स्यान्मदात्ययविकारिणाम् ॥

BR. 22.39

- *svedana* (fomentation)
- *añjana* (collyrium)
- *dhūmapāna* (medicated smoking)
- *nāvana* (errhines)
- *dantaghraṣaṇa* (brushing of teeth)
- *tāmbūla* (betel leaves)

these are inapt.

Sage *Caraka's* advice

As per Sage *Caraka* :

निवृत्तः सर्वमद्येभ्यो नरो यश्च जितेन्द्रियः ।

शारीरमानसैर्धीमान् विकारैर्न स युज्यते ॥ CS.Ci. 24.206
A *dhimān* (wise person), who is *jitendriya* (self controlled all senses) and who refrains from gulping all kinds of *madya* (alcohol), never suffers from *śārīra* (somatic) and *mānasa* (psychic) *vikāras* (disorders).

- Absolute alcohol ⇒ contains 99.95% alcohol
- Rectified spirit ⇒ contains 90% alcohol
- Denatured ⇒ mixture of alcohol 95% + wood naphtha 5%

- Ethanol ⇒ produced by fermentation of sugar by yeast

Absorption of alcohol

- 20% absorbed from stomach
- 80% absorbed from small intestine

Excretion of alcohol

- 5% excreted in the breath
- 5% excreted in the urine

Physiological effect of alcohol

Table No. 12.3

Blood alcohol conc.	Effects
0 - 50 mg%	<ul style="list-style-type: none"> • Mild euphoria
50 - 100 mg%	<ul style="list-style-type: none"> • Diminished inhibitions • Enhanced self confidence • Alteration of judgment etc.
100 - 150 mg%	<ul style="list-style-type: none"> • Basic mental confusion • Emotional instability • Impairment of memory • Sleepiness
150 - 300 mg%	<ul style="list-style-type: none"> • Loss of muscular co-ordination • Staggering gait • Marked mental confusion • Dizziness • Disorientation etc.
300 - 400 mg%	<ul style="list-style-type: none"> • Marked in-coordination • Stupor • Decreased response to stimuli • Coma
400 mg% +	<ul style="list-style-type: none"> • Anesthesia • Deep coma • Death

Phase of alcohol intoxication

- *Stage of excitement* : Due to inhibition of higher centres person feels pleasure, laugh and smiles readily or becomes angry easily.
- *Stage of incoordination* : Confusion, Slurred speech and staggering gait nausea and vomiting are common. The pupils are dilated.
- *Stage of coma* : Person entered into deep sleep and responds only to strong stimuli. Mc Ewan's sign is positive.

Fatal dose

- Absolute alcohol: 150 - 250 ml

Methods used for determining blood alcohol

- Kozelka and Hine test
- Cavett test
- Gas chromatography
- Breathe analysis (using alcometer/alcotest etc.)

Fatal period

- 12 - 24 hrs

Treatment

- Gastric lavage
- Keeping the patient warm
- NS (1 litre) + Glucose (10%) + Thiamine (100 mg) + Insulin (15 units)
- Nerve stimulants
- Artificial respiration
- Oxygen inhalation etc.

Post-mortem appearance

- Alcoholic odour
- Acute inflammation of stomach
- Congestion of brain, liver etc.
- Oedema and congestion of brain etc.



JĀNGAMA-VIṢA (ANIMAL POISON) - 1

LEARNING OBJECTIVES

- Adhsthans of jangama - visa - 16
- Jangama visa moves down wards.
- Administration of visa (poison) cures poisoning because of prabhava.
- There are 27 synonyms of sarpa
- Vasuki is superior sarpa.
- Sarpa are
 - Divya
 - Bhauma.
- Following reasons of Snake bites
 - Padabhimrsta
 - Dusta
 - Krudha
 - Gras arthi
- Sarpa - dama (snake bite) is classified into three types
 - Sarpita
 - Radita
 - Nirvisa
- Visa (poison) stays for a period of hundred matra at the site of dama (bite)
- Tourniquet should be tied four finger above the site (snake bite)

Definition of jāṅgama-viṣa (animal poison)

- Viṣa (poison) found in the animals inhabiting in forests is termed as 'jāṅgama-viṣa (animal poison)';
- Ācārya Vāgbhaṭa defines 'jāṅgama-viṣa' as -
सर्पलूतादिदंष्ट्रासु दारुणं जंगमं विषम् । AH.Ut. 35.5

The poison, *dāruṇa* (powerful) in nature, present in the *damaṣṭrā* (teeth) of *sarpa* (snakes), *lūtā* (spiders) etc is called *jāṅgama-viṣa* (animal poison).

- Ācārya Caraka has enlisted faunae that are poisonous; he quotes -

सर्पाः कीटोन्दुरा लूता वृश्चिका गृहगोधिकाः ।

जलौकामत्स्यमण्डूकाः कणभाः सकृकण्टकाः ॥

श्वसिंहव्याघ्रगोमायुतरक्षुनकुलादयः ।

दंष्ट्रिणो ये विषं दंष्ट्रोत्थं जंगमं मतम् ॥ CS.Ci. 23.9-10

Sarpa (snakes), *kīṭa* (insects), *undura* (rats), *lūtā* (spiders), *vṛścika* (scorpion), *gṛhagodhikā* (house lizard), *jalaukā* (leech), *matsya* (fish), *maṇḍūka* (frog), *kaṇabha* (a kind of bird), *kṛkaṇṭaka* (chamelion), *śva* (dogs), *simha* (lion), *vyāghra* (tiger), *gomāyu* (fox), *tarakṣu* and *nakula* (mongoose) and other such creatures with teeth; *viṣa* (poison) enclosed in their dentures and poisoning caused by their bites is termed as 'jāṅgama-viṣa (animal poison)'.

- As per Prāṇācārya Śrī Sadānanda Śarmā - author of *Rasatarāṅgiṇī* -

सर्पादिजन्तुप्रभवं विषं जंगमसंज्ञकम् ।

Rasatarāṅgiṇī 24.3

Poison derived from the *sarpa* (snakes) and other such poisonous beings is termed as *jāṅgama-viṣa* (animal poison).

Adhiṣṭhāna (sites) of jāṅgama-viṣa (animal poison)

Sites of venom, among poisonous animals, is termed as *adhiṣṭhāna* (site) of *jāṅgama-viṣa*. Ācārya *Suśruta* has enumerated sixteen such sites in the body of animals; he quotes :

तत्र दृष्टिनिःश्वासदंष्ट्रानखमूत्रपुरीषशुक्रलालार्तवमुख-
सन्दंशविशार्धिततुण्डास्थिपित्तशूकशवानीति ॥ SS.K. 3.4

Adhishthanas (sites) of jāṅgama-viṣa (animal poisons) are :

1. <i>dr̥ṣṭi</i> (sight/ vision)	9. <i>ārtava</i> (menstrual blood)
2. <i>niḥśvāsa</i> (breath)	10. <i>mukhasandamśa</i> (mouth bite)
3. <i>damśtrā</i> (canine teeth)	11. <i>viśardhita</i> (flatus)
4. <i>nakha</i> (nails)	12. <i>tuṅḍa</i> (beak)
5. <i>mūtra</i> (urine)	13. <i>asthi</i> (bone)
6. <i>purīṣa</i> (faeces)	14. <i>pitta</i> (bile)
7. <i>śukra</i> (semen)	15. <i>śūka</i> (bristles)
8. <i>lālā</i> (saliva)	16. <i>śava</i> (cadaver)

Ācārya Suśruta goes further to group animals according to site of *viṣa* (poison) in their body; he quotes :

तत्र दृष्टिनिःश्वासविषा दिव्याः सर्पाः, भौमास्तु दंष्ट्राविषाः, मार्जारश्चवानरमकरमण्डूकपाकमत्स्यगोधाशम्बूकप्रचलाक गृहगोधिकाचतुष्पादकीटास्तथाऽन्ये दंष्ट्रानखविषाः, चिपिटपिच्चिटककषायवासिकसर्षपकतोदवर्चःकीटकौण्डिन्यकाः शकृन्मूत्रविषाः, मूषिकाः शुक्रविषाः लूता लालामूत्रपुरीषमुखसन्दंशनखशुक्रार्तवविषाः, वृश्चिकविश्वम्भरवरटीराजीवमत्स्योच्चिटिंगाः समुद्रवृश्चिकाश्चाल(र)विषाः, चित्रशिरःसरावकुर्दिशतदारुकारिमेदकसारिकामुखा मुखसन्दंशविशार्धितमूत्रपुरीषविषाः, मक्षिकाकणभजलायुका मुखसन्दंशविषाः, विषहतास्थि सर्पकण्टकवरटीमत्स्यास्थि चेत्यस्थिविषाणि, शकुलीमत्स्यरक्तराजिवरकी(टी)मत्स्याश्च पित्तविषाः, सूक्ष्मतुण्डोच्चिटिंगवरटीशतपदीशूकवलभिकाशृगिभ्रमराः शूकतुण्डविषाः, कीटसर्पदेहा गतासवः शवविषाः; शेषास्त्वनुक्ता मुखसन्दंशविषेष्वेव गणयितव्याः ॥

SS.K. 3.5

- *divya sarpa* (celestial snakes) have venom in their *dr̥ṣṭi* (sight/ vision) & *niḥśvāsa* (breath);
- *bhauma sarpa* (earthly snakes) have venom in *damśtrā* (fangs);
- *mārjāra* (cat), *śva* (dog), *vānara* (monkey), *makara* (crocodile), *maṇḍūka* (frog), *pākamatsya*, *godhā* (alligator), *śambūka* (snail), *pracalāka* (chamelion), *grhagodhikā* (house lizard), *catuspāda* (quadrupeds), *kīṭa* (insects) etc. have poison in their *damśtrā* (canine teeth) & *nakha* (nails);

- *cipiṭa*, *piccīṭaka*, *kaṣāyavāsika*, *sarṣapaka*, *toṭaka*, *varcaḥkīṭa* and *kaunḍinyaka* have poison in their *śakrt* (faeces) and *mūtra* (urine);
- *mūṣika* (rat) have poison in *śukra* (semen);
- *lūtā* (spider) have poison in *lālā* (saliva), *mūtra* (urine), *purīṣa* (faeces), *mukha sandamśa* (mouth bite), *nakha* (nails), *śukra* (semen), *ārtava* (menstrual blood);
- *vṛścika* (scorpion), *viśvambhara*, *varaṭi* (wasp), *rājīva*, *matsya*, *uccīṅga* and *samudravṛścika* (sea scorpion) have poison in *āla/ āra* (sting);
- *citraśiraḥ*, *sarāva*, *kurdiśata*, *dārukāri*, *medaka* and *sārikāmukha* have poison in their *mukha sandamśa* (mouth bite), *viśardhita* (flatus), *mūtra* (urine) & *purīṣa* (faeces);
- *makṣikā* (flies), *kaṇabha*, and *jalāyukā* (leech) have poison in *mukha sandamśa* (mouth bite);
- *viśahata asthi* (bones of poison-killed animal), *asthi* (bones) of *sarpakaṇṭaka*, *varaṭi* and *matsya-asthi* (fish bone) are *asthi-viṣa* (bone-poisons);
- *śakulī matsya* (fish variety), *raktarāji*, *varakī* and *matsya* (fish) have poison in *pitta* (bile);
- *sūkṣmatuṅḍa*, *uccīṅga*, *varaṭi*, *śatapadī*, *śūka*, *valabhikā*, *śṛṅgī* and *bhramara* have poison in *śūka* (bristles) & *tuṅḍa* (beak);
- the *deha* (bodies) of *kīṭa* (insects) and *sarpa* (snakes) when *gatāsavaḥ* (lifeless) are the *śava-viṣa* (cadaver poisons);
- the remaining ones which are not mentioned should be included in poisons of *mukha sandamśa* (mouth bite) only. (See Table No 13.1)

Ācārya Caraka has given names of seventeen creatures that belong to the category of *jāṅgama-viṣa* (animal poisons); see - CS.Ci. 23.9-10

General features of jāṅgama-viṣa (animal poison)

Ācārya Caraka says -

जंगमं स्यादधोभागमूर्ध्वभागं तु मूलजम् । CS.Ci. 23.17

Table 13.1 : Adhiṣṭhāna (site) of jāṅgama viṣa according to Sage Suśruta

S.No.	Adhiṣṭhāna (site) of jāṅgama viṣa	Names	
1.	dr̥ṣṭi (sight/ vision)& niḥśvāsa (breath)	<ul style="list-style-type: none"> • divya sarpa (celestial snakes) 	
2.	daṁṣṭrā (fangs)	<ul style="list-style-type: none"> • bhauma sarpa (earthly snakes) 	
3.	daṁṣṭrā (canine teeth)& nakha (nails)	<ul style="list-style-type: none"> • mārjāra (cat) • śva (dog) • vānara (monkey) • makara (crocodile) • maṇḍūka (frog) • pākamatsya 	<ul style="list-style-type: none"> • godhā (alligator) • śambūka (snail) • pracalāka (chamelion) • ḡrhagodhikā (house lizard) • catuṣpāda (quadrupeds) • kīṭa (insects)etc.
4.	mūtra (urine) & puriṣa (faeces)	<ul style="list-style-type: none"> • cipiṭa • picciṭaka • kaṣāyavāsika • sarṣapaka 	<ul style="list-style-type: none"> • toṭaka • varcaḥkīṭa • kauṇḍinyaka
5.	śukra (semen)	<ul style="list-style-type: none"> • mūṣika (rat) 	
6.	lālā (saliva), mūtra (urine), puriṣa (faeces), mukhasandamśa (mouth bite), nakha (nails), śukra (semen), ārtava (menstrual blood)	<ul style="list-style-type: none"> • lūtā (spider) 	
7.	āra (sting)	<ul style="list-style-type: none"> • vṛścika (scorpion) • viśvambhara • varaṭi (wasp) • rājiva 	<ul style="list-style-type: none"> • matsya • ucciṅga • samudravṛścika (sea scorpion)
8.	mukhasandamśa (mouth bite), viśardhita (flatus), mūtra (urine) & puriṣa (faeces)	<ul style="list-style-type: none"> • citraśiraḥ • sarāva • kurdiśata 	<ul style="list-style-type: none"> • dārukāri • medaka • sārīkāmukha
9.	mukhasandamśa (mouth bite)	<ul style="list-style-type: none"> • makṣikā (flies) • kaṇabha • jalāyukā (leech) 	
10.	asthi (bone)	<ul style="list-style-type: none"> • viśahata asthi (bones of poison killed animals) • bone of sarpakaṇṭaka • bone of varaṭi • matsya asthi (fish bone) 	
11.	pitta (bile)	<ul style="list-style-type: none"> • śakulī matsya (fish variety) • raktarāji • varakī • matsya (fish) 	
12.	śūka (bristles) & tuṇḍa (beak)	<ul style="list-style-type: none"> • sūkṣmatuṇḍa • ucciṅga • varaṭi • śatapadi 	<ul style="list-style-type: none"> • śūka • valabhikā • śṛṅgi • bhramara
13.	śava (cadaver)	<ul style="list-style-type: none"> • kīṭa (insects) • sarpa (snakes) 	

Jāṅgama-viṣa (animal poison) moves down-wards in the alimentary canal.

निद्रां तन्द्रां क्लमं दाहं सपाकं लोमहर्षणम् ।
शोफं चौवातिसारं च जनयेज्जंगमं विषम् ॥

CS.Ci. 23.15

Bite by jāṅgama creatures gives rise to following general features :

- *nidrā* (somnolence)
- *tandrā* (drowsiness)
- *klama* (mental fatigue)
- *dāha* (burning sensation)
- *pāka* (inflammation)
- *lomaharṣaṇa* (horripilation)
- *śopha* (oedema)
- *atisāra* (diarrhoea).

General treatment of jāṅgama-viṣa (animal poison)

Ācārya Caraka says -

तस्माद्दंष्ट्राविषं मौलं हन्ति मौलं च दंष्ट्रजम् ॥

CS.Ci. 23.17

The *sthāvara viṣa* (poison of immobile origin/vegetable poison) cures the poisoning caused by jāṅgama-viṣa (animal poison). This is justified by Ācārya Caraka in the 26th chapter of *Sūtrasthāna*; he quotes :

विषं विषघ्नमुक्तं यत् प्रभावस्तत्र कारणम् ।

CS.Sū. 26.69

i.e. administration of a *viṣa* (poison) cures poisoning because of *prabhāva* (specific action).

Sarpa viṣa (snake poison/bite)

Similar to fatality of *mūlavīṣa* (root poisons), among *sthāvara* group of poisons, *sarpa* (snake bite) is among *jāṅgama* group of poisons. Though found world over, snakes habitat more in hot and humid climates of tropical regions and forest belts.

Approximately more than three thousand species of snakes are documented till date; among these nearly two hundred and fifty are found in Indian sub-continent and approx fifty of these are poisonous.

India registers nearly one lakh cases of snake bite per year and causing death of ten thousand to twenty thousand people. Many, among these, die fearing snake bite; the description of *śaṅkā-viṣa* (imaginary fear of snake bite), by Ācārya Caraka, is worth mentioning here.

Śaṅkā-viṣa (imaginary fear of snake bite)

As per Ācārya Caraka-

दुरन्धकारे विद्वस्य केनचिद्विषशंकया ।
विषोद्वेगाज्ज्वरश्छर्दिर्मूर्च्छा दाहोऽपि वा भवेत् ॥
ग्लानिर्मोहोऽतिसारश्चाप्येतच्छंकाविषं मतम् ।

CS.Ci. 23.221-222

When a person is bitten by something unknown in *duḥandhakāra* (pitch darkness), the *śaṅkā* (suspicion) of being stung by a poisonous being causes *viṣodvega* (features of pseudo-poisoning) in the form of *jvara* (fever), *chardi* (vomiting), *mūrccā* (fainting), *dāha* (burning sensation), *glāni* (anxiety), *moha* (mental confusion/stupor) and *atisāra* (diarrhoea). This condition is called *śaṅkā-viṣa* (imaginary fear of snake bite).

These signs and symptoms are, purely, psychogenic in nature; thus termed '*śaṅkā-viṣa*'.

Sarpaṅgābhīhata (touch of snake)

As per Ācārya Vṛddha Vāgbhaṭa-

भीरोः सर्पागसंस्पर्शाद् भयेन कुपितोऽनिलः ।
कदाचित् कुरुते शोफं सर्पागाभिहतं तु तत् ॥

AS.Ut. 41.36

In *bhīru* (timid) individuals *saṁsparśa* (touch) of *sarpaṅga* (snake's body) is enough to cause *bhaya* (fear) and this causes aggravation of *anila* (*vāta*) and resultant *śopha* (oedema). This is termed as *sarpaṅgābhīhata* (touch of snake).

Synonyms of sarpa (snakes)

Ācārya Narahari Paṇḍita, author of *Rāja Nighaṅṭu*, has enlisted twenty seven synonyms of *sarpa* (snake) in the *siṁhādivarga* of the same text; he quotes :

- | | |
|-----------------------|----------------------|
| ♦ <i>darvīkara</i> | ♦ <i>kādraveya</i> |
| ♦ <i>dvīrasana</i> | ♦ <i>vakraga</i> |
| ♦ <i>pātālanilaya</i> | ♦ <i>dandaśūkaka</i> |
| ♦ <i>valī</i> | ♦ <i>caṅkuṣhravā</i> |
| ♦ <i>nāga</i> | ♦ <i>viṣadhara</i> |

- ◆ gūḍhānghri
- ◆ kuṇḍalī
- ◆ phaṇī
- ◆ pannaga
- ◆ vāyubhakṣa
- ◆ bhogī
- ◆ jihmaga
- ◆ sarpa

- ◆ daṁṣṭrī
- ◆ bhujāṅga
- ◆ ahi
- ◆ bhujaga
- ◆ sarīsrpa
- ◆ kañcukī
- ◆ dīrghapuccha
- ◆ dvijihva
- ◆ uraga

Classification of sarpa (snakes)

(I) As per Ācārya Suśruta :

असंख्या वासुकिश्रेष्ठा विख्यातास्तक्षकादयः ॥
महीधराश्च नागेन्द्रा हुताग्निसमतेजसः ॥

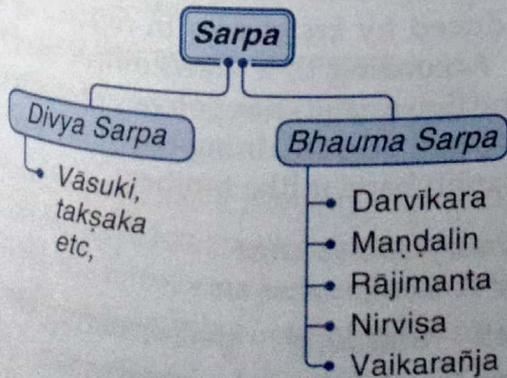
अशीतिस्त्वेव सर्पाणां भिद्यते पञ्चधा तु सा ॥
दर्वीकरा मण्डलिनो राजिमन्तस्तथैव च ॥
निर्विषा वैकरञ्जाश्च त्रिविधास्ते पुनः स्मृताः ॥
दर्वीकरा मण्डलिनो राजिमन्तश्च पन्नगाः ॥
तेषु दर्वीकरा ज्ञेया विंशतिः षट् च पन्नगाः ॥
द्वाविंशतिर्मण्डलिनो राजिमन्तस्तथा दश ॥
निर्विषा द्वादश ज्ञेया वैकरञ्जास्त्रयस्तथा ॥
वैकरञ्जोद्भवाः सप्त चित्रा मण्डलिराजिलाः ॥

SS.K. 4.5-12

Vāsuki is superior among the innumerable *vikhyāta sarpas* (renowned snakes) such as *takṣaka* etc.; these are *mahīdhara* (sustain earth) and *nāgendra*.

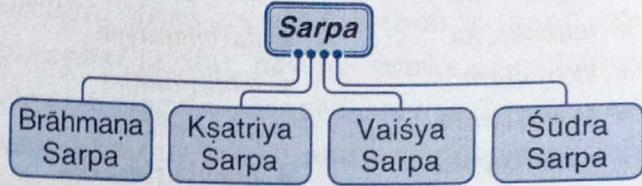
Bhauma sarpa (earthly snakes) are categorized into following five :

- *darvīkara sarpa* → 26
- *maṇḍalin sarpa* → 22
- *rājimanta sarpa* → 10
- *nirviṣa sarpa* → 12
- *vaikarañja sarpa* → 3



Vaikarañjodbhava sarpa (i.e. progenies of *vaikarañja sarpa*), *citrā* (variegated) with *maṇḍali* (rounded spots) and *rājilā* (stripes), are seven in number.

Sarpas are again classified on the basis of caste; these are four :



(II) As per Ācārya Caraka-

इह दर्वीकरः सर्पो मण्डली राजिमानिति ।

त्रयो यथाक्रमं वातपित्तश्लेष्मप्रकोपणाः ॥

CS.Ci. 23.123

- *Darvīkara sarpa* (aggravates *vāta*)
- *Maṇḍalī sarpa* (aggravates *pitta*)
- *Rājimāna sarpa* (aggravates *kapha*).

(III) As per Ācārya Vṛddha Vāgbhaṭa-

दिव्यभौमविभागेन द्विविधाः पन्नगाः स्मृताः ।

वासुकिस्तक्षकोऽनन्तः सगरः सागरालयः ॥

तथा नन्दोपनन्दाद्याः समिद्धाग्निसमप्रभाः ।

दिव्या गर्जन्ति वर्षन्ति द्योतन्ते द्योतयन्ति ते ॥

धारयन्ति जगत्कृत्स्नं कुर्युः क्रुद्धाश्च भस्मसात् ।

दृङ्निश्चासैनमस्तेभ्यो न तेष्वस्ति चिकित्सितम् ॥

दर्वीकरा मण्डलिनो राजीमन्तश्च पन्नगाः ।

त्रिधा समासतो भौमा भिद्यन्ते ते त्वनेकधा ।

व्यासतो योनिभेदेन नोच्यन्तेऽनुपयोगतः ॥

AS.Ut. 41.2-3

Sarpas (snakes) are classified into :

- *divya* (celestial)
- *bhauma* (terrestrial).

Vāsuki, *takṣaka*, *ananta*, *sagara*, *sāgarālaya*, *nandā* and *upanandā*- are examples of *divya sarpas* (celestial snakes).

Bhauma sarpas (terrestrial snakes) are

- *darvīkara*
- *maṇḍalina* and
- *rājimanta*.

Ācārya Suśruta's view:

(A) *Darvīkara sarpa* are -

तत्र दर्वीकराः - कृष्णसर्पो, महाकृष्णः, कृष्णोदरः
श्वेतकपोतो, महाकपोतो, बलाहको, महासर्पः, शंख-

कपालो लोहिताक्षो, गवेधुकः, परिसर्पः, खण्डफणः, ककुदः, पद्मो, महापद्मो, दर्भपुष्पो, दधिमुखः, पुण्डरीको, भ्रुकुटीमुखो, विष्किरः, पुष्पाभिकीर्णो, गिरिसर्पः, ऋजुसर्पः, श्वेतोदरो, महाशिरा, अलगर्द, आशीविष इति (1)।

SS.K. 4.34 (1)

- | | |
|-----------------------|------------------------|
| ◆ <i>kṛṣṇasarpa</i> | ◆ <i>mahāpadma</i> |
| ◆ <i>mahākṛṣṇa</i> | ◆ <i>darbhapuṣpa</i> |
| ◆ <i>kṛṣṇodara</i> | ◆ <i>dadhimukha</i> |
| ◆ <i>śvetakapota</i> | ◆ <i>punḍarīka</i> |
| ◆ <i>mahākapota</i> | ◆ <i>bhrūkuṭimukha</i> |
| ◆ <i>balāhaka</i> | ◆ <i>viṣkīra</i> |
| ◆ <i>mahāsarpa</i> | ◆ <i>puṣpābhikīrṇa</i> |
| ◆ <i>śaṅkhakapāla</i> | ◆ <i>girisarpa</i> |
| ◆ <i>lohitākṣa</i> | ◆ <i>rjusarpa</i> |
| ◆ <i>gavedhuka</i> | ◆ <i>śvetodara</i> |
| ◆ <i>parisarpa</i> | ◆ <i>mahāśirā</i> |
| ◆ <i>khaṇḍaphaṇa</i> | ◆ <i>alagarda</i> |
| ◆ <i>kakuda</i> | ◆ <i>āśīviṣa</i> |
| ◆ <i>padma</i> | |

(B) Maṇḍalin sarpa are -

मण्डलिनस्तु - आदर्शमण्डलः, श्वेतमण्डलो, रक्तमण्डलः, चित्रमण्डलः, पृषतो, रोधपुष्पो, मिलिन्दको, गोनसो, वृद्धगोनसः, पनसो, महापनसो, वेणुपत्रकः, शिशुको, मदनः, पालिन्दिरः पिङ्गलः, तन्तुकः, पुष्पपाण्डुः, षडङ्गो, अग्निको बभ्रुः, कषायः, कलुषः, पारावतो, हस्ताभरणः, चित्रकः, एणीपद इति (2)।

SS.K. 4.34 (2)

- | | |
|------------------------|-----------------------|
| ◆ <i>ādarśamaṇḍala</i> | ◆ <i>pālindira</i> |
| ◆ <i>śvetamaṇḍala</i> | ◆ <i>piṅgala</i> |
| ◆ <i>raktamaṇḍala</i> | ◆ <i>tantuka</i> |
| ◆ <i>citramaṇḍala</i> | ◆ <i>puṣpapāṇḍu</i> |
| ◆ <i>prṣata</i> | ◆ <i>ṣaḍaṅga</i> |
| ◆ <i>rodhrapuṣpa</i> | ◆ <i>agnika</i> |
| ◆ <i>milindaka</i> | ◆ <i>babhru</i> |
| ◆ <i>gonasa</i> | ◆ <i>kaṣāya</i> |
| ◆ <i>vṛddhagonasa</i> | ◆ <i>kaluṣa</i> |
| ◆ <i>panasa</i> | ◆ <i>pārāvata</i> |
| ◆ <i>mahāpanasa</i> | ◆ <i>hastābharāṇa</i> |
| ◆ <i>veṇupatraka</i> | ◆ <i>citraka</i> |
| ◆ <i>śīśuka</i> | ◆ <i>eṇīpada</i> |
| ◆ <i>madana</i> | |

(C) Rājimanta sarpa are -

राजिमन्तस्तु - पुण्डरीको राजिचित्रो, अङ्गुलराजिः,

बिन्दुराजिः, कर्दमकः, तृणशोषकः, सर्षपकः, श्वेतहनुः, दर्भपुष्पश्चक्रको गोधूमकः, किकिसाद इति (3)।

SS.K. 4.34 (3)

- | | |
|---------------------|----------------------|
| ◆ <i>punḍarīka</i> | ◆ <i>sarṣapaka</i> |
| ◆ <i>rājicitra</i> | ◆ <i>śvetahanu</i> |
| ◆ <i>aṅgularāji</i> | ◆ <i>darbhapuṣpa</i> |
| ◆ <i>bindurāji</i> | ◆ <i>cakraka</i> |
| ◆ <i>kardamaka</i> | ◆ <i>godhūmaka</i> |
| ◆ <i>trṇaśoṣaka</i> | ◆ <i>kikkisāda</i> |

(D) Nirviṣa sarpa (poisonous snakes) are -

निर्विषास्तु - गलगोली, शूकपत्रो, अजगरो, दिव्यको, वर्षाहिकः पुष्पशकली, ज्योतीरथः, क्षीरिकापुष्पको, अहिपताको, अन्धाहिको, गौराहिको, वृक्षेशय इति (4)।

SS.K. 4.34 (4)

- | | |
|----------------------|-------------------------|
| ◆ <i>galagolī</i> | ◆ <i>vyotīratha</i> |
| ◆ <i>śūkapatra</i> | ◆ <i>kṣīrikāpuṣpaka</i> |
| ◆ <i>ajagara</i> | ◆ <i>ahipatāka</i> |
| ◆ <i>divyaka</i> | ◆ <i>andhāhika</i> |
| ◆ <i>varṣāhika</i> | ◆ <i>gaurāhika</i> |
| ◆ <i>puṣpaśakalī</i> | ◆ <i>vṛkṣeśaya</i> |

(E) Vaikarañja sarpa are -

वैकरञ्जास्तु त्रयाणां दर्वीकरादीनां व्यतिकराज्जाताः तद्यथा - माकुलिः, पोटागलः, स्निग्धराजिरिति। तत्र, कृष्णसर्पेण गोनस्यां वैपरीत्येन वा जातो माकुलिः; राजिलेन गोनस्यां वैपरीत्येन वा जातः पोटागलः; कृष्णसर्पेण राजिमत्यां वैपरीत्येन वा जातः स्निग्धराजिरिति। तेषामाद्यस्य पितृवद्विषोत्कर्षो, द्वयोर्मातृवदित्येके (5)।

SS.K. 4.34 (5)

These are born by intermingling of three kinds of *darvīkara* etc. and they are named-

- | | |
|-------------------|----------------------|
| ◆ <i>mākuli</i> | ◆ <i>snigdharāji</i> |
| ◆ <i>poṭagala</i> | |

Of these, *mākuli* is produced by *kṛṣṇasarpa* in *gonasī* or vice versa; *poṭagala* is produced by *rājila* in *gonasī* and vice versa; and *snigdharāji* is produced by *kṛṣṇasarpa* in *rājimatī* or vice versa. According to a view, out of them, the first one (i.e. *mākuli*) has potency of poison like father while the remaining two (i.e. *poṭagala* & *snigdharāji*) have it like mother.

(F) Vaikarañjodbhava sarpa

(born of Vaikarañja sarpa) are -

त्रयाणां वैकरञ्जानां पुनिर्दिव्येलकरोधपुष्पकराजि-
चित्रकपोटागलपुष्पाभिकीर्णदर्भपुष्पवेल्लितकाः सप्तः

तेषामाद्यास्त्रयो राजिलवत्, शेषा मण्डलिवत्, एवमेतेषां सर्पाणामशीतिर्व्याख्याता ॥

SS.K. 4.34

These are born of three kinds of *vaikaraṅja* sarpas and they are seven in number -

- *divyelaka*
- *rodhrapuṣpaka*
- *rājicitraka*
- *poṭagala*
- *puṣpābhikīrṇa*
- *darbhapuṣpa*
- *vellitaka*

Among them, the first three (i.e. *divyelaka*, *rodhrapuṣpaka* & *rājicitraka*) are *rājila* and others like *maṅḍalin sarpa*.

Notes - The total number of snakes, as per *Ācārya Suśruta's* view, is eighty; he quotes-

अशीतिस्त्वेव सर्पाणां भिद्यते पञ्चधा तु सा । SS.K. 4.9

But, on counting these, the number exceeds eighty eight; thus it indicates certain discrepancies in the original text.

Table No 13.2

Classification of <i>sarpa</i>	As per <i>Ācārya Suśruta's</i> view:	Actual number of sarpas
• <i>Darvikara sarpa</i>	26	27
<i>Maṅḍalin sarpa</i>	22	27
• <i>Rājimanta sarpa</i>	10	12
• <i>Nirviṣa sarpa</i>	12	12
• <i>Vaikaraṅja sarpa</i>	3	3
• <i>Vaikaraṅjod-bhava sarpa</i>	7	7
Total	80	88

Physical appearance of *darvikara*, *maṅḍalin* and *rājimanta sarpas*

As per *Ācārya Caraka* -

दर्वीकरः फणी ज्ञेयो मण्डली मण्डलाफणः ।

बिन्दुलेखविचित्रांगः पन्नगः स्यात्तु राजिमान् ॥

CS.Ci. 23.125

The *darvikara sarpa* has a *phaṇa* (spoon shaped hood); *maṅḍalī sarpa* has *maṅḍala* (rounded) *phaṇa* (hood) and the *rājimān sarpa* has a *vicitra aṅga* (variegated body) with *bindulekha* (drop like spots).

As per *Ācārya Suśruta-*

(a) *Darvikara sarpa-*

रथांगलांगलच्छत्रस्वस्तिकांकुशधारिणः ।

ज्ञेया दर्वीकराः सर्पाः फणिनः शीघ्रगामिनः ॥

SS.K. 4.22

Darvikara sarpas are *phaṇina* (hooded) and are *śīghragāmī* (agile), having marks of *rathāṅga* (wheels), *lāṅgala* (plough), *cchatra* (umbrella), *svastika* (pious cross) and *aṅkuśa* (goad) on the body.

(b) *Maṅḍalin sarpa-*

मण्डलैर्विविधैश्चित्राः पृथ्वो मन्दगामिनः ।

ज्ञेया मण्डलिनः सर्पा ज्वलनार्कसमप्रभाः ॥ SS.K. 4.23

Maṅḍalin sarpas are *pr̥thu* (large bodied) and *citrā* (variegated); they have various kinds of *maṅḍalas* (circular patches); these are *mandagāmī* (sluggish in movements) have *prabhā* (lustre) like *jvalana* (fire flame) and the *arka* (sun).

(c) *Rājimanta sarpa*

स्निग्धा विविधवर्णाभिस्तिर्यग्धूर्व च राजिभिः ।

चित्रिता इव ये भान्ति राजिमन्तस्तु ते स्मृताः ॥

SS.K. 4.24

Rājimanta sarpas are *snigdha* (glossy) and marked with *tiryak* (oblique) and *urdhva* (straight) *rājis* (stripes) of various colours as if *citrīta* (painted).

Table 13.3 : Physical appearances of various kinds of snakes

S. No.	As per <i>Ācārya Caraka</i>	As per <i>Ācārya Suśruta</i>
1. <i>Darvikara sarpa</i>	• <i>phaṇa</i> (spoon shaped hood)	• <i>phaṇina</i> (hooded) • <i>śīghragāmī</i> (agile) • marks of <i>rathāṅga</i> (wheels), <i>lāṅgala</i> (plough), <i>cchatra</i> (umbrella), <i>svastika</i> (pious cross) and <i>aṅkuśa</i> (goad) on the body

S. No.	As per Ācārya Caraka	As per Ācārya Suśruta
2. Maṇḍalin sarpa	<ul style="list-style-type: none"> maṇḍala (rounded) phana (hood) 	<ul style="list-style-type: none"> prthu (large bodied) citrā (variegated) various kinds of maṇḍalas (circu- lar patches) mandagāmi (sluggish in movements) prabhā (lustre like jvalana (fire flame) and the arka (sun)
3. Rājimanta sarpa	<ul style="list-style-type: none"> vicitra aṅga (var- iegated body) with bin- dulekha (drop like spots). 	<ul style="list-style-type: none"> snigdha (glossy) marked with tiryak (oblique) and urdhva (straight) rājis (stripes) of vari- ous colours as if citrita (painted)

Vicaraṇa kāla (time of outing) for snakes

As per Ācārya Suśruta :

रजन्याः पश्चिमे यामे सर्पाश्चित्राश्चरन्ति हि ।

शेषेषूक्ता मण्डलिनो दिवा दर्वीकराः स्मृताः ॥

SS.K. 4.31

6-9 ← Rājimanta sarpa moves around in the paścima yāma (last quarter of night) where as maṇḍalin- sarpa travels in remaining time; darvīkara sarpa travels during the day times.

Rasa, virya and doṣa aggravating nature of viṣa (poison)

As per Ācārya Suśruta :

कोपयन्त्यनिलं जन्तोः फणिनः सर्व एव तु ।

पित्तं मण्डलिनश्चापि कफं चानेकराजयः ॥

अपत्यमसवर्णाभ्यां द्विदोषकरलक्षणम् ।

ज्ञेयौ दोषैश्च दम्पत्यो ॥

SS.K. 4.29-30

Darvīkara sarpa aggravates vāta and maṇḍalin sarpa aggravates pitta; rājimanta sarpa aggra-

vates kaphadoṣa. Apatya (sibling) of dissimular varṇa (order) causes aggravation of two doṣas.

Effect of age and season on sarpadaṁśa (snake bite)

As per Ācārya Suśruta :

दर्वीकरास्तु तरुणा वृद्धा मण्डलिनस्तथा ।

राजिमन्तो वयोमध्या जायन्ते मृत्युहेतवः ॥ SS.K. 4.32

Darvīkara sarpa is fatal in taruṇāvasthā (young age); maṇḍalin sarpa is fatal in vr̥ddhāvasthā (old age) and rājimanta sarpa in madhya vayah (middle age).

For further reading:

As per Ācārya Caraka -

तरुणाः कृष्णसर्पास्तु गोनसाः स्थविरास्तथा ।

राजिमन्तो वयोमध्ये भवन्त्याशीविषोपमाः ॥

CS.Ci. 23.135

Lifestyle and lifespan of snakes

As per Ācārya Vr̥ddha Vāgbhaṭa :

प्रायेणर्तुमती मासं ज्येष्ठं तिष्ठति पन्नगी ।

आषाढे सर्पसंयोगादण्डानां मासि कार्तिके ।

द्वे शते विंशति द्वे च सा सूते तत्र जायते ॥

कर्कतनसवर्णेण्डे समुद्भिन्ने भुजंगमः ॥

दीर्घलोहितराजीभिश्चित्रे योषिन्नपुंसकम् ।

शिरीषपुष्पसदृशे दंष्ट्राः सर्पस्य सप्तमे ।

चतस्रः सम्भवन्त्यह्नि विषं तासु चतुर्दशे ॥

वामाधराऽसिता पीता तदूर्ध्वा दक्षिणा त्वधः ।

रक्ता श्यावोत्तरैकद्विचित्रचतुर्विषबिन्दुकाः ॥

ता क्रमान्मुद्गमात्रोऽत्र बिन्दुरेष हि भोगिनाम् ।

विषे विकल्पनान्येषां विद्यादंष्ट्रास्तथाऽपराः ।

चत्वारिंशद्भुजंगस्य निर्विषाश्चतुरुतराः ॥

आयुर्वर्षशतं विंशं पञ्चवर्षशतायुषः ।

गोनसा घर्मतप्तानां गवां नासासमुद्भवाः ॥

AS.Ut. 41.14-19

In general, the pannagī (female snake) is rtumati (in fertile period) during jyēṣṭha (May) and it mates with the sarpa (male snake) during āṣāḍha (July) and conceives; it delivers two hundred aṇḍas (eggs) in kārtika (October). From aṇḍas (eggs) having varṇa (colour) of karkatana (maṇi) come out bhujaṅgas (male snakes), from

those having *dīrgha lohita rāji* (thick reddish streaks) come out *yoṣit* (female) snakes and *napuṁsaka* (eunuch) snakes are born of *aṇḍa* (eggs) resembling *śirīṣapuṣpa* (flowers of Albizzia lebbek).

When seven days old, four *daṁṣṭrās* (fangs) develop (in the baby snakes) and on fourteenth day *viṣa* (venom) descends into them; *vāma-adhara* (lower left) fang is *asita* (blackish) while the one in *vāma-urdhva* (upper left) is *pīta* (yellowish); the *dakṣiṇa-adhara* (lower right) fang is *rakta* (reddish) and the last (i.e. *dakṣiṇa-urdhva* (upper right)) fang is *śyāva* (bluish) in colour; one, two, three and four *bindus* (drops) of venom are present in each of these fangs respectively. Here *bindu* (drop) is equivalent to size of a *mudga* (green gram).

Apart from these four fangs, there are forty four *nirviṣa daṁṣṭrās* (non-poisonous teeth).

Āyu (lifespan) of snakes, in general, is one hundred and twenty years while that of *gonasais* one hundred and fifty years; *gonasa* are born from *nāsā* (nose) of *go* (cows) fatigued by *gharma* (heat/summer).

Sex difference among snakes

As per *Ācārya Caraka* :

वृत्तभोगो महाकायः श्वसन्ध्वेक्षणः पुमान् ।
स्थूलमूर्धा समांगश्च स्त्री त्वतः स्याद्विपर्ययात् ॥
क्लीबस्त्रसति ।

CS.Ci. 23.130-131

Pumān sarpa (male snake) has *vṛttabhoga* (round hood), *mahākāya* (large body), *śvasan* (hissing sound), *ūrdhvekṣaṇa* (upward gaze), *sthūlamūrdhā* (large head) and *samāṅga* (even body); *strī sarpa* (female snake) is *viparyaya* (opposite) of these characteristics; *klība sarpa* (impotent snake) is *trasta* (timid).

For further reading:

As per *Ācārya Suśruta*-

तत्र महानेत्रजिह्वास्यशिरसः पुमांसः सूक्ष्मनेत्रजिह्वा-
स्यशिरसः स्त्रियः उभयलक्षणा मन्दविषा अक्रोधा
नपुंसका इति ॥

SS.K. 4.35

Caste based classification among snakes

(I) As per *Ācārya Suśruta* :

मुक्त्तारूप्यप्रभा ये च कपिला ये च पन्नगाः ।
सुगन्धयः सुवर्णाभास्ते जात्या ब्राह्मणाः स्मृताः ॥
क्षत्रियाः स्निग्धवर्णास्तु पन्नगा भृशकोपनाः ।
सूर्यचन्द्राकृतिच्छत्रलक्ष्म तेषां तथाऽम्बुजम् ॥
कृष्णा वज्रनिभा ये च लोहिता वर्णतस्तथा ।
धूम्राः पारावताभाश्च वैश्यास्ते पन्नगाः स्मृताः ॥
महिषद्वीपिवर्णाभास्तथैव परुषत्वचः ।
भिन्नवर्णाश्च ये केचिच्छूद्रास्ते परिकीर्तिताः ॥

SS.K. 4.25-28

Brāhmaṇa pannaga (snakes) have *prabhā* (brilliance) of *muktā* (pearl) and *rūpya* (silver), are *kapila* (brownish) in colour, with *sugandha* (pleasing odour) and radiance of *suvarṇa* (gold). *Kṣatriya sarpa* (snakes) are *snigdha* (slimy) in *varṇa* (complexion), *kopana* (short tempered); their *ākṛti* (marks) resemble *sūrya* (sun), *candra* (moon), *cchatra* (umbrella), *lakṣma* (conch) or *ambuja* (lotus).

Vaiśya pannaga (snakes) are *kṛṣṇa* (blackish) with brilliance of *vajra* (diamond); their *varṇa* (colour) is *lohita* (blood), *dhūmra* (smoky) and/ or *pārāvata* (pigeon or dove).

Śūdra sarpa (snakes) have colour of *mahiṣa* (buffalo) or *dvīpi* (leopard); they have *paruṣa tvacā* (rough skin) and *bhinna varṇa* (varied colours).

(II) As per *Ācārya Vṛddha Vāgbhaṭa* :

ब्राह्मणाः क्रोधना नीलकपिलाः श्वेतलोहिताः ।
रक्तास्याः पिङ्गनयना मेध्यदेशविचारिणः ॥
भोगे यज्ञोपवीतादिद्विजचिह्नोपचिह्निताः ।
बिल्वपुष्पहिमोशीरपद्मगुग्गुलुगन्धयः ॥

AS.Ut. 41.23-24

Brāhmaṇa sarpas are

- *krodhī* (short tempered),
- *nīla-kapila* (bluish-brown) or *śveta-lohita* (whitish-red) in colour;
- their *āśya* (mouth) is *rakta* (reddish);
- their *nayana* (eyes) are *piṅga* (brow-nish);
- their *vicaraṇa* (roaming) is in *medhya deśa* (clean places);

- they endure *yajñopavīta* (sacrificial thread) marks similar to that of *dvija* (*brāhmaṇas*) on their *bhoga* (hood);
- their *gandha* (odour) is similar to *bilvapuṣpa*, *hima* (candana), *uśīra*, *padma* and *guggulu*.

क्षत्रिया मानिनो धीरा रक्ताक्षा भृशकोपनाः ।

पक्वजाम्बवखर्जूरद्राक्षाभिन्नाञ्जनप्रभाः ॥

भोगेऽर्द्धचन्द्रश्रीवत्सशंखचक्रहलाकिताः ।

जातीचम्पकपुन्नागपत्रजौगकगन्धयः ॥ AS.Ut. 41.25-26

Kṣatriya sarpas are :

- *mānina* (full of pride)
- *dhīra* (brave/ patient)
- *raktākṣa* (reddened eyes)
- *bhṛśakopanāḥ* (awfully angry by nature)
- their colour is similar to *pakva* (ripened) *jambu*, *kharjūra*, *drākṣā*, *abhinna* (broken) *añjana* (lump)
- their *bhoga* (hood) is marked with *arḍdhacandra* (half moon), *śrīvatsa*, *śaṅkha* (conch), *cakra* (wheel) or *hala* (plough)
- their *gandha* (odour) resembles *jātī*, *campaka*, *punnāga*, *patra* and/or *joṅgaka*.

वैश्याः पारावताभासा वज्रगोमेदकप्रभाः ।

बिन्दुमण्डलचित्रांगा धूम्रपाटललोहिताः ।

वस्तकुष्ठाविकक्षीरसर्पिषां गन्धतः समाः ॥ AS.Ut. 41.27

Vaiśya sarpas

- resemble *pārāvata* (pigeon or dove), *vajra* (diamond) and/ or *gomedaka* (beryl);
- their body is covered either with *bindu* (droplets/dots) or *maṇḍala* (circular) patches;

- they are either *dhūmra* (smoky), *pāṭala* or *lohita* (reddish) in appearance (colour);
- their *gandha* (odour) is similar to that of *basta* (goat), *kuṣṭha*, *āvika* (sheep), *kṣīra* (milk) or *sarpi* (ghee).

शूद्राः सवर्णा गोधूममहिषद्विपकर्मैः ।

बिन्दुरेखाचिता रूक्षाः सुराशोणितगन्धयः ॥

AS.Ut. 41.28

Śūdra sarpas

- have *varṇa* (complexion) of *godhūma* (wheat), *mahiṣa* (buffalo), *dvipa* (elephants) or *kardama* (slush);
- they have *bindu* (droplets/dots) or *rekhā* (streaks/lines) on their body;
- are *rukṣa* (rough) to touch and
- emit *gandha* (odour) of either *surā* (alcohol) and *śoṇita* (blood).

Schedule for movement of snake (as per their caste)

As per Ācārya Vṛddha Vāgbhaṭa :

पूर्वमध्यापराह्णेषु चरन्ति ब्राह्मणादयः ।

अस्तंगते रवौ शूद्राः ॥

AS.Ut. 41.25

Brāhmaṇa sarpas move about in the *pūrvāhṇa* (forenoon), *kṣatriya sarpas* in the *madhyāhṇa* (midnoon), *vaiśya sarpas* in *aparāhṇa* (evening hours) and *śūdra sarpas* just prior to setting of *ravi* (sun) i.e. dusk.

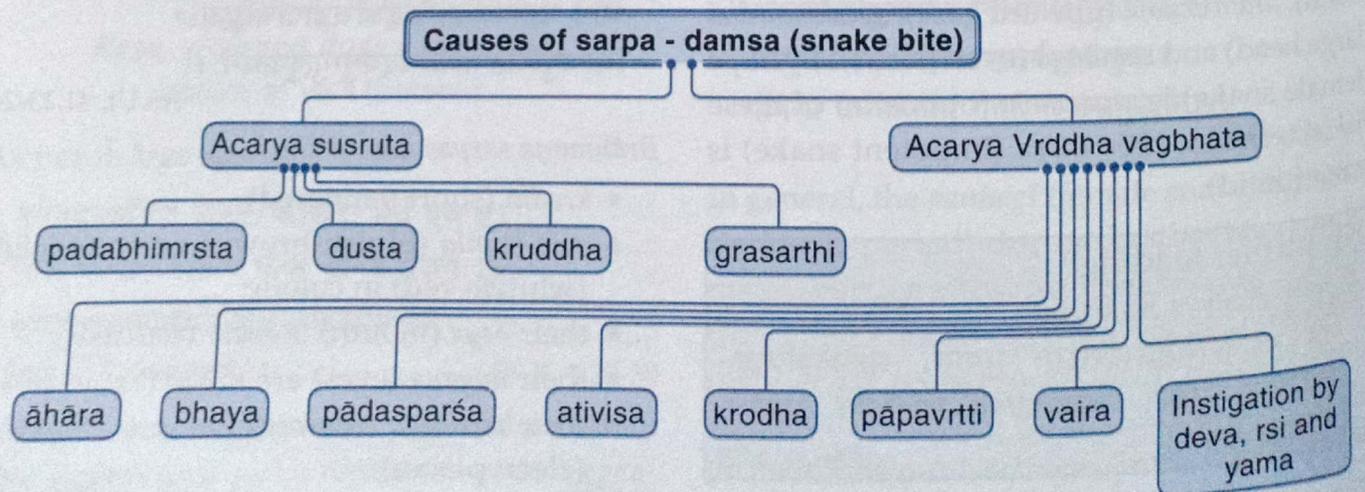
Doṣaprakopa- as per the caste of snakes

As per Ācārya Vṛddha Vāgbhaṭa :

विप्रास्त्रीनप्यनिलपूर्वकान् ।

कोपयन्ति क्रमाद्दोषास्त्रींस्त्रयः क्षत्रियादयाः ॥

AS.Ut. 41.24



Bite of *brāhmaṇa sarpa* causes aggravation of all the *doṣas* with predominance of *anila* or *vāta*; bite of *kṣatriya sarpa* aggravates *vāta*; bite of *vaiśya sarpa* aggravates *pitta* and *kapha* aggravates by the bite of *śūdra sarpa*.

Causes for *sarpa-damśa* (snake bite)

(I) As per *Ācārya Suśruta* :

पादाभिमृष्टा दुष्टा वा क्रुद्धा ग्रासार्थिनोऽपि वा ॥
ते दशन्ति महाक्रोधास्त्रिविधं भीमदर्शनाः । SS.K. 4.13-14

Snakes bite (humans and other living beings) for following reasons :

- *pādābhimṛṣṭa* (trampled under feet)
- *duṣṭa* (ill natured)
- *kruddha* (anger)
- *grāsārthī* (hunger).

(II) As per *Ācārya Vṛddha Vāgbhaṭa* :

आहारार्थं भयात्पादस्पर्शादतिविषात्क्रुधः ।
पापवत्तया वैराद्देवर्षियमचोदनात् ।
दशन्ति सर्पास्तेषूक्तं विषाधिक्यं यथोत्तरम् ॥

AS.Ut. 41.27

Snakes bite (humans and other living beings) for following reasons :

- *āhāra* (diet)
- *bhaya* (fear)
- *pādasparśa* (touch by feet)
- *ativiṣa* (accumulation of venom in their body)
- *krodha* (anger)
- *pāpavṛtti* (ill intentions)
- *vaira* (hatred/ enmity)
- instigation by *deva* (Gods), *ṛṣi* (sages) and *yama* (God of death).

The virulence of venom is more predominant in each succeeding one.

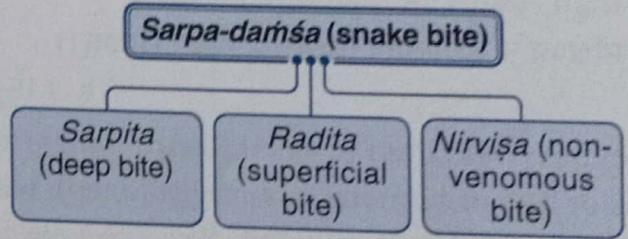
Classification of *sarpa-damśa* (snake bite)

(I) As per *Ācārya Suśruta*:

सर्पितं रदितं चापि तृतीयमथ निर्विषम् ।
सर्पागाभिहतं केचिदिच्छन्ति खलु तद्विदः ॥ SS.K. 4.14

Sarpa-damśa (snake bite) is classified into following three :

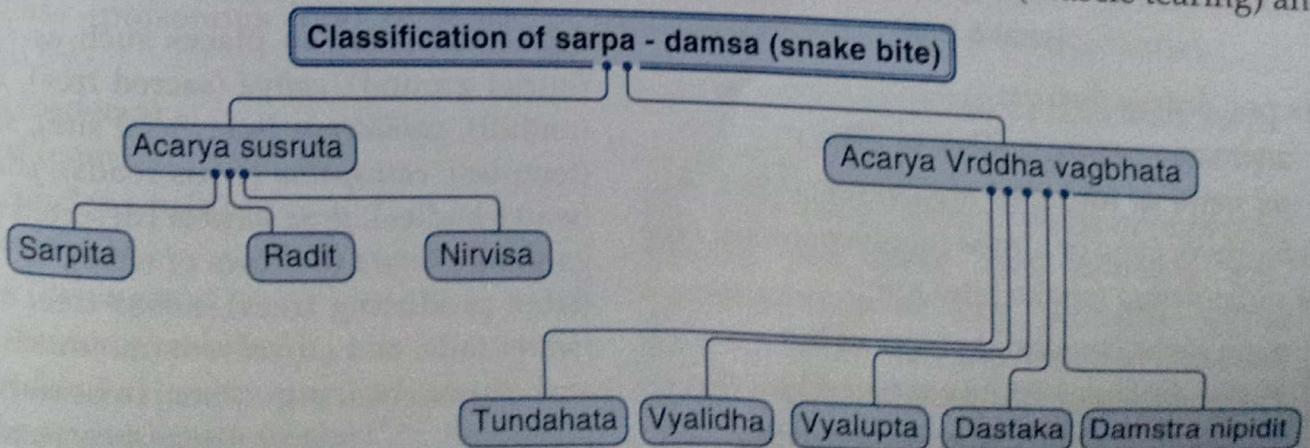
- *sarpita* (deep bite)
- *radita* (superficial bite)
- *nirviṣa* (non-venomous bite)



(II) As per *Ācārya Vṛddha Vāgbhaṭa* :

यत्र लालापरिक्लेदमात्रं गात्रे प्रदृश्यते ।
न तु दंष्ट्राकृतं दंशं तत्तुण्डाहतमादिशेत् ॥
एकं दंष्ट्रापदं द्वे वा व्यालीढाख्यमशोणितम् ।
दंष्ट्रापदे सरक्ते द्वे व्यालुप्तं त्रीणि तानि तु ॥
मांसच्छेदादविच्छिन्नरक्तवाहीनि दष्टकम् ।
दंष्ट्रापदानि चत्वारि तद्वदृष्टनिपीडितम् ॥ AS.Ut. 41.30

- *tunḍāhata* {only *lālā* (saliva) and no marks of *damśtrā* (fangs)}
- *vyālīḍha* {mark of one or two *damśtrās* (fangs) and no *śoṇita* (bleeding)}
- *vyālupta* {mark of two *damśtrās* (fangs) with *rakta* (bleeding)}
- *daṣṭaka* {mark of three *damśtrās* (fangs) with *māmsacchedana* (muscle tearing) and



avicchinna (non-ruptured) *rakta-vāhini* (blood vessels)

- *damṣṭrānipīḍita* {mark of four *damṣṭrās* (fangs) with *māmsacchedana* (muscle tearing) and *vicchinna* (ruptured) *raktavāhini* (blood vessels)}.

Features of *sarpita* type of *sarpadaṁśa* (snake bite)

As per *Ācārya Suśruta* :

पदानि यत्र दन्तानामेकं द्वे वा बहूनि वा ।
निमग्नान्यल्परक्तानि यान्युद्धृत्य करोति हि ॥
चञ्चुमालकयुक्तानि वैकृत्यकरणानि च ।
संक्षिप्तानि सशोफानि विद्यात्तत् सर्पितं भिषक् ॥

SS.K. 4.15-16

When *pada* (marks) of *danta* (teeth/ fangs) are one or two or numerous, *nimagna* (deep), with little *rakta* (blood), twisted, like *cañcumālaka* (beaked), causing *vikṛti* (complications), *sañkṣipta* (contracted) and *śopha* (swollen) - it should be known as *sarpita* (deep) kind of *sarpadaṁśa* (snake bite).

Features of *radita* type of *sarpadaṁśa* (snake bite)

As per *Ācārya Suśruta* :

राज्यः सलोहिता यत्र नीलाः पीताः सितास्तथा ।
विज्ञेयं रदितं तत्तु ज्ञेयमल्पविषं च तत् ॥ SS.K. 4.17

Presence of *lohita* (reddish), *nīla* (bluish), *pīta* (yellowish) and *sita* (whitish) *rājis* (streaks) at the site of bite are features of *radita* (superficial) type of *sarpa-damśa* (snake bite).

Features of *nirviṣa* type of *sarpadaṁśa* (snake bite)

As per *Ācārya Suśruta* :

अशोफमल्पदुष्टासृक् प्रकृतिस्थस्य देहिनः ।
पदं पदानि वा विद्यादविषं तच्चिकित्सकः ॥ SS.K. 4.18

Features of *aviṣa* or *nirviṣa* (non-venomous) type of *sarpa-damśa* (snake bite) are :

- no *śopha* (swelling) at site of bite,
- *alpa duṣṭa asṛk* (mildly vitiated blood),
- patient is *prakṛtistha* (in normalcy).

Factors causing decrease in venomousness of snakes

(I) As per *Ācārya Caraka* :

भीतमत्ताबलोष्णक्षुत्तृषार्ते वर्धते विषम् ।
विषं प्रकृतिकालौ च तुल्यौ प्राप्याल्पमन्यथा ॥
वारिविप्रहताः क्षीणा भीता नकुलनिर्जिताः ।
वृद्धा बालास्त्वचो मुक्ताः सर्पा मन्दविषाः स्मृताः ॥

CS.Ci. 23.162

The effect of *viṣa* (venom) is enhanced if the snake is *bhīta* (frightened), *matta* (intoxicated), *abala* (frail), afflicted with *uṣṇa* (heat), *kṣut* (hunger) and *trṣṭā* (thirst). Similarly, if the *prakṛti* (physical constitution) and *kāla* (time of bite) are identical to the *viṣa* (poison), then the effect (of venom) is amplified.

If the snake is afflicted with gushing of *vāri* (water), if it is *kṣīṇa* (scrawny), *bhīta* (phobic) of attacks by *nakula* (mongoose), if it is *vṛddha* (elderly) *orbāla* (too young), if it has shed its *tvacā* (scales), the *viṣa* (venom) is *manda* (mild in nature).

Intense toxicity of *sarpa-damśa* (snake bite)

As per *Ācārya Vṛddha Vāgbhaṭa* :

श्मशानचैत्यवल्मीकयज्ञाश्रमसुरालये ।
चतुष्पथे जलस्थाने जीर्णोद्यानेषु कोटरे ॥
क्षीरिद्रुमे निम्बतरौ निज्झरे गिरिगह्वरे ।
चक्रवज्रगदाकुन्तत्रिशूलांकजटाधराः ॥
रक्तास्यनयना ये च ते स्युराशीविषोपमाः ।
न तेषां कालनियमो न च वेगेष्वनुक्रमः ॥
मन्त्रतन्त्रबलान्नापि प्रसह्य विनिवर्तनम् ।
उपहारनमस्कारजपशान्तिपरायणः ।

कश्चिज्जीवति तैर्दष्टो विरूपो विकलोऽपि वा ॥

AS.Ut. 41.48

Snakes dwelling in places such as *śmaśāna* (burial ground), *caitya* (sacred tree), *valmika* (anthill), *yajñāśraya* (sacrificial site), *surālaya* (temples), *catuspatha* (cross roads), *jalasthāna* (water bodies), *jīrṇa udyāna* (deserted parks/ gardens), *koṭara* (hollows of trees), *kṣīridruma* (latex producing trees), *nimba tree*, *nirjhara* (water falls) and *girigahvara* (mountain caves) and those bearing *cakra* (wheels), *vajra* (diamond), *gadā* (mace), *kunta* (spear) and *trishūla*

(trident) on their body and also those who are *jaṭādhara* (bear tuft of hair) and whose *āśya* (mouth) and *nayana* (eyes) are *rakta* (reddish)-these possess *viṣa* (poison) similar to that of poisonous *mūla* (roots).

These (kind of snakes) forgo any rules pertaining to *kāla* (schedule) and *anukrama* (sequencing) of *vega* (impetuosity).

Even *bala* (strength) of *mantra* (incantations) and *tantra* (magical methods) fail to pacify its toxicity.

Only *upahāra* (offerings), *namaskāra* (worshipping), *japa* (recitations), *śānti* (pacifying measures), *parāyaṇa* (sermons) help patient survive that too *virūpa* (ugly) and *vikala* (distorted) body.

Protection from *sarpa-damśa* (snake bite)

As per *Ācārya Caraka* :

छत्री झङ्गीरपाणिश्च चरेद्रात्रौ तथा दिवा ।

तच्छयाशब्दवित्रस्ताः प्रणश्यन्त्याशु पन्नगाः ॥

CS.Ci. 23.250

One should venture out with a *chatrī* (umbrella) during the day and with a *jharjharapāṇi* (rattling stick) at night so that their *chāyā* (shade) and *śabda* (sound) respectively; this frightens the *pannaga* (snake) and he absconds without attacking/biting.

General symptoms of *sarpa-damśa* (snake bite)

(I) As per *Ācārya Vṛddha Vāgbhata* :

दंशस्तु सविषः सर्वः सशोफो वेदनान्वितः ।

तुद्यते ग्रथितः किञ्चित् कण्डूमान् दह्यते भृशम् ॥

AS.Ut. 41.35

Saviṣa damśa (poisonous bite) of *sarpa* is manifested by -

- *śopha* (oedema)
- *vedanā* (pain)
- *toda* (pricking pain)
- *grathita* (knots)
- *kaṇḍū* (itching) and
- *dāha* (burning sensation).

Bite by *nirviṣa sarpa* (non-poisonous snakes) has *viparīta* (opposite) manifestations.

(II) As per *Ācārya Caraka* :

विशेषादूक्षकदुकमम्लोष्णं स्वादु शीतलम् ।

विषं यथाक्रमं तेषां तस्माद्वातादिकोपनम् ॥

दर्वीकरकृतो दंशः सूक्ष्मदंष्ट्रापदोऽसितः ।

निरुद्धरक्तः कूर्माभो वातव्याधिकरो मतः ॥

पृथ्वर्पितः सशोथश्च दंशो मण्डलिना कृतः ।

पीताभः पीतरक्तश्च सर्वपित्तविकारकृत् ॥

कृतो राजिमता दंशः पिच्छिलः स्थिरशोफकृत् ।

स्निग्धः पाण्डुश्च सान्द्रासृक् श्लेष्मव्याधिसमीरणः ॥

CS.Ci. 23.126-129

The *viṣa* (venom) of *darvīkara sarpa* being *rukṣa* (dry) and *kaṭuka* (bitter) causes *kopana* (aggravation) of *vāta*; *viṣa* (venom) of *maṇḍalī sarpa* being *amla* (sour) and *uṣṇa* (warm) causes *kopana* (aggravation) of *pitta*; *rājimān sarpa*'s *viṣa* (venom) aggravates *kapha* due to its *svādu* (sweet) and *śītala* (cold) attributes.

The *damśa* (bite) of *darvīkara sarpa* is characterized by *sūkṣma* (subtle) and *asita damśā* (black marks of the fangs), *niruddha-rakta* (bloodless), *kūrmābha* (tortoise shaped) swelling and manifestation of *vātavyādhis* (diseases caused by *vāta*).

The *damśa* (bite) of *maṇḍalī sarpa* is *prthu* (gross) and *arpita* (deep) along with *śoṭha* (oedema), *pītābha* (yellowish discolouration) of the site, exudation of *pīta-rakta* (yellowish blood) and also manifestation of *pittavikāras* (disorders due to *pitta*).

The *damśa* (bite) of *rājimān sarpa* is *picchila* (slimy) with *sthira śopha* (static oedema), *snigdha* (unctuous), *pāṇḍu* (pale) and discharge of *sāndra asṛk* (thickened blood) and also manifestation of *śleṣma-vyādhis* (diseases due to *kapha*).

Signs & symptoms of bite by *darvīkara sarpa*

As per *Ācārya Suśruta* :

तत्र, दर्वीकरविषेण त्वङ्नयननखदशनवदनमूत्रपुरीषदं शकृष्णत्वं रौक्ष्यं शिरसो गौरवं सन्धिवेदना कटी-पृष्ठग्रीवादौर्बल्यं जृम्भणं वेपथुः स्वरावसादो घुर्घुरको जडता शुष्कोद्गारः कासश्चासौ हिक्का वायोरुर्ध्वगमनं शूलोद्वेष्टनं तृष्णा लालास्रावः फेनागमनं स्रोतोऽवरोध-स्तास्ताश्च वातवेदना भवन्ति ।

SS.K. 4.37

Signs & symptoms of bite by *darvīkara sarpa* are -

- *kṛṣṇatva* (blackish discolouration) of *tvak* (skin), *nayana* (eyes), *nakha* (nails,) *daśana* (teeth), *vadana* (body), *mūtra* (urine), *purīṣa* (faeces) and *daṁśa* (site of bite)
- *rauṣya* (dryness)
- *śiraḥ gaurava* (heaviness of head region)
- *sandhivedanā* (arthralgia)
- *daurbalya* (weakness) in *kaṭī* (waist), *pr̥ṣṭha* (back) and *grīvā* (neck) region
- *jṛmbhāṇa* (yawning)
- *vepathu* (trembling)
- *svarāvāsāda* (frailness of voice)
- *ghurghuraka* (gurgling sound in throat)
- *jaḍatā* (stiffness)
- *śuṣka udgāra* (dry belching)
- *kāsa* (cough)
- *śvāsa* (dyspnoea/asthma)
- *hikkā* (hiccough)
- *urdhvagamana* (upward movement) of *vāyu*
- *śūla* (pain) causing *udveṣṭana* (cramps)
- *tr̥ṣṇā* (thirst)
- *lālāsṛāva* (salivation)
- *phenāgamana* (frothing through oral cavity)
- *sroto'varodha* (obstruction of bodily channels)
- *vātavedanā* (varied kinds of pain etc.).

Signs & symptoms of bite by *maṇḍalin sarpa*

As per *Ācārya Suśruta* :

मण्डलिविषेण त्वगादीनां पीतत्वं शीताभिलाषः परिधूपनं दाहस्तृष्णा मदो मूर्च्छा ज्वरः शोणितागमनमूर्ध्वमधश्च मांसानामवशातनं श्वयथुर्दशकोथः पीतरूपदर्शनमाशुको-पस्तास्ताश्च पित्तवेदना भवन्ति।

SS.K. 4.37

Signs & symptoms of bite by *maṇḍalin sarpa* are -

- *pītatva* (yellowish discolouration) of *tvak* (skin) etc.
- *śītābhilāṣaḥ* (craving for cold articles)
- *paridhūpana* (generalized burning sensation)
- *dāha* (localized burning sensation)
- *tr̥ṣṇā* (thirst)
- *mada* (intoxication)
- *mūrucchā* (fainting)
- *jvara* (fever)

- *śoṇitagamana* (bleeding) through *ūrdhva* (upward) and *adhaḥ* (downward) routes
- *avaśātana* (putrefaction) of *māmsa* (muscle tissues)
- *śvayathu* (oedema)
- *daṁśakothaḥ* (gangrene at the site of bite)
- *pīta rūpadarśana* (yellowish vision)
- *āśukopa* (short temperedness)
- *pittavedanā* (other types of pittaja affliction).

Signs & symptoms of bite by *rājimanta sarpa*

As per *Ācārya Suśruta* :

राजिमद्विषेण शुक्लत्वं त्वगादीनां शीतज्वरो रोमहर्षः स्तब्धत्वं गात्राणामादंशशोफः सान्द्रकफप्रसेकश्छिदीर-भीक्षणमक्षणोः कण्डूः कण्ठे श्वयथुर्घुर्घुरक उच्छ्वास-निरोधस्तमःप्रवेशस्तास्ताश्च कफवेदना भवन्ति॥

SS.K. 4.37

Signs & symptoms of bite by *rājimanta sarpa* are -

- *śuklatva* (whitish discolouration) of *tvak* (skin) etc.
- *śītajvara* (fever with chills)
- *romaharṣa* (horripilation)
- *stabdhatva* (stiffness) of *gātra* (limbs)
- *ādaṁśa śopha* (swelling at the site of bite)
- *sāndra kapha praseka* (discharge of thick mucus)
- *chardi* (vomiting)
- *kaṇḍū* (itching) in *akṣi* (eyes)
- *śvayathu* (swelling) in *kaṇṭha* (throat)
- *ghurghuraka* (gurgling sound in throat)
- *ucchvāsa nirodha* (laboured breathing)
- *tamaḥ-praveśa* (black outs)
- *kaphavedanā* (various kinds of afflictions of *kapha*). (See Table No 13.3)

Signs of *sarpa-daṁśa* (snake bite) - as per sex etc.

As per *Ācārya Suśruta* :

पुरुषाभिदष्ट ऊर्ध्वं प्रेक्षते अधस्तात् स्त्रिया सिराशो-त्तिष्ठन्ति ललाटे नपुंसकाभिदष्टस्तिर्यक्प्रेक्षी भवति, गर्भिण्या पाण्डुमुखो ध्यातश्च सूतिकया कुक्षिशूलार्तः सरुधिरं मेहत्युपजिह्विका चास्य भवति ग्रासार्थिनाज्जं कांक्षति वृद्धेन चिरान्मन्दाश्च वेगाः बालेनाशु मृदवश्च, निर्विषेणाविषलिङ्गं अन्धाहिकेनान्धत्वमित्येके ग्रासनात् अजगरः शरीरप्राणहरो न विषात्। SS.K. 4.38

Table 13.4 : Signs and symptoms of bite by various kinds of snakes

<i>Darvikara sarpa</i>	<i>Maṅḍalin sarpa</i>	<i>Rājimanta sarpa</i>
1. <i>kṛṣṇatva</i> (blackish discolouration) of <i>tvak</i> (skin), <i>nayana</i> (eyes), <i>nakha</i> (nails), <i>daśana</i> (teeth), <i>vadana</i> (body), <i>mūtra</i> (urine), <i>purīṣa</i> (faeces) and <i>darśā</i> (site of bite)	1. <i>pītatva</i> (yellowish discolouration) of <i>tvak</i> (skin) etc.	1. <i>śuklatva</i> (whitish discolouration) of <i>tvak</i> (skin) etc.
2. <i>rauḥṣya</i> (dryness)	2. <i>śītābhilāṣaḥ</i> (craving for cold articles)	2. <i>śītajvara</i> (fever with chills)
3. <i>śīraḥ gaurava</i> (heaviness of head region)	3. <i>paridhūpana</i> (generalized burning sensation)	3. <i>romahaṛṣa</i> (horripilation)
4. <i>sandhivedanā</i> (arthralgia)	4. <i>dāha</i> (localized burning sensation)	4. <i>stabdhatva</i> (stiffness) of <i>gātra</i> (limbs)
5. <i>daurbalya</i> (weakness) in <i>kaṭi</i> (waist), <i>prṣṭha</i> (back) and <i>grīvā</i> (neck) region	5. <i>tṛṣṇā</i> (thirst)	5. <i>ādarśā śopha</i> (swelling at the site of bite)
6. <i>jṛmbhaṇa</i> (yawning)	6. <i>mada</i> (intoxication)	6. <i>sāndra kaphapraseka</i> (discharge of thick mucus)
7. <i>vepathu</i> (trembling)	7. <i>mūrcchā</i> (fainting)	7. <i>chardi</i> (vomiting)
8. <i>svarāvasāda</i> (frailness of voice)	8. <i>jvara</i> (fever)	8. <i>kaṇḍū</i> (itching) in <i>akṣī</i> (eyes)
9. <i>ghurghuraka</i> (gurgling sound in throat)	9. <i>śoṇitagamana</i> (bleeding) through <i>ūrdhva</i> (upward) and <i>adhah</i> (downward) routes	9. <i>śvayathu</i> (swelling) in <i>kaṇṭha</i> (throat)
10. <i>jaḍatā</i> (stiffness)	10. <i>avaśātana</i> (putrefaction) of <i>māṁsa</i> (muscle tissues)	10. <i>ghurghuraka</i> (gurgling sound in throat)
11. <i>śuṣka udgāra</i> (dry belching)	11. <i>śvayathu</i> (oedema)	11. <i>ucchvāsa nirodha</i> (laboured breathing)
12. <i>kāsa</i> (cough)	12. <i>darśakothaḥ</i> (gangrene at the site of bite)	12. <i>tamaḥpraveśa</i> (black outs)
13. <i>śvāsa</i> (dyspnoea/ asthma)	13. <i>pīta rūpadarśana</i> (yellowish vision)	13. <i>kaphavedanā</i> (various kinds of afflictions of <i>kapha</i>)
14. <i>hikkā</i> (hiccough)	14. <i>āśukopa</i> (short temperedness)	
15. <i>urdhvagamana</i> (upward movement) of <i>vāyu</i>	15. <i>pittavedanā</i> (other types of <i>pittaja</i> affliction).	
16. <i>śūla</i> (pain) causing <i>udveṣṭana</i> (cramps)		
17. <i>tṛṣṇā</i> (thirst)		
18. <i>lālasrāva</i> (salivation)		
19. <i>phenāgamana</i> (frothing through oral cavity)		
20. <i>sroto'varodha</i> (obstruction of bodily channels)		
21. <i>vātavedanā</i> (varied kinds of pain etc.).		

Person bitten by *puruṣa sarpa* (male snake) gazes upwards and the one bitten by *strī sarpa* (female snake) gazes downwards and has tortuous *sirās* (veins) on the *lalāṭa* (forehead); person bitten by *napuṃsaka sarpa* (eunuch snake) is *tiryakprekṣī* (oblique gaze); person bitten by *garbhīṇī sarpa* (pregnant snake) suffers from *pāṇḍu* (pallor) over the *mukha* (face) and *dhmāta* (distended) abdomen. Person bitten by *sūtikā sarpa* (snake in post-partum) suffers from *kukṣīśūla* (abdominal colic), *sarudhira meha* (haematuria) and *upajihvikā* (swelling over the tongue); bite by *grāsārthī sarpa* (hungry snake) is exhibited by *anna-kāṅkṣā* (desire for food) by the person; bite of *vṛddha sarpa* (elderly snake) is *cira* (delayed) and *manda* (mind) in *vega* (impulse) and that of *bāla sarpa* (young snake) is *āśu* (rapid) but *mṛdu* (mind) in impulse. Bite by *nirviṣa sarpa* (non-poisonous snake) has *aviṣa liṅgas* (non-poisonous symptoms); person bitten by *andha āhika* (blind snake) suffers from *andhatva* (blindness). *Ajagara* (python) destroys the *śarīra* (body) and *prāṇa* (life) of the person by *grasana* (swallowing) and not by *viṣa* (poison/venom).

Table 13.5 : Signs of *sarpa-darśa* (snake bite) - as per sex etc.

Sarpa (snake)	signs or effect of bite
<i>Puruṣa sarpa</i> (male snake)	• upward gazing
<i>Strī sarpa</i> (female snake)	• downward gazing • tortuous <i>sirās</i> (veins) on the <i>lalāṭa</i> (forehead)
<i>Napuṃsaka sarpa</i> (eunuch snake)	• <i>tiryakprekṣī</i> (oblique gaze)
<i>Garbhīṇī sarpa</i> (pregnant snake)	• <i>pāṇḍu</i> (pallor) over the <i>mukha</i> (face) • <i>dhmāta</i> (distended) abdomen
<i>Sūtikā sarpa</i> (snake in post-partum)	• <i>kukṣīśūla</i> (abdominal colic) • <i>sarudhira meha</i> (haematuria) • <i>upajihvikā</i> (swelling over the tongue)
<i>Grāsārthī sarpa</i> (hungry snake)	• <i>anna-kāṅkṣā</i> (desire for food)

Sarpa (snake)	signs or effect of bite
<i>Vṛddha sarpa</i> (elderly snake)	• <i>cira</i> (delayed) and <i>manda</i> (mind) in <i>vega</i> (impulse)
<i>Bāla sarpa</i> (young snake)	• <i>āśu</i> (rapid) but <i>mṛdu</i> (mind) in impulse
<i>Nirviṣa sarpa</i> (non-poisonous snake)	• <i>aviṣa liṅgas</i> (non-poisonous symptoms)
<i>Andha āhika</i> (blind snake)	• <i>andhatva</i> (blindness)
<i>Ajagara</i> (python)	• destruction of the <i>śarīra</i> (body) and <i>prāṇa</i> (life)

Vega (impetuosity) of snake poison

As per Ācārya Vṛddha Vāgbhaṭa :

वेगानां रक्तमांसाद्याः सप्तोक्ताः पूर्वमाश्रयाः ॥

AS.Ut. 41.42

Vega (impetuosity), seven in number, is time taken by *viṣa* (venom) to travel from *rakta* to *māṃsa* etc. tissues.

Vega (impetuosity) in *darvikara sarpa*

(I) Prathama (first) vega of *darvikara sarpa*

As per Ācārya Suśruta :

तत्र दर्वीकराणां प्रथमे वेगे विषं शोणितं दूषयति तत् प्रदुष्टं कृष्णतामुपैति तेन काष्ण्यं पिपीलिकापरिसर्पणमिव चांगे भवति ।

SS.K. 4.39

During the *prathama* (first) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *śoṇita* (blood) and thus making it *kṛṣṇa* (blackish); it causes *kārṣṇya* (blackish discolouration of the body) and feeling of *pipīlikā parisarpana* (crawling ants) over the *aṅga* (body).

(II) Dvitiya (second) vega of *darvikara sarpa*

As per Ācārya Suśruta :

द्वितीये मांसं दूषयति, तेनात्यर्थं कृष्णता शोफो ग्रन्थयश्चांगे भवन्ति ।

SS.K. 4.39

During the *dvitiya* (second) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *māṃsa* (muscle tissues) and causes *atyartha kṛṣṇatā* (marked blackishness), *śoṣha* (swelling) and *granthi* (cysts) in the *aṅga* (body).

(III) *Tṛtīya* (third) *vega* of *darvikara sarpa*As per *Ācārya Suśruta* :

तृतीये मेदो दूषयति तेन दंशक्लेदः शिरोगौरवं
स्वेदश्चक्षुर्ग्रहणं च। SS.K. 4.39

During the *tṛtīya* (third) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *medaḥ* (fat) and causes *daṁśakleḍa* (moistening of site of bite), *śirogaurava* (heaviness of head), *sveda* (sweating) and *chakṣu-grahaṇa* (stiffness of eyes).

(IV) *Caturtha* (fourth) *vega* of *darvikara sarpa*As per *Ācārya Suśruta* :

चतुर्थे कोष्ठमनुप्रविश्य कफप्रधानान् दोषान् दूषयति, तेन
तन्दाप्रसेकसन्धिविश्लेषा भवन्ति। SS.K. 4.39

During the *caturtha* (fourth) *vega* of *darvikara sarpa*, the *viṣa* (poison) inhabits the *koṣṭha* (GIT) and vitiates the *doṣas* predominantly *kapha* which produces *tandrā* (lassitude), *praseka* (salivation) and *sandhiviśleṣa* (laxity of joints).

(V) *Pañcama* (fifth) *vega* of *darvikara sarpa*As per *Ācārya Suśruta* :

पञ्चमेऽस्थीन्यनुप्रविशति प्राणमग्निं च दूषयति, तेन
पर्वभेदो हिक्का दाहश्च भवति। SS.K. 4.39।

During the *pañcama* (fifth) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *asthi* (bone) and also vitiates the *prāṇa* (life) and *agni* (digestive fire); these result in *parvabheda* (arthralgia), *hikkā* (hiccough) and *dāha* (burning sensation).

(VI) *Ṣaṣṭha* (sixth) *vega* of *darvikara sarpa*As per *Ācārya Suśruta* :

षष्ठे मज्जानमनुप्रविशति ग्रहणीं चात्यर्थं दूषयति,
तेन गात्राणां गौरवमतीसारो हृत्पीडा मूर्च्छा च भवति।
SS.K. 4.39

During the *ṣaṣṭha* (sixth) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *majjā* and aggressively vitiates the *grahaṇī* (duodenum) which gives rise to *gātra gaurava* (heaviness in the body), *atisāra* (diarrhoea), *hṛtpīḍā* (cardiac pain) and *mūrccā* (fainting).

(VII) *Saptama* (seventh) *vega* of *darvikara sarpa*As per *Ācārya Suśruta* :

सप्तमे शुक्रमनुप्रविशति व्यानं चात्यर्थं कोपयति कफं च
सूक्ष्मव्यानोभ्यः प्रच्यावयति तेन श्लेष्मवर्तिप्रादुर्भावः

कटीपृष्ठभंगः सर्वचेष्टाविघातो लालास्वेदयोरति-
प्रवृत्तिरुच्छ्वासनिरोधश्च भवति। SS.K. 4.39

During the *saptama* (seventh) *vega* of *darvikara sarpa*, the *viṣa* (poison) vitiates the *śukra* along with intense vitiation of *vyānavāyu*; this causes discharge of *kapha* into *sūkṣma srota* (smaller channels) of the body by which there are appearance of *śleṣmavarti* (mucus wick), *bhaṅga* (breaking pain) in *kaṭī* (waist) and *prṣṭha* (back), *sarvaceṣṭāvighāta* (diminution of all move-ments), *atipravṛtti* (excessive discharge) of *lālā* (saliva) and *sveda* (sweat) and finally *ucchvāsa nirodha* (cessation of breathing).

Vega (impetuosity) in *maṇḍalin sarpa*(I) *Prathama* (first) *vega* of *maṇḍalin sarpa*As per *Ācārya Suśruta* :

मण्डलिनां प्रथमे वेगे विषं शोणितं दूषयति, तत् प्रदुष्टं
पीततामुपैति तत्र परिदाहः पीतावभासता चांगानां
भवति। SS.K. 4.39

During the *prathama* (first) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *śonita* (blood) which acquires *pītatā* (yellowishness) and gives rise to *paridāha* (generalized burning sensation) and *pītāvabhāsata* (yellowish discolouration) in the *aṅga* (body).

(II) *Dvitiya* (second) *vega* of *maṇḍalin sarpa*As per *Ācārya Suśruta* :

द्वितीये मांसं दूषयति, तेनात्यर्थं पीतता परिदाहो दंशे
श्वयथुश्च भवति। SS.K. 4.39

During the *dvitiya* (second) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *māmsa* (muscle tissues) and causes profuse *pītatā* (yellowishness) along with *paridāha* (generalized burning sensation) and *śvayathu* (swelling) at the site of *daṁśa* (bite).

(III) *Tṛtīya* (third) *vega* of *maṇḍalin sarpa*As per *Ācārya Suśruta* :

तृतीये मेदो दूषयति तेन पूर्ववच्चक्षुर्ग्रहणं तृष्णा दंशक्लेदः
स्वेदश्च। SS.K. 4.39

During the *tṛtīya* (third) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *medaḥ* (fat) and

causes *cakṣurgrahaṇa* (stiffness in eyes), *tṛṣṇā* (thirst), *damśakleda* (moistening of site of bite) and *sveda* (sweating).

(IV) Caturtha (fourth) vega of maṇḍalin sarpa

As per Ācārya Suśruta :

चतुर्थे कोष्ठमनुप्रविश्य ज्वरमापादयति । SS.K. 4.39

During the *caturtha* (fourth) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) inhabits the *koṣṭha* (GIT) and causes *jvara* (fever).

(V) Pañcama (fifth) vega of maṇḍalin sarpa

As per Ācārya Suśruta :

पञ्चमे परिदाहं सर्वगात्रेषु करोति । SS.K. 4.39

During the *pañcama* (fifth) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *asthi* (bone) and causes *paridāha* (generalized burning sensation) in *sarvagātras* (all the body parts).

(VI) Ṣaṣṭha (sixth) vega of maṇḍalin sarpa

As per Ācārya Suśruta :

षष्ठसप्तमयोः पूर्ववत् । SS.K. 4.39

During the *ṣaṣṭha* (sixth) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *majjā* and its features are *pūrvavat* (i.e. similar to *ṣaṣṭha* (sixth) *vega* of *darvīkara sarpa*).

(VII) Saptama (seventh) vega of maṇḍalin sarpa

As per Ācārya Suśruta :

षष्ठसप्तमयोः पूर्ववत् । SS.K. 4.39

During the *saptama* (seventh) *vega* of *maṇḍalin sarpa*, the *viṣa* (poison) vitiates the *śukra* and its features are *pūrvavat* (i.e. similar to *saptama* (seventh) *vega* of *darvīkara sarpa*).

Vega (impetuosity) in rājimanta sarpa

(I) Prathama (first) vega of rājimanta sarpa

As per Ācārya Suśruta :

राजिमतां प्रथमे वेगे विषं शोणितं दूषयति तत् प्रदुष्टं पाण्डुतामुपैति, तेन रोमहर्षः शुक्लावभासश्च पुरुषो भवति । SS.K. 4.39

During the *prathama* (first) *vega* of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *śoṇita* (blood) which attains *pāṇḍutā* (paleness) and causes *romaharṣa* (horripilation) and *śuklāvabhāsatā* (whitish discolouration) of the person.

(II) Dvitiya (second) vega of rājimanta sarpa

As per Ācārya Suśruta :

द्वितीये मांसं दूषयति, तेन पाण्डुताज्यर्थं जाड्यं शिरःशोफश्च भवति । SS.K. 4.39

During the *dvitiya* (second) *vega* of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *māmsa* (muscle tissues) and causes intense *pāṇḍutā* (paleness) along with *jāḍya* (stiffness/ rigidity) and *śiraḥśopha* (swelling in head region).

(III) Tṛtīya (third) vega of rājimanta sarpa

As per Ācārya Suśruta :

तृतीये मेदो दूषयति, तेन चक्षुर्ग्रहणं दंशक्लेदः स्वेदो घ्राणाक्षिस्रावश्च भवति । SS.K. 4.39

During the *tṛtīya* (third) *vega* of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *medaḥ* (fat) and causes *cakṣurgrahaṇa* (stiffness in eyes), *damśakleda* (moistening of site of bite), *sveda* (sweating), *ghrāṇasrāva* (nasal discharge) and *akṣisrāva* (ocular discharge).

(IV) Caturtha (fourth) vega of rājimanta sarpa

As per Ācārya Suśruta :

चतुर्थे कोष्ठमनुप्रविश्य मन्यास्तम्भं शिरोमौरवं चापादयति । SS.K. 4.39

During the *caturtha* (fourth) *vega* of *rājimanta sarpa*, the *viṣa* (poison) inhabits the *koṣṭha* (GIT) and results in *manyāstambha* (neck stiffness) and *śirogaurava* (heaviness of head).

(V) Pañcama (fifth) vega of rājimanta sarpa

As per Ācārya Suśruta :

पञ्चमे वाक्संगं शीतज्वरं च करोति । SS.K. 4.39

During the *pañcama* (fifth) *vega* of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *asthi* (bone) and causes *vāksaṅga* (loss of speech/ aphonia) and *śītajvara* (fever with chills).

(VI) Ṣaṣṭha (sixth) vega of rājimanta sarpa

As per Ācārya Suśruta :

पूर्ववदिति ।। SS.K. 4.39

During the *ṣaṣṭha* (sixth) *vega* of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *majjā* and its features are *pūrvavat* (i.e. similar to *ṣaṣṭha* (sixth) *vega* of *darvīkara sarpa*).

Table No. 13.6

Veṅga	<i>Darvikara sarpa</i>	<i>Māṅḍalin sarpa</i>	<i>Rājīmanta sarpa</i>
<i>Pravāha</i> (first) <i>veṅga</i>	<ul style="list-style-type: none"> • vitiation of <i>śoṇita</i> (blood) • <i>kṛṣṇa</i> (blackish) discolouration of <i>śoṇita</i> (blood) • <i>karṣṇya</i> (blackish discolouration of the body) • feeling of <i>pipilika pari-sarpaṇa</i> (crawling ants) over the <i>aṅga</i> (body) 	<ul style="list-style-type: none"> • vitiation of the <i>śoṇita</i> (blood) & acquiring of <i>pitatā</i> (yellowishness) • <i>paridāha</i> (generalized burning sensation) • <i>pitāvabhāsata</i> (yellowish discolouration) in the <i>aṅga</i> (body) 	<ul style="list-style-type: none"> • vitiation of the <i>śoṇita</i> (blood) & attaining <i>pāṇḍutā</i> (paleness) • <i>romaharṣa</i> (horripilation) • <i>śuklavabhāsata</i> (whitish discolouration)
<i>Dvītiya</i> (second) <i>veṅga</i>	<ul style="list-style-type: none"> • vitiation of <i>māṁsa</i> (muscle tissues) • <i>atyartha kṛṣṇatā</i> (marked blackishness) • <i>śopha</i> (swelling) and <i>granthi</i> (cysts) in the <i>aṅga</i> (body) 	<ul style="list-style-type: none"> • vitiation of <i>māṁsa</i> (muscle tissues) • profuse <i>pitatā</i> (yellowishness) • <i>paridāha</i> (generalized burning sensation) • <i>śvayathu</i> (swelling) at the site of <i>damśa</i> (bite) 	<ul style="list-style-type: none"> • vitiation of <i>māṁsa</i> (muscle tissues) • intense <i>pāṇḍutā</i> (paleness) • <i>jāḍya</i> (stiffness / rigidity) • <i>śiraśśopha</i> (swelling in head region)
<i>Tṛtīya</i> (third) <i>veṅga</i>	<ul style="list-style-type: none"> • vitiation of the <i>medaḥ</i> (fat) • <i>damśakleḍa</i> (moistening of site of bite) • <i>śirogaurava</i> (heaviness of head) • <i>sveda</i> (sweating) • <i>caḅṣu-grahaṇa</i> (stiffness of eyes) 	<p>vitiates the <i>medaḥ</i> (fat) and causes <i>caḅṣurgrahaṇa</i> (stiffness in eyes), <i>tṛṣṇā</i> (thirst), <i>damśakleḍa</i> (moistening of site of bite) and <i>sveda</i> (sweating)</p>	<p>vitiates the <i>medaḥ</i> (fat) and causes <i>caḅṣurgrahaṇa</i> (stiffness in eyes), <i>damśakleḍa</i> (moistening of site of bite), <i>sveda</i> (sweating), <i>ghrāṇasrāva</i> (nasal discharge) and <i>akṣisrāva</i> (ocular discharge)</p>
<i>Caturtha</i> (fourth) <i>veṅga</i>	<ul style="list-style-type: none"> • <i>viṣa</i> (poison) inhabits the <i>koṣṭha</i> (GIT) • vitiation of the <i>doṣas</i> predominantly <i>kapha tandrā</i> (lassitude) • <i>praseka</i> (salivation) • <i>sandhiviśleṣa</i> (laxity of joints) 	<ul style="list-style-type: none"> • <i>viṣa</i> (poison) inhabits the <i>koṣṭha</i> (GIT) • <i>jvara</i> (fever) 	<ul style="list-style-type: none"> • inhabits the <i>koṣṭha</i> (GIT) • <i>manyāstambha</i> (neck stiffness) • <i>śirogaurava</i> (heaviness of head)
<i>Pañcama</i> (fifth) <i>veṅga</i>	<ul style="list-style-type: none"> • vitiation of the <i>asthi</i> (bone) • vitiation of the <i>prāṇa</i> (life) and <i>agni</i> (digestive fire) • <i>parvabheda</i> (arthralgia) • <i>hikkā</i> (hiccough) • <i>dāha</i> (burning sensation) 	<ul style="list-style-type: none"> • vitiation of <i>asthi</i> (bone) • <i>paridāha</i> (generalized burning sensation) in <i>sarvagātras</i> (all the body parts) 	<ul style="list-style-type: none"> • vitiation of <i>asthi</i> (bone) • <i>vāksaṅga</i> (loss of speech/aphonia) • <i>śitajvara</i> (fever with chills)

S.No.	Vega	Darvikara sarpa	Maṇḍalin sarpa	Rājimanta sarpa
6.	Ṣaṣṭha (sixth) vega	<ul style="list-style-type: none"> • vitiation of the <i>majjā</i> • aggressive vitiation of the <i>grahaṇī</i> (duodenum) • <i>gātra gaurava</i> (heaviness in the body) • <i>atisāra</i> (diarrhoea) • <i>hṛtpīḍā</i> (cardiac pain) • <i>mūrcchā</i> (fainting) 	<ul style="list-style-type: none"> • similar to <i>ṣaṣṭha</i> (sixth) vega of <i>darvikara sarpa</i> 	<ul style="list-style-type: none"> • similar to <i>ṣaṣṭha</i> (sixth) vega of <i>darvikara sarpa</i>
7.	Saptama (seventh) vega	<ul style="list-style-type: none"> • vitiation of the <i>śukra</i> along with intense vitiation of <i>vyāna vāyu</i> • discharge of <i>kapha</i> into <i>sūkṣma srota</i> (smaller channels) of the body • appearance of <i>śleṣmavartī</i> (mucus wick) • <i>bhaṅga</i> (breaking pain) in <i>kaṭī</i> (waist) and <i>prṣṭha</i> (back) • <i>sarva ceṣṭāvighāta</i> (diminution of all movements) • <i>atipravṛtti</i> (excessive discharge) of <i>lālā</i> (saliva) and <i>sveda</i> (sweat) • <i>ucchvāsa nirodha</i> (cessation of breathing) 	<ul style="list-style-type: none"> • similar to <i>saptama</i> (seventh) vega of <i>darvikara sarpa</i> 	<ul style="list-style-type: none"> • similar to <i>saptama</i> (seventh) vega of <i>darvikara sarpa</i>

(VII) Saptama (seventh) vega of rājimanta sarpa

As per Ācārya Suśruta :

पूर्ववदिति ।।

SS.K. 4.39

During the *saptama* (seventh) vega of *rājimanta sarpa*, the *viṣa* (poison) vitiates the *śukra* and its features are *pūroavat* (i.e. similar to *saptama* (seventh) vega of *darvikara sarpa*).

Features of poisonous & non-poisonous snakes

Features of poisonous snakes

- Scales on the head are small to large with conspicuous pit between the eyes and nostrils. Third labial touches the eyes and the nasal shields.
- Scales on the belly are large and they envelop the whole extent of belly.
- Fangs are long, grooved or canalized.

- Teeth - two long fangs.
- Tail is compressed.
- Poisonous snakes are nocturnal in nature.
- Bite marks - two marks of fangs with or without marks of other smaller teeth.

Features of non-poisonous snakes

- Scales on the head are large.
- Scales on the belly are small to moderately large in size and they fall short or covering the whole belly.
- Fangs are short and solid.
- Teeth are numerous but small.
- Tail is not markedly compressed.
- Non-poisonous snakes are not nocturnal in nature.
- Bite marks - numerous teeth in a row.

Poisonous snakes, on the basis of their venoms, are classified into following three

- Elapid
- Viper and Sea snakes.
- Elapids - The venom of elapids is neurotoxic in nature.
- Vipers - The venom of vipers is vasculotoxic in nature.
- Sea snakes - The venom of sea snakes is musculo-toxic in nature.

Commonly found snakes in India

Ancistrodon himalayanus

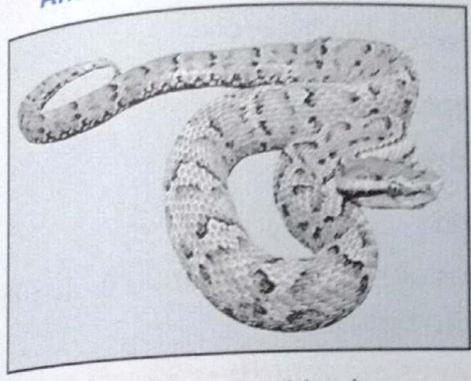


Fig. 13.1 : Ancistrodon himalayanus

English name

- Himalayan Pit Viper or Himalayan Viper

Family

- Viperidae

Introduction

- It is a venomous snake.

Habitat

- It is found in Himalayan belt of India; it is also found in Kashmir and Punjab.

Type of venom

- Hemotoxic

Description

- Its average length is 2.5 to 3 feet.
- The head is noticeably wide and elongated, with proportionally arranged large scales.
- The dorsal scales are strongly keeled.

- An elongated postocular extends anteriorly to separate the eye from the supralabials.
- The dorsum is brownish, mottled or variegated to form a pattern of transverse bars.
- Ventral scales are white with black and red dots or speckles.

Viper russelii/ Russell's viper

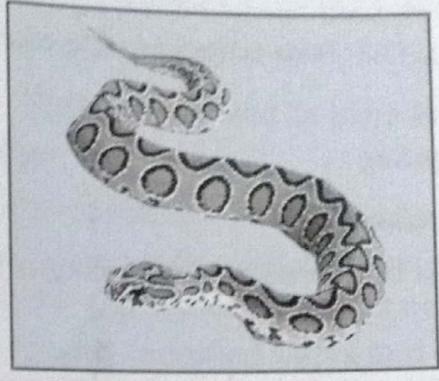


Fig. 13.2 : Viper russelii/ Russell's viper

Family

- Viperidae

Scientific Name

- Daboia russelii or Viper russelii

English names

- Daboia/ Russell's viper/ Chain viper etc.

Distribution

- It is distributed throughout India upto Assam.

Venom Type

- Haemotoxic

Description

- Its average length is 3 to 4.5 feet.
- It can be easily recognized by robust and stout body covered with keeled scales.
- Its head is triangular, pointed with small keeled scales.
- Two triangular shaped spots of rounded edge present on the top.
- The tail is small with pointed tip and is covered with typical keeled scales.

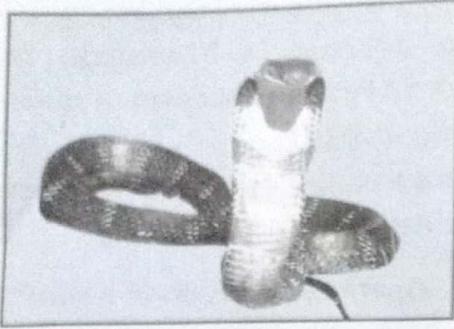
Naga bungarus or King cobra

Fig. 13.3 : Naga bungarus or King cobra

Family

- Elapidae

Scientific Name

- Naga bungarus or Ophiophagus hannah

Habitat

- These are found in low to moderate elevation up to 2005 m.
- In India these are found in Western Ghats, eastern coastline of Andhra and Odisha; Sundarbans etc.

Venom Type

- Neurotoxic

Description

- These are easily identified due to very large and heavy body marked with light bands.
- Its average length is 8 to 10 feet.
- The body is very long, slender and covered with large size smooth scales.
- Dorsal colour varies according to geographical locations.
- Bands of hood region are inverted V shaped and are known for having characteristic to recognize each individual.
- Head is large with rounded snout, covered with large shields and slightly broader than neck.
- Tail is long with pointed tip.

Bungarus Caeruleus**Family**

- Elapidae



Fig. 13.4 : Bungarus Caeruleus

Scientific Name

- Bungarus caeruleus

English

- Common Indian Krait

Distribution

- All over the India.

Venom Type

- Neurotoxic

Description

- It has shiny black colored body with milky white bands.
- Its average length is 90 to 120 cm.
- Its head is depressed with rounded snout and is slightly broader than the neck.
- Its tail is prehensile, shorter and ends with pointed tip.

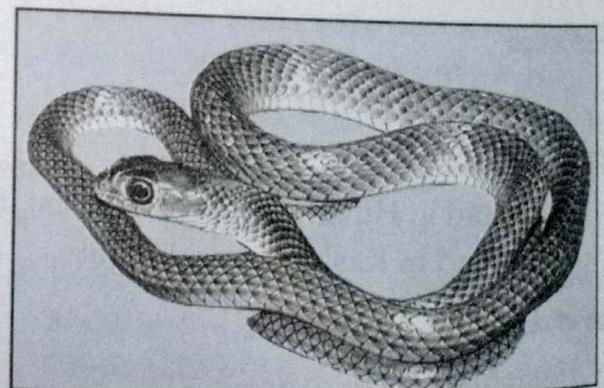
Zamenis mucosus

Fig. 13.5 : Zamenis mucosus

Scientific Name

- Zamenis mucosus or Ptyas mucosa

Family

- Colubridae

English name

- Oriental Rat Snake

Habitat

- The rat snake is found all over India including North-east and Andaman Islands.

Venom

- Non-toxic

Description

- The body is very long with dark color patterns on the whole dorsal surface.
- Its average length is 6 to 7 feet.
- The head is pointed, not depressed with shiny smooth scales, clearly broader than the neck.
- The tail is long and slender.

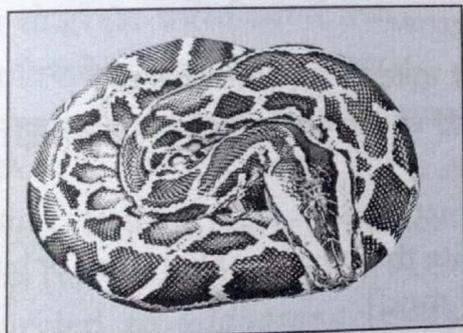
Python molurus

Fig. 13.6 : Python molurus

Scientific Name

- Python molurus

Family

- Pythonidae

English

- Black-tailed Python

Hindi

- Ajgar

Habitat

- It is found in most of the Indian States.

Venom

- Non-toxic

Description

- It is easily identified by checking its large size, dark irregular patches, pinkish head and slow locomotion.

- It is average length is 7 to 12 feet.
- The body is thick with shiny smooth scales.
- Dorsal surface is full of irregular shaped patches of dark brown or blackish color.
- The head is triangular, clearly broader than neck.
- Heat sensitive pits are found laterally on snout.
- The tail is short and has dark yellow and black reticulations.

Snake venom and its toxicity**Introduction**

- Snake venom is the saliva of the snake.
- It is yellowish in color, transparent, clear, viscous and slightly sticky in nature.
- It is highly modified saliva and contains zootoxins that facilitates the immobilization and digestion of prey, and also defends against a threat.

Composition

- proteolytic enzymes
- phosphatidases
- cholinesterases
- neurotoxins
- hyaluronidase
- lecithinase
- proteases

History

- Charles Lucien Bonaparte was the first to establish the proteinaceous nature of snake venom.

Types

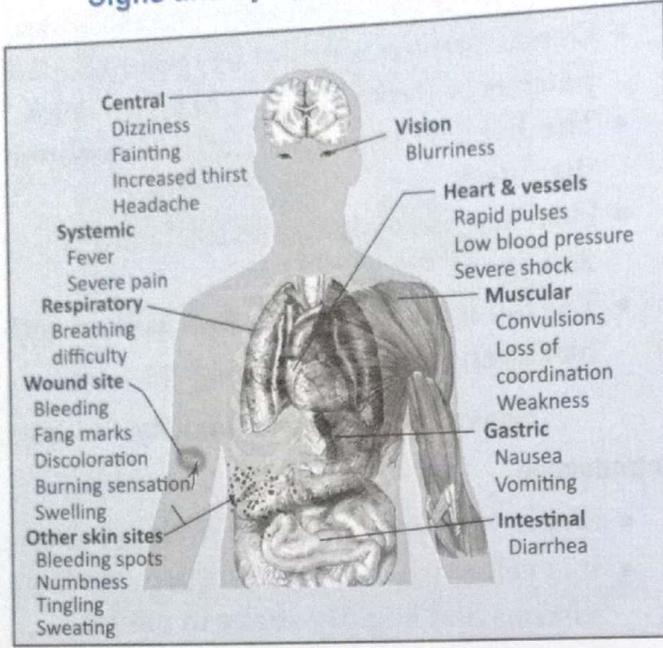
- Hemotoxic venom
- Neurotoxic venom
- Myotoxic venom
- Cytotoxic venom

Sarpa-damśa (snake bite)

Toxicologists categorize snake bite into :

- purposeful or deliberate biting
- self-protection biting

Signs and symptoms of snake bite



Russells' Viper

- Edema and excruciating pain at the site
- Failure of clotting
- Rupturing of blood vessels and bleeding
- Cardiac arrest due to presence of cardio-toxin in the venom
- Death (due to shock and hemorrhages)

Cobra

- Painless bite is immediately followed by intoxication
- Loss of consciousness
- Disturbed gait
- Loss of functions of tongue etc.
- Loss of speech
- Frothy mouth
- Nausea and vomiting
- Difficulty in breathing etc.

Krait

- Acute abdominal pain (due to hemorrhage)
- Few signs quoted under Cobra are also seen
- Death due to respiratory arrest.

Treatment of *sarpa-damśa* (snake bite)

(I) As per Ācārya Caraka :

दष्टमात्रो दशेदाशु तं सर्पं लोष्टमेव वा ।
उपर्यरिष्टां बध्नीयादंशं छिन्द्याद्देहत्था ॥ CS.Ci. 23.251

Immediately after the *sarpa-damśa* (snake bite), the victim should bite the *sarpa* (snake) itself or bite a *loṣṭa* (lump of mud). This should be followed by tying of an *ariṣṭā* (tourniquet) above the site of bite and doing *chedana* (incision) and *dahana* (cauterization) of the site.

As per Ācārya Vṛddha Vāgbhaṭa :

मात्राशतं विषं स्थित्वा दंशो दष्टस्य देहिनः ।
देहं प्रक्रमते धातून् रुधिरादीन् प्रदूषयत् ॥
एतस्मिन्नन्तरे कर्म दंशस्योत्कर्तनादिकम् ।
कुर्याच्छीघ्रं यथा देहे विषवल्ली न रोहति ॥

AS.Ut. 42.2-3

Viṣa (poison) stays for a period of hundred *mātrā* at the site of *damśa* (bite) and then it vitiates *rudhira* (blood) and other *dhātus* (bodily tissues); so, within this period, *utkartana* (incising) of site of *damśa* (bite) should be done promptly such that the *viṣavallī* (poisonous creeper) doesn't grow.

दष्टमात्रो दशेदाशु तमेव पवनाशिनम् ।

लोष्टं महीं वा दशनैश्छित्त्वा वानु ससम्भ्रमम् ॥

AS.Ut. 42.4

Person bitten by *sarpa* (snake), immediate, should bite the *sarpa* (snake) itself or bite a *loṣṭa* (lump of mud).

(II) As per Ācārya Vṛddha Vāgbhaṭa :

निष्ठीवेन समालिम्पेदंशं कर्णमलेन वा ।

दंशस्योपरि बध्नीयादरिष्टां चतुरंगुले ।

क्षौमादिभिर्वेणिकया सिद्धैर्मन्त्रैश्च मन्त्रवित् ॥

बन्धो देशानुसारेण नातिगाढश्लथो हितः ।

दंशपूतित्वशोफादीन् कुरुते ह्यतिपीडितः ।

अशक्तः शिथिलो रोद्धुं विषं देशान्तरं व्रजत् ॥

अम्बुवत् सेतुबन्धेन बन्धेन स्तभ्यते विषम् ।

न वहन्ति सिराश्चास्य विषं बन्धाभिपीडिताः ॥

AS.Ut. 42.5-7

Site of *damśa* (bite) should be smeared with *niṣṭhīva* (sputum) or *karnamala* (ear wax). An *ariṣṭā* (tourniquet), made of *kṣauma* (thread of flax) etc. or *veṇikā* (hair) fortified with *siddha mantra* (powerful incantations) and four finger breath, should be tied above the site. Depending upon the *deśa* (site), *bandha* (tying of tourniquet) should neither be very *gāḍha* (tight) nor very

slatha (loose) and it should be *hita* (beneficial); *atipīḍita bandha* (extremely tight tourniquet) causes *pūtitva* (putrefaction) of site of *daṁśa* (bite) along with *śopha* (oedema) etc. and the one which is *śithila* (loose/slack) will fail to arrest *viṣa* (poison) from going *deśāntara* (other sites).

Just as *ambu* (water) is hindered by *setu* (dam), so is *viṣa* (poison) by *ariṣṭā* (tourniquet) and thus preventing flow into the *sirās* (vessels).

Drugs useful in *sarpa daṁśa* (snake bite)

- ◆ *Aparājitā* ◆ *Dāruharidrā*
- ◆ *Apāmārga* ◆ *Nāgadamanī*
- ◆ *Kākajaṅghā* ◆ *Mayūrasikhā*
- ◆ *Kāñcanāra* ◆ *Śirīṣa*
- ◆ *Ciñcā* ◆ *Haridrā*
- ◆ *Taṇḍulīyaka* ◆ *Haridrā*

(III) As per *Ācārya Vṛddha Vāgbhaṭa* :

निष्पीड्य चोद्धरेदंश मर्मसन्धिगतं तथा ।

न जायते विषावेगो बीजनाशादिवाङ्कुरः ।

मर्मगे प्राप्नुयान्मृत्युं सन्धिस्थे विकलाङ्गताम् ॥

AS.Ut. 42.8

Daṁśa (fangs/ teeth) which are not embedded in *marma* (vital parts) or *sandhi* (joints) should be subjected to *uddharaṇa* (extraction) by *niṣpīḍana* (pressing) of surrounding parts; this will prevent *viṣāvega* (spreading of poison) just as an *aṅkura* (sprout) is lost when the *bīja* (seed) is destroyed. Extraction of fangs from site of *daṁśa* (bite) located in *marma* (vital parts) causes death of the patient and from *sandhi* (joints) causes *vikalāṅgatā* (distortion of body).

(IV) As per *Ācārya Vṛddha Vāgbhaṭa* :

दंश मण्डलिनां मुक्त्वा पित्तलत्वादथापरम् ।

प्रतप्तैर्हेमलोहाद्यैर्दहेदाशूल्मुकेन वा ।

करोति भस्मसात् सद्यो वह्निः किं नाम न क्षणात् ।

AS.Ut. 42.9

All sites of *daṁśa* (bite) should be subjected to *dahana* (cauterization) using heated rods of *hema* (gold), *loha* (iron) etc. or even by a burning *ulmuka* (faggot). The *vahni* (fire) converts everything into *bhasma* (ash). This procedure

is inapt in case of bite by *maṇḍali sarpa* which are predominant in *pitta*.

(V) As per *Ācārya Vṛddha Vāgbhaṭa*-

आचूषेत् पूर्णवक्त्रो वा मृद्भस्मागदगोमयैः ।

प्रच्छयान्तरिष्ठायां मांसलं तु विशेषतः ॥ AS.Ut. 42.10

Physician should do *ācūṣaṇa* (sucking) of poison by filling his *vaktra* (mouth) with *mṛd* (mud), *bhasma* (ash), *agada* (anti-poisonous formulae) or *gomaya* (cow dung). The site for sucking should be below the *ariṣṭā* (tourniquet) and it should be *māmsala* (fleshy).

(VI) As per *Ācārya Vṛddha Vāgbhaṭa*

अङ्गं सहैव दंशेन लेपयेदगदैर्मुहुः ।

चन्दनोशीरयुक्तेन सलिलेन च सेचयेत् ॥ AS.Ut. 42.11

The entire body along with site of *daṁśa* (bite) should be smeared frequently with the *lepa* (paste) of *agada* (anti-poisonous recipes) and *secana* (irrigation) should be done using water processed with *candana* and *uśīra*.

(VII) As per *Ācārya Vṛddha Vāgbhaṭa*

विषे प्रविसृते विध्येत् सिरां सा परमा क्रिया ।

रक्ते निर्हियमाणे हि कृत्स्नं निहियते विषम् ।

दुष्टे हि व्याप्नुयादङ्गं ध्रुवं मृत्युर्भवत्यतः ॥

AS.Ut. 42.12-13

Viṣa (poison) spreading in various parts of the body should be paused by *sirāvedhana* (venesection) and this is the best *kriyā* (therapy). If *rakta* (blood) is not removed out, the *viṣa* (poison) removes (destroys) everything; and this venomous *rakta* (blood), spreading in all the body parts, is sure to kill the patient.

सिरास्वदृश्यमानासु योज्याः शृङ्गजलौकसः ॥

AS.Ut. 42.16

If *sirās* (veins) are not visible for venesection then a *śṛṅga* (sucking horn) or *jalaukā* (leech) may be used.

(VIII) As per *Ācārya Vṛddha Vāgbhaṭa*

शोणितं स्तुतशेषं च प्रविलीनं विषोष्मणा ।

लेपसेकैः सुबहुशः स्तम्भयेद् भृशशीतलैः ॥

अस्कन्ने विषवेगाद्धि मूर्च्छयमदहदद्रवाः ।

भवन्ति तान् जयेच्छ्रीतैर्वीजेच्चारोमहर्षतः ॥

AS.Ut. 42.17-18

Ṣoṇita (blood) which is *srutaśeṣa* (residual after venesection) and which is *pravilīna* (more liquefied) due to *uṣmā* (heat) of *viṣa* (poison) should be subjected to *stambhana* (stoppage/arrest) using extremely *śītala* (cold) *lepa* (anointments) and *seka* (irrigations).

Askanna ṣoṇita (blood failing to clot) due to *viṣavega* (impetuosity of poison) causes *mūrcchā* (fainting), *mada* (intoxication) and *hr̥ddrava* (palpitation); these are treated by *śīta* (cold) measures and fanning the patient till he gets *romaharṣa* (horripilation).

(IX) As per *Ācārya Vṛddha Vāgbhaṭa* :

विषं कर्षति तीक्ष्णत्वाद् हृदयं तस्य गुप्तये ।
पिबेद् घृतं घृतक्षौद्रमगदं वा घृताप्लुतम् ॥
मज्जानं गोमयरसं भस्माम्भः कृष्णमृज्जलम् ।
ऐक्यं पञ्चगव्यं वा दधि गैरिकवारि वा ॥

AS.Ut. 42.19-20

Viṣa (poison) by its *tīkṣṇa* (sharp) property causes *karṣaṇa* (wearying) of *hr̥daya* (heart); to evade this patient should be made to drink *ghṛta* (ghee) or *ghṛta* (ghee) mixed with *kṣaudra* (honey) or *agada* (anti-poisonous recipe) with *ghṛta* (ghee).

Majjā (bone marrow), *gomaya rasa* (juice of cow dung), *bhasmāmbha* (ash mixed in water), *kṛṣṇa mṛttikā jala* (black mud mixed in water), *pañcagavya* (cow's milk + cow's curd + cow's ghee + cow's urine + cow's dung) mixed together, *dadhi* (curd) or *gairikavāri* (ochre dissolved in water) - may be given for drinking.

खादेद्वा कोविदारार्कशिरीषकटभीच्छदान् ।
छागमेषवराहासृक्शिशुस्थविरयोषितः ॥
पिबेयुर्गर्भिणी शीतमधुरान् पयसागदान् ।
तथा मूर्च्छादयो न स्युर्विषं चाश्चेतिनानिलम् ॥

AS.Ut. 42.21-22

Paste of bark of *kovidāra*, *arka*, *śirīṣa*, *kaṭabhī* should be licked.

Śīśu (children), *sthavira* (elderly) and *yoṣita* (women) may drink *asṛk* (blood) of *chāga* (goat), *meṣa* (sheep) or *varāha* (boar)

Garbhinī (pregnant woman) may drink *payah* (milk) added with *agada* (anti-poisonous recipe) of *śīta* (cold) and *madhura* (sweet) ingredients.

By these *mūrcchā* (fainting) etc. are avoided and *viṣa* (poison) is thrown out of the body and not the *anila* (life) itself.

(X) As per *Ācārya Vṛddha Vāgbhaṭa*

हृदयावरणेनास्य श्लेष्मा हृद्युपचीयते ।
प्रवृत्तगौरवोत्क्लेशहृल्लासं वामयेत्ततः ॥
द्रवैः काञ्जिककौलत्थतैलमद्यादिवर्जितैः ।
वमनैर्विषहृद्भिश्च नैवं व्याप्नोति तद्रूपः ॥

AS.Ut. 42.23-24

Hṛdayāvaraṇa (cardio-protective measure) causes aggravation of *śleṣma* which accrues in the *hr̥daya* (heart) and results in *gaurava* (heaviness), *utkleśa* (salivation) and *hr̥llāsa* (nausea); hence, the patient should be subjected to *vamana* (emesis) using drugs which are *viṣahr̥t* (anti-poisonous); but *drava* (liquids) such as *kāñjika* (sour gruel), soup of *kulattha*, *taila* (oil), *madya* (alcohol) etc. should be avoided as they may cause dispersal of *viṣa* (poison) all over.

(XI) As per *Ācārya Vṛddha Vāgbhaṭa*

भुजंगदोषप्रकृतिस्थानवेगविशेषतः ।
सुसूक्ष्मं सम्यगालोच्य विशिष्टां चाचरेत्क्रियाम् ॥

AS.Ut. 42.20

Viśiṣṭa kriyā (special therapeutics) should be adopted after meticulous observation of *prakṛti* (nature) of *bhujāṅga* (snake), *doṣa*, *sthāna* (site) and *vega* (stage of poisoning).

Formulae for treatment of bite by *darvīkara sarpa*

As per *Ācārya Vṛddha Vāgbhaṭa* :

(A) सिन्दुवारकमूलानि रसेन स्वेन पेषयेत् ।
मधुयुक्तोयमगदः पानं दर्वीकृतां विषे ॥

AS.Ut. 42.26

Mūla (root) of *sinduvāraka* is macerated with its own *svarasa* (juice) and served with *madhu* (honey) is a potent *agada* (anti-poisonous formulae) for *viṣa* (venom) of *darvīkara sarpas*.

(B) सिन्दुवारकमूलानि श्वेता च गिरिकर्णिका ।
पानं दर्वीकरैर्दष्टे ॥

AS.Ut. 42.27

Mūla (root) of *sinduvāraka*, *śvetā* and *girikarṇikā* are made into a paste and consumed for abating *viṣa* (venom) of *darvīkara sarpas*.

(C) नस्यं मधु सपाकलम् ॥

AS.Ut. 42.27

Pākala (*kuṣṭha*) and *madhu* (honey) are used as *nasya* (errhine) for pacifying *viṣa* (venom) of *darvīkara sarpas*.

(D) कृष्णसर्पेण दष्टस्य लिम्पेद्दंशं हृतेऽसृजि ।
चारटीनाकुलीभ्यां वा तीक्ष्णमूलविषेण वा ॥

AS.Ut. 42.28

Daṣṭa (bite) of *kṛṣṇa sarpa* (black snake) is treated by relieving of *asṛk* (blood) from the site and applying *lepa* (paste) of *cāraṭī* and *nākulī* or a *tīkṣṇa* (strong) *mūlaviṣa* (root poison).

(E) पानं च क्षौद्रमञ्जिष्ठागृहधूमयुतं घृतम् ॥

AS.Ut. 42.29

Ghṛta (ghee) added with *kṣaudra* (honey), *mañjiṣṭhā* and *grhadhūma* (kitchen soot) should be gulped.

(F) तण्डुलीयककाश्मर्यकिणिहीगिरिकर्णिकाः ।
मातुलुंगी सिता सेलुः पाननस्याञ्जने हितः ।
अगदः फणिनां घोरे विषे राजीमतामपि ॥

AS.Ut. 42.30

Agada (anti-poisonous recipe) made of *taṇḍulīyaka*, *kāśmarya*, *kiṇihī*, *girikarṇikā*, *mātuluṅgī*, *sitā* (*śveta vacā*) and *śelu* are used for *pāna* (drinking), *nasya* (errhines), *añjana* (collyrium) in case of bite by *phaṇi sarpa* and *rājimat sarpa*.

Formulae for treatment of bite by *rājimāna sarpa*

As per *Ācārya Vṛddha Vāgbhaṭa* :

कटुकातिविषाकुष्ठगृहधूमहरेणुकाः ।
सक्षौद्रव्योषतगरा घ्नन्ति राजिमतां विषम् ॥

AS.Ut. 42.36

Kaṭukā, *ativiṣā*, *kuṣṭha*, *grhadhūma*, *hareṇuka*, *vyoṣa* and *tagara* are made into a paste and mixed with *kṣaudra* (honey) consumed; this destroys venom of *rājimat sarpa*.

Formulae for treatment of bite by *maṇḍalin sarpa*

As per *Ācārya Vṛddha Vāgbhaṭa* :

(A) समाः सुगन्धामृद्धीकाश्चेताख्यागजकर्णिकाः ।
अर्द्धांशं सौरसं पत्रं कपित्थ बिल्वदाडिमम् ।
सक्षौद्रो मण्डलिविषे विशेषादगदो हितः ॥

AS.Ut. 42.31

Equal parts of *sugandhā*, *mṛdvīkā*, *śvetākhyā*, *gajakarṇikā*, leaves of *surasā*, *kapittha*, *bilva* and *dāḍīma* made into a paste and mixed with *kṣaudra*

(honey) is used as an *agada* (anti-poisonous recipe) for *maṇḍali sarpa*.

(B) पञ्चवल्कलवरायष्टी नागपुष्पैलवालुकम् ।
जीवकर्षभकौ शीतं सिता पद्मकमुत्पलम् ॥
सक्षौद्रो हिमवान् नाम हन्ति मण्डलिनां विषम् ।
लेपाच्छ्वयथुवीसर्पविस्फोटज्वरदाहहा ॥

AS.Ut. 42.32-33

Bark of *pañcavalkala*, *varā*, *yaṣṭī*, *nāgapuṣpa*, *elavāluka*, *jīvaka*, *ēṣabhaka*, *śita*, *sitā*, *padmaka* and *utpala* are made into a paste and used after mixing with *kṣaudra* (honey). This recipe is known as *Himavān agada* and it destroys *viṣa* (venom) of *maṇḍali sarpa*; its *lepa* (anointment) pacifies *śvayathu* (swell-ing), *vīsarpa* (cellulitis), *viṣphoṭa* (blisters), *jvara* (fever) and *dāha* (burning sensation).

(C) काश्मर्यं वटशृंगानि जीवकर्षभकौ सिताम् ।
मञ्जिष्ठां मधुकं चेति दष्टो मण्डलिना पिबेत् ॥

AS.Ut. 42.34

Paste of *kāśmarya*, *śuṅga* (young shoots) of *vaṭa*, *jīvaka*, *ēṣabhaka*, *sitā* (*vacā*), *mañjiṣṭhā* and *madhukais* useful in pacifying *viṣa* (venom) of *maṇḍali sarpa*.

Formulae for treatment of bite by *gonasa sarpa*

As per *Ācārya Vṛddha Vāgbhaṭa* :

वंशत्वग्बीजकटुका पाटलीबीजनागरम् ।
शिरीषबीजातिविषे मूलं गावेधुकं वचाम् ।
पिष्टो गोवारिणाष्टांगो हन्ति गोनसजं विषम् ॥

AS.Ut. 42.35

Tvak (bark) of *vaṁśa*, *kaṭukā*, *bīja* (seeds) of *pāṭalī*, *nāgara*, *bīja* (seeds) of *śirīṣa*, *ativiṣā*, *mūla* (roots) of *gavedhuka* and *vacā* are made into a paste with *govāri* (cow's urine). This recipe is known as *Aṣṭāṅga agada* and it pacifies *viṣa* (poison) of *gonasa sarpa*.

Treatment of snake bite as per the *vegas* {velocity}

(A) Treatment of various *vegas* of *darvī-kara sarpa* bite:

As per *Ācārya Suśruta* :

फणिनां विषवेगे तु प्रथमे शोणितं हरेत् ।
द्वितीये मधुसर्पिभ्यां पाययेतागदं भिषक् ॥
नस्यकर्माञ्जने युञ्ज्यात्तृतीये विषनाशने ।
वान्तं चतुर्थे पूर्वाक्तां यवागूमथ दापयेत् ॥
शीतोपचारं कृत्वाऽऽदौ भिषक् पञ्चमषष्ठयोः ।
पाययेच्छोधनं तीक्ष्णं यवागूं चापि कीर्तिताम् ॥

सप्तमे त्ववपीडेन शिरस्तीक्ष्णेन शोधयेत् ।
तीक्ष्णमेवाञ्जनं दद्यात्, तीक्ष्णशस्त्रेण मूर्ध्नि च ॥
कृत्वा काकपदं चर्म सासृग्वा पिशितं क्षिपेत् ।

SS.K. 5.20-24

Table No. 13.7

S.No.	Vega	Treatment
1.	Prathama (first) vega	raktamokṣaṇa (blood letting)
2.	Dvitiya (second) vega	agada + madhu (honey) + sarpi (ghee)
3.	Tṛtiya (third) vega	viṣa-nāśana (anti-venomous) nasya-karma (medicated errhines) and aṅjana-karma (medicated collyrium)
4.	Caturtha (fourth) vega	vamana karma (emesis) followed by consuming of yavāgū (gruel) quoted under sthāvara viṣa (immobile poisons)
5.	Pañcama (fifth) vega	initially, śītopacāra (cold measures); followed by tikṣṇa śodhana (strong purgation) and consumption of yavāgū (gruel)
6.	Ṣaṣṭha (sixth) vega	initially, śītopacāra (cold measures); followed by tikṣṇa śodhana (strong purgation) and consumption of yavāgū (gruel)
7.	Saptama (seventh) vega	(1) tikṣṇa avapīḍa nasya (strong powdered errhines) for śīraḥ śodhana (cleansing of head region) (2) tikṣṇa aṅjana (strong collyrium) (3) kākapada (similar to crow's feet) incision on the mūrdhā (scalp) using tikṣṇa śastra (sharp instruments) followed by placing carma (skin) or piśita (flesh) with asṛk (blood)

(B) Treatment of various vegas of maṅḍalin sarpa-bite:

As per Ācārya Suśruta :

पूर्वे मण्डलिनां वेगे दर्वीकरवदाचरेत् ॥
अगदं मधुसर्पिर्भ्यां द्वितीये पाययेत् च ।

वामयित्वा यवागूं च पूर्वोक्तामथ दापयेत् ॥
तृतीये शोधितं तीक्ष्णैर्यवागूं पाययेद्भिताम् ॥
चतुर्थे पञ्चमे चापि दर्वीकरवदाचरेत् ॥
काकोल्यादिर्हितः षष्ठे पेयश्च मधुरोऽगदः ।
हितोऽवपीडे त्वगदः सप्तमे विषनाशनः ॥ SS.K. 5.24-27

Table No. 13.8

S.No.	Vega	Treatment
1.	Prathama (first) vega	raktamokṣaṇa (blood letting)
2.	Dvitiya (second) vega	(1) agada + madhu (honey) + sarpi (ghee) (2) vamana karma (emesis) followed by consuming of yavāgū (gruel)
3.	Tṛtiya (third) vega	tikṣṇa śodhana (strong purgation) followed by consuming of yavāgū (gruel)
4.	Caturtha (fourth) vega	similar to that of darvikara sarpa
5.	Pañcama (fifth) vega	similar to that of darvikara sarpa
6.	Ṣaṣṭha (sixth) vega	consuming drugs of kākol-yādi gaṇa or madhura (sweetish) agadas
7.	Saptama (seventh) vega	consumption of viṣa-nāśana agada (anti-venom drugs) and avapīḍa nasya (powdered errhines)

(C) Treatment of various vegas of rājimāna sarpa-bite:

As per Ācārya Suśruta :

पूर्वे राजिमतां वेगेऽलाबुभिः शोणितं हरेत् ।

अगदं मधुसर्पिर्भ्यां संयुक्तं पाययेत् च ॥

वान्तं द्वितीये त्वगदं पाययेद्विषनाशनम् ।

तृतीयादिषु त्रिष्वेवं विधिर्दार्वीकरो हितः ॥

षष्ठेऽञ्जनं तीक्ष्णतममवपीडश्च सप्तमे । SS.K. 5.28-30

Table No. 13.9

S.No.	Vega	Treatment
1.	Prathama (first) vega	raktamokṣaṇa (blood letting) using alābu (gourd)
2.	Dvitiya (second) vega	vamana karma (emesis) followed by consuming of agada + madhu (honey) + sarpi (ghee)

S.No.	Vega	Treatment
3.	Tṛtīya (third) vega	similar to that of darvikara sarpa
4.	Caturtha (fourth) vega	similar to that of darvikara sarpa
5.	Pañcama (fifth) vega	similar to that of darvikara sarpa
6.	Ṣaṣṭha (sixth) vega	tikṣṇa añjana (strong collyrium)
7.	Saptama (seventh) vega	avapīḍa nasya (powdered errhines)

Treatment of viṣa (venom) reaching various tissues and organs

(A) Treatment of rasagata viṣa (venom reaching rasa)

As per Ācārya Vṛddha Vāgbhaṭa :

रक्तं मांसं च गोधायाः शुष्कं चूर्णीकृतं हितम् ।

विषे रसगते पानं कपित्थरससंयुतम् ॥ AS.Ut. 42.43

Rakta (blood) and māmsa (flesh) of godhā (iguana lizard) is dried and powdered and added with kapittha rasa and consumed in case of rasagata sarpaviṣa (snake venom reaching the plasma).

(B) Treatment of raktagata viṣa (venom reaching blood)

As per Ācārya Vṛddha Vāgbhaṭa :

शेलुमूलत्वगग्राणि बादरोदुम्बराणि च ।

कटभ्याश्च पिबेद्रक्तगते ॥ AS.Ut. 42.44

Mūlatvak (bark of root) of śelu, agra (young shoots) of badara, udumbara and kaṭabhī is mixed with kapittha rasa; this formulae is apt in raktagata sarpa viṣa (snake venom reaching the blood).

(C) Treatment of māmsagata viṣa (venom reaching muscles) -

As per Ācārya Vṛddha Vāgbhaṭa :

मांसगते पुनः ॥

सक्षौद्रं खादिरारिष्टं कौटजं मूलमम्भसा ।

AS.Ut. 42.44-45

Paste of khadira, ariṣṭa, kuṭaja made with ambha (water) and mixed with kṣaudra (honey) is applied in māmsagata sarpaviṣa (snake venom reaching the muscle tissues).

(D) Treatment of sarva-dhātugā viṣa (venom pervading all the tissues)

As per Ācārya Vṛddha Vāgbhaṭa :

सर्वेष्वपि बलायुग्मं मधुकं मदनं नतम् ॥ AS.Ut. 42.45
Paste of balā, atibalā, madhuka, madana and nata mixed with kṣaudra (honey) is useful in sarvadhātugata sarpaviṣa (snake venom pervading all the bodily tissues).

(E) Treatment of śirogata sarpaviṣa (venom pervading the head region)

As per Ācārya Vṛddha Vāgbhaṭa :

शिरोगते विषे मूलं नस्यकर्मणि योजयेत् ।

बन्धुजीवस्य भांगर्याश्च सुरसस्यासितस्य च ॥

अथवा पिप्पलीहिङ्गुवृश्चिकालीमनःशिलाः ।

शिरीषबीजापामार्गलवणं चेतनाकरम् ॥

कल्कश्रूणोऽथवाकृष्णक्षवकातिविषोषणात् ॥

AS.Ut. 42.46-47

In case of śirogata sarpaviṣa (venom pervading the head region) nasya karma (medicated errhines) should be done using

- juice of mūla (root) of bandhujīva, bhārṅgī and asita surasā
- kalka (paste) of pippalī, hiṅgu, vṛścikālī, manaḥśilā, śirīṣabīja, apāmārga and lavaṇa (salt) {this errhines restores cetanā (consciousness)}
- kalka cūrṇa (paste of powder) of kṛṣṇā, kṣavaka, ativiṣā and uṣaṇa.

(F) Treatment of akṣigata sarpaviṣa (venom pervading the eyes)

As per Ācārya Vṛddha Vāgbhaṭa :

(i) पिप्पलीमरिचक्षारवचासैन्धवशिगुकाः ।

पिष्टा रोहितपित्तेन घ्नन्त्यक्षिगतमञ्जनात् ॥

चन्दनं मधुकं मांसी पिप्पलीमरिचोत्पलम् ।

सैन्धवं चाञ्जनं श्रेष्ठं गवां पित्तेन कल्कितम् ॥

AS.Ut. 42.48-49

Treatment of akṣigata sarpaviṣa (venom pervading the eyes) is application of -

- añjana (collyrium) made of pippalī, marica, kṣāra, vacā, saindhava and śigru macerated with pitta (bile) of rohita matsya
- añjana (collyrium) made of candana, madhuka, māmsī, pippalī, marica, utpala

and *saindhava* (salt) macerated with *gopitta* (cow's bile)

- (ii) नक्तमालफलं व्योषं बिल्वमूलं निशाद्वयम् ।
पुष्पं च सौरसं पिष्टमञ्जनं बस्तवारिणा ॥
भोजवैतरणोद्दिष्टं विषसुप्तप्रबोधनम् ॥

AS.Ut. 42.50

Añjana (collyrium) made of *phala* (fruit) of *naktamāla*, *vyoṣa*, *bilvamūla*, *niśā*, *dāruharidrā* and *puṣpa* (flowers) of *surasā* macerated with *bastvāri* (goat's urine); this formulation is described by Sage *Bhoja* and Sage *Vaitaraṇa* for *prabodhana* (bring back consciousness) of *viṣasupta* (fainting caused by venom).

(iii) *Garuḍāñjana*

वारिगुञ्जाफलोशीरं नेत्रयोर्विषदुष्टयोः ।
अञ्जनं वारिणा पिष्टं गारुडं गरुडोपमम् ॥

AS.Ut. 42.51

Phala (fruits) of *vāriḡuñjā* and *uśira* is made into a paste using *vāri* (water) and applied to the eyes afflicted with venom; this formulae known as *Garuḍāñjana* is just like *Guruḍa*.

- (iv) समुद्रफेनं मरिचं कणासौवीरकाञ्जनम् ।
चूर्णाञ्जनं ससिन्धुत्थं विषोपहतचक्षुषाम् ॥

AS.Ut. 42.52

Cūrṇāñjana (powdered collyrium) made of *samudraphena*, *marica*, *kaṇā*, *sauvīra-kāñjana* and *saindhava* (salt) is useful in *viṣopahata cakṣu* (eyes strained/fatigued by venom of snake).

(G) Treatment of *kaṇthagata sarpaviṣa* (venom pervading the throat)

कपित्थमांसं ससिताक्षौद्रं कण्ठगते विषे । AS.Ut. 42.53

When *sarpaviṣa* (venom of snake) reaches the *kaṇṭha* (throat), the patient should be made to lick *māṁsa* (marrow) of *kapittha* along with *sitā* (sugar) and *kṣaudra* (honey).

(H) Treatment of *āmāśagata sarpaviṣa* (venom reaching the stomach)

As per *Ācārya Vṛddha Vāgbhaṭa* :

लिहादामाशयगते ताभ्यां चूर्णपलं नतात् ॥

AS.Ut. 42.53

Treatment of *āmāśagata sarpaviṣa* (venom reaching the stomach) is licking of one *pala* (40 gms) of *nata* along with *sitā* (sugar) and *kṣaudra* (honey).

(I) Treatment of *pakvāśayagata sarpa-viṣa* (venom reaching the intestines)

As per *Ācārya Vṛddha Vāgbhaṭa* :

विषे पक्वाशयगते मञ्जिष्ठा रजनीद्वयम् ।
पिप्पलीं च समं पिष्ट्वा गव्यपित्तेन पाययेत् ॥

AS.Ut. 42.54

Treatment of *pakvāśayagata sarpaviṣa* (venom reaching the intestines) is gulping of *mañjiṣṭhā*, *rajanī*, *dāruharidrā*, *pippalī* macerated with *gavyapitta* (ox bile).

(J) Treatment of *pravṛddha* (aggravated) *śleṣma* in *kaṇṭha* (throat) due to venom

As per *Ācārya Vṛddha Vāgbhaṭa* :

पिप्पलीनागरक्षारं नवनीतेन मूर्च्छितम् ।
प्रवृद्धे कण्ठगे दद्याच्छ्लेष्मणि प्रतिसारणम् ॥

AS.Ut. 42.55

Treatment of *pravṛddha* (aggravated) *śleṣma* in *kaṇṭha* (throat) due to venom is *pratisāraṇa* (application) of *kṣāra* (ash) of *pippalī* and *nāgara* mixed with *navanīta* (butter).

Treatment of *sarpāṅgābhihata* (touch of snake) and *śaṅkāviṣa* (imaginary fear of snake bite)

Ācārya Vṛddha Vāgbhaṭa quotes :

सिता वैगन्धिको द्राक्षा पयस्या मधुकं मधु ।
पानं समन्त्रपूताम्बुप्रोक्षणं सान्त्वहर्षणम् ।
सर्पागाभिहते युञ्ज्यात्तथा शंकाविषार्दिते ॥

AS.Ut. 42.54

Ācārya Vṛddha Vāgbhaṭa says—in the event of *sarpāṅgābhihata* (touch of snake) or *śaṅkāviṣa* (imaginary fear of snake bite) following measures should be adopted -

- **Oral medication:** *Sitā* (sugar crystals), *vaigandhika*, *drākṣā*, *payasyā*, *madhuka* and *madhu* should be smeared and consumed.
- **Prokṣaṇa (sprinkling):** Water incanted with *mantras* (incantations) should be sprinkled over the patient.
- **Psychiatric measures:** The patient should be solaced and cheered up.

Some formulations for prophylaxis against *sarpa-damśa* (snake bite)

The formulations listed here are taken from *Bhaiṣajyaratnāvalī* (authored by *Ācārya*

Govindadāsa Sena) and the author guarantees one year of immunity from snake venom if these formulations are consumed in prescribed manner.

- During āṣāḍha māsa on a śubha (auspicious) vāra, tithi, nakṣatra etc. mūla (root) of pratyaṅgirā (kaṅṭakī śirīṣa) along with taṇḍulodaka (rice water) should be given to the patient who has been bitten by a sarpa (snake);

▪ Ācārya Govindadāsa Sena quotes :

मूलं तण्डुलवारिणा पिबति यः प्रत्यंगिरासम्भवं
निष्पिष्टं शुचिभद्रयोगदिवसे तस्याहिभीतिः कुतः ।
दर्पादेव फणी यदा दशति तं मोहान्वितो मूलपं स्थाने तत्र
स एव याति नियतं वक्त्रं यमस्याचिरात् ॥ BR. 72.8

- Traversing of Sūrya (sun) in meṣa rāśi (i.e. during vaiśākha māsa) one seed of masūra along with nimba patra should be consumed by the patient; he quotes

मसूरं निम्बपत्राभ्यां योजति मेषगते रवौ ।
अब्दमेकं न भीतिः स्याद्विषात् तस्य न संशयः ॥

BR. 72.9

- During puṣya nakṣatra, mūla (root) of śveta punarnavā made into paste should be consumed along with taṇḍulodaka (rice water); he quotes

धवलपुनर्नवजटया तण्डुलजलपीतया च पुष्यक्षौ ।
अपहरति खलु विषधरोपद्रवमावत्सरं पुंसाम् ॥

BR. 72.10

Articles contra-indicated in sarpa-damśa (snake bite)

As per Ācārya Suśruta :

न पिबेत्तैलकौलत्थमद्यसौवीरकाणि च ॥ SS.K. 5.18
Ācārya Suśruta is of the opinion that snake bitten person should refrain from :

- ♦ taila (oil)
- ♦ kulattha
- ♦ madya (alcohol)
- ♦ sauviraka

Useful formulations

- Kūlakādi vaṭī (Bhaiṣajyaratnāvalī)
- Viṣavajrapāta rasa (Rasendrasārasaṅg-raha)
- Bhīmarudra rasa
- Mr̥tyupāśacchedī ghr̥ta (Śārṅgadhara-saṁhitā)
- Garuḍāñjana (Yogarātnākara) etc. can be used as per indications.

Modern treatment of Snake bite

Steps in Management of snake bite are :

- Eradication of doubt, if any, regarding snake bite
- Arresting spread of snake venom
- Use of antidotes and
- Symptomatic management.

(I) Eradication of doubt, if any, regarding snake bite

At times the fear of snake bite, rather than the actual bite, causes more harm to the patient. Therefore, it is the duty of attending physician to first eradicate any fear, concern or doubt in the patient's mind. The patient needs to be explained that not all snakes are poisonous and also the amount of venom injected by poisonous snakes, at times, is not sufficient to cause any harm. Some bites may only be superficial.

(II) Arresting spread of snake venom

Once the patient is assured and taken into confidence, the physician should arrange for immediate measures that will arrest the spread of snake venom in the patient's body. For this following measures should be adopted -

- Immobilization of body part where the snake has bitten
- Application of tourniquet etc.
- Local measures
 - ♦ Immobilization - Frequent moving of body parts will increase the blood flow and subsequently will only support rapid spreading of the venom. Therefore, the site of bite should be immobilized.
 - ♦ Application of tourniquet etc. - This is done to arrest the spread of venom through the blood stream.
 - ♦ Local measures
 - ♦ Site of bite should be cleaned with water.
 - ♦ Incision should be made at the site for suction of blood.

(III) Use of anti-dotes

Antidotes are of two kinds :

- Specific antidotes and
- Polyvalent antidotes.

Specific antidotes are used only after the confirmation of the snake that has bitten the patient whereas polyvalent antidotes can be used to tackle four major snake bites viz. (a) Cobra, (b) Common Krait, (3) Russell's viper and (4) saw-scaled viper.

Dose - 20 ml intravenous (can be repeated if symptoms persist)

Pre-requisites

- **Sensitivity test** - Prior to injecting polyvalent anti-snake venom serum the patient should be tested for sensitivity. For this 0.05 to 0.1 ml of serum (1:10 dilution) should be injected intradermally.
- Allergic reactions - To tackle allergic reactions Adrenaline {(1:1000) 0.25 ml s.c.} and Avil {2ml i.m.} should be given.

(IV) Symptomatic management of

- Localized swelling, burning sensation etc.
- Convulsions
- Shock and allergic reactions to antivenom serum
- Renal failure
- Hemorrhage
- Respiratory paralysis etc.

Fatal dose

▪ Cobra venom	-	15 mg
▪ Russells' viper venom	-	40 mg
▪ Echis carinate venom	-	8 mg
▪ Krait venom	-	6 mg

Fatal period

▪ Cobra	-	Few hours
▪ Viper	-	Few days (1 - 2 days)

Medicolegal aspects

- Accidental (most common)
- Cattle homicide (occasionally)
- Human Homicide (rarely)
- Suicide (rarely)

Post-mortem appearance

- Marks of one or two fangs at the site of bite.
- The depth of bite varies from species to species (in case of Naga it is approximately 1 cm and in Viper it is 2.5 cm deep).
- Oedema, discoloration, blood oozing etc. are not uncommon.
- In case of viper bite bleeding is more pronounced.
- In case of neurotoxic venom signs of respiratory arrest will be visible.

In case of hemotoxic venom signs of internal bleeding in lungs, omentum, bladder etc. will be seen.



JĀNGAMA-VIṢA (ANIMAL POISON) - 2

LEARNING OBJECTIVES

- Synonyms of vṛścika - 2
 - śukakīta
 - alidrona
- Types of vṛścika
 - On the basis of toxicity - 3
 - According to their ākṛti (shapes) - 30
- Satapadis (centipedes) are of eight types.
- Lūtaviṣa is duralaksyatama (most difficult to comprehend)
- Lūtaviṣa takes 7 days to manifest and thus kill.
- Lūtaviṣa is ghoratma, durvijñeya.
- Lūtās are of sixteen types.
- Kṛcchrasādhya lūtās - 8, asādhya lūtās - 8
- Lūtā inducts its toxins through eight ways.
- Mūṣaka viṣa resides in its śukra (semen)
- Mūṣaka has ten synonyms.
- Mūṣaka are categorized into eighteen kinds.
- Alarka - viṣa synonyms
 - jala santrāsa
 - jala trāsa
- Signs of alarka viṣa
 - suptata
 - kṛṣṇa
 - aṣṛk
- Masak (mosquitoes) are of five kinds.
- Jala trāsa is a rista (imminent death) lakshana of alarka viṣa.
- Jalauka types
 - savisa - 6
 - nirvisa - 6
- Manduka (frogs) are of eight kinds.
- Pipilika (ants) are of six kinds.
- Maksika (flies) are of six kinds.
- Galagolika (lizard) is of six types.

1. Vṛścika viṣa (Scorpion's venom)

Introduction

Vṛścika (scorpion), a highly venomous living being, is usually found in burrows of rats and other burrowing animals, under the bricks, stones and pile of garbage; here it rests for the entire day and venture out only after sunset to attack other creatures. It attacks human beings out of fear of being stampeded or runover. Its resemblance is similar to that of crabs.

Synonyms for vṛścika (scorpions)

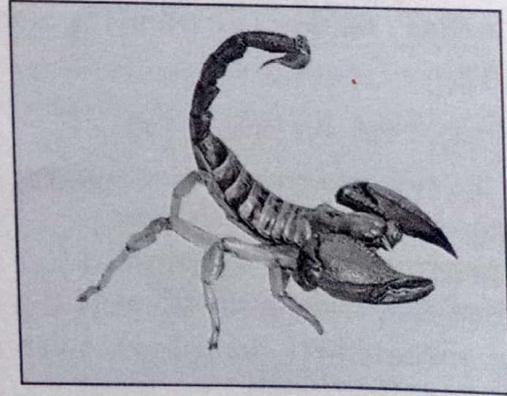


Fig. 14.1 : vṛścika (scorpions)

Ācārya Narahari Paṇḍita, author of *Rājani-ghaṇṭu*, has quoted two synonyms for vṛścika; these are -

वृश्चिकः शूककीटः स्यादलिद्रोणश्च वृश्चिके ॥

Rājanighaṇṭu Simhādivargaḥ 80

◆ Śūkakīta

◆ Alidroṇa

Origin of vṛścika (scorpions)

As per Ācārya Vāgbhaṭa :

ते गवादिशकृत्कोथाहिग्धदष्टादिकोत्थतः ॥

सर्पकोथाच्च सम्भूता ।

AH.Ut. 37.7-8

The vṛścika (scorpions) are born from the putrefied śakṛt (dung) of go (cow) etc., cadaver

of animals killed by poisoned arrow and cadaver of sarpa (snakes).

Types and origin of *vṛścika* (scorpions)

As per *Ācārya Suśruta*:

(I) According to toxicity - 3

त्रिविधा वृश्चिकाः प्रोक्ता मन्दमध्यमहाविषाः ॥
गोशकृत्कोथजा मन्दा मध्याः काष्ठेष्टिकोद्धवाः ।
सर्पकोथोद्धवास्तीक्ष्णा ये चान्ये विषसंभवाः ॥

SS.K. 8.56-57

Ācārya Suśruta has categorized scorpions, on the basis of their toxicity, into following three:

- *mandaviṣā vṛścika* (mildly toxic scorpion)
- *madhyaviṣā vṛścika* (moderately toxic scorpion)
- *mahāviṣā vṛścika* (highly toxic scorpion)

Mandaviṣā vṛścika (mildly toxic scorpion) originates from putrefied gośakṛt (cow dung); *madhyaviṣā vṛścika* (moderately toxic scorpion) originates from *kāṣṭha* (wood) and *iṣṭikā* (bricks); the last - *mahāviṣā vṛścika* (highly toxic scorpion) - originates from sloughened sarpa (snakes) or from other tikṣṇa (virulent) poisonous substances.

(II) According to their *akṛti* (shapes) - 30

Ācārya Suśruta has enumerated thirty types of scorpions based on their shapes:

मन्दा द्वादश मध्यास्तु त्रयः पञ्चदशोत्तमाः ।
दश विंशतिरित्येते संख्यया परिकीर्तिताः ॥ SS.K. 8.58

Among these thirty scorpions, twelve are *mandaviṣā vṛścikas* (mildly toxic scorpions), three are *madhyaviṣā vṛścikas* (moderately toxic scorpions) and remaining fifteen are *mahāviṣā vṛścikas* (highly toxic scorpions).

Table 14.1 : Kinds of *vṛścikas* (scorpions) along with their origin and numbers - as per *Ācārya Suśruta*

S. No.	Kind of <i>vṛścikas</i>	Origin	No.
1.	<i>Mandaviṣā vṛścika</i> (mildly toxic scorpion)	putrefied <i>gośakṛt</i> (cow dung)	12
2.	<i>Madhyaviṣā vṛścika</i> (moderately toxic scorpion)	<i>kāṣṭha</i> (wood) and <i>iṣṭikā</i> (bricks)	3

S. No.	Kind of <i>vṛścikas</i>	Origin	No.
3.	<i>Mahāviṣā vṛścika</i> (highly toxic scorpion)	sloughened <i>sarpa</i> (snakes) or other <i>tikṣṇa</i> (virulent) poisonous substances	15

He has explained these scorpions in details.

Names and features of *mandaviṣā vṛścikas* (mildly toxic scorpions)

As per *Ācārya Suśruta*:

कृष्णः श्यावः कर्बुरः पाण्डुवर्णो गोमूत्राभः कर्कशो
मेचकश्च । पीतो धूम्रो रोमशः शाड्वलाभो रक्तः
श्वेतोदरेणेति मन्दाः ॥ युक्ताश्चैते वृश्चिकाः पुच्छदेशे
स्युर्भूयोभिः पर्वभिश्चैतरेभ्यः । SS.K. 8.59-60

Mandaviṣā vṛścikas (mildly toxic scorpions) are (1) *kṛṣṇa* (black), (2) *śyāva* (blackish), (3) *karbura* (variegated), (4) *pāṇḍu* (pale), (5) *gomūtrābha* (resembling cow's urine), (6) *karkaśa* (rough), (7) *mecaka* (bluish), (8) *pīta* (yellowish), (9) *dhūmra* (smoky), (10) *romaśa* (hairy), (11) *śāḍvalābha* (grass like) and (12) *rakta* (reddish) with *śveta udara* (whitish abdomen); these possess, in the *pucchadeśa* (tail region), many *parvas* (joints) in comparison to others.

Signs and symptoms exhibited by bite of *mandaviṣā vṛścikas* (mildly toxic scorpions)

(I) As per *Ācārya Suśruta* :

एभिर्दष्टे वेदना वेपथुश्च गात्रस्तम्भः कृष्णरक्तागमश्च ॥
शाखादष्टे वेदना चोर्ध्वमेति दाहस्वेदौ दंशशोफो ज्वरश्च ।
SS.K. 8. 60-61

Mandaviṣā vṛścikas (mildly toxic scorpions) by their sting produce *vedanā* (pain), *vepathu* (trembling), *gātrastambha* (stiffness in body) and *āgama* (discharge) of *kṛṣṇa rakta* (blackish blood); when they sting in the *śākhās* (extremities), *vedanā* (pain) rushes *ūrdhva* (upwards) along with *dāha* (burning sensation), *sveda* (sweating), *daṁśa-śoḥpa* (localized oedema) and *jvara* (fever).

(II) As per *Ācārya Vṛddha Vagbhata* :

मन्दाः पीताः सिताः श्यावा रूक्षाः कर्बुरमेचकाः ।
रोमशा बहुपर्वाणो लोहताः पाण्डुरोदराः । AS.Ut. 43.14

Māṇḍa viṣa vṛścika (mildly poisonous scorpions) are *pīta* (yellow), *sita* (white), *śyāva* (bluish), *rukṣa* (dry), *karbura* (rough), *mecaka* (dark brown) in colour, *romaśa* (hairy), *bahuparva* (with many joints) and *lohita* (reddish) & *pāṇḍura* (whitish) *udara* (abdomen).

Names and features of *madhyaviṣā vṛścikas* (moderately toxic scorpions)

As per *Ācārya Suśruta*:

रक्तः पीतः कापिलेनोदरेण सर्वे धूम्राः पर्वभिश्च त्रिभिः
स्युः॥ एते मूत्रोच्चारपूत्यण्डजाता मध्या ज्ञेयास्त्रि-
प्रकारोरगाणाम्। SS.K. 8. 61-62

Madhyaviṣā vṛścikas (moderately toxic scorpions) are (1) *rakta* (reddish), (2) *pīta* (yellowish) and (3) *kapila* (brown) with *dhūmra* (smoky) *udara* (abdomen) and three *dhūmra parvas* (smoky joints); they originate from *mūtra* (urine), *uccāra* (faeces), *pūti* (putrefied materials) and *aṇḍa* (eggs).

Signs and symptoms exhibited by bite of *madhyaviṣā vṛścikas* (moderately toxic scorpions)

(I) As per *Ācārya Suśruta*

यस्यैतेषामन्वयाद्यः प्रसूतो दोषोत्पत्तिं तत्स्वरूपां स
कुर्यात्॥ जिह्वाशोफो भोजनस्यावरोधो मूर्च्छा चोग्रा
मध्यवीर्याभिदष्टे। SS.K. 8. 62-63

Sting of *madhyaviṣā vṛścikas* (moderately toxic scorpions) produce *doṣas* (disorders) similar to that of the three types *sarpa* (snakes) from which they are born of; particularly they cause *jihvāśoṣa* (oedema of tongue), *bhojanasyāvarodha* (obstruction to food) and *ugra mūrccā* (severe fainting).

(II) As per *Ācārya Vṛddha Vagbhata*

धूम्रोदरास्त्रिपर्वाणो मध्यास्तु कपिलारुणाः॥
AS.Ut. 43.14

Madhya viṣa vṛścika (moderately poisonous scorpions) have *dhūmraudara* (smoky abdomen), three *parvas* (joints) and *kapila* (brown) & *aruṇa* (reddish) in colour.

Names and features of *mahāviṣā vṛścikas* (highly toxic scorpions)

श्वेतश्चित्रः श्यामलो लोहिताभो रक्तः श्वेतो रक्तनीलोदरी
च॥ पीतोऽरक्तो नीलपीतोऽपरस्तु रक्तो नीलो
नीलशुक्लस्तथा च। रक्तो बभ्रुः पूर्ववच्चैकपर्वा यश्चापर्वा
पर्यशी द्वे च यस्य॥ नानारूपा वर्णतश्चापि घोरा ज्ञेयाश्चैते

वृश्चिकाः प्राणचीराः। जन्मतेषां सर्पक्रोधात् प्रदिष्टं
देहेभ्यो वा घातितानां विषेण॥ SS.K. 8. 63-65

Mahāviṣā vṛścikas (highly toxic scorpions) are - *śveta* (whitish), *citra* (variegated), *śyāmala* (bluish), *lohitābha* (reddish), *rakta-śveta* (red with white) and *rakta-nīla* (red with blue) *udara* (abdomen); another *pīta-arakta* (yellow with slight red) or *nīla-pīta* (blue-yellow); another again *rakta-nīla* (red-blue), *nīla-śukla* (blue-white), *rakta-babhru* (red-grey), similar to *madhyaviṣā vṛścikas* with *parva* (joints) or without *parva* (joints). Thus, these *mahāviṣā vṛścikas* (highly toxic scorpions), of varied *rūpa* (features) and *varṇa* (colours), are severe and extremely fatal to cause death. These originate either from sloughened *sarpa* (snakes) or other *tikṣṇa* (virulent) poisonous substances.

Signs and symptoms exhibited by bite of *mahāviṣā vṛścikas* (highly toxic scorpions)

(I) As per *Ācārya Suśruta*

एभिर्दष्टे सर्पवेगप्रवृत्तिः स्फोटोत्पत्तिर्भ्रान्तिदाहो ज्वरश्च।
खेभ्यः कृष्णं शोणितं याति तीव्रं तस्मात् प्राणैस्त्यज्यते
शीघ्रमेव॥ SS.K. 8.66

Signs and symptoms exhibited by bite of *mahāviṣā vṛścikas* (highly toxic scorpions) are that of *sarpa-vega* (similar to snake bite) along with *sphoṭa* (blisters), *bhrānti* (giddiness), *dāha* (burning sensation), *jvara* (fever) and oozing of *kṛṣṇa śoṇita* (blackish blood) from *kha* (bodily channels); these result in instant death of patient.

(II) As per *Ācārya Vṛddha Vagbhata*:

पिशांगाः शबलाश्चित्राः शोणिताभा महाविषाः।
अग्न्याभा द्वयेकपर्वाणो रक्तासितसितोदराः॥

AS.Ut. 43.14

Mahā viṣa vṛścika (strongly poisonous scorpions) are *piśaṅga* (reddish brown), *śabala* (spotted), *citra* (variegated), *śoṇitābha* (bloody red), *agnyābha* (fiery red) with one *parva* (joint) and *raktāsita udara* (reddish-black abdomen). (See Table No 14.2-14.3)

General symptoms of *vṛścika-damśa* (scorpion bite)

Ācārya Caraka quotes -

दहत्यग्निरिवादी तु भिनत्तीवोर्ध्वमाशु च।
वृश्चिकस्य विषं याति दंशे पश्चात्तु तिष्ठति॥

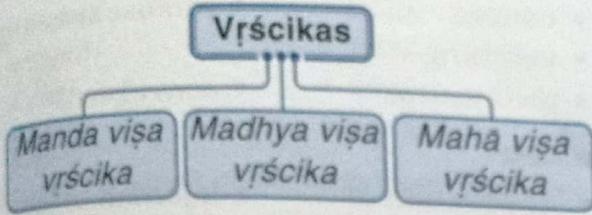
CS.Ci. 23.150

Table 14.2 : Signs and symptoms exhibited by bite of various *vṛścikas* (scorpions)

<i>Mandaviṣā vṛścika</i> (mildly toxic scorpion)	<i>Madhyaviṣā vṛścika</i> (moderately toxic scorpion)	<i>Mahāviṣā vṛścika</i> (highly toxic scorpion)
<ul style="list-style-type: none"> • <i>vedanā</i> (pain) • <i>vepathu</i> (trembling) • <i>gātrastambha</i> (stiffness in body) • <i>āgama</i> (discharge) of <i>kṛṣṇa rakta</i> (blackish blood) • bite in <i>sākhās</i> (extremities) causes <i>vedanā</i> (pain) to rush <i>ūrdhva</i> (upwards) along with <ul style="list-style-type: none"> • <i>dāha</i> (burning sensation) • <i>sveda</i> (sweating) • <i>damśa-śopha</i> (localized oedema) • <i>jvara</i> (fever) 	<ul style="list-style-type: none"> • <i>doṣas</i> (disorders) similar to that of the three types <i>sarpa</i> (snakes) from which they are born of • <i>jihvāśopha</i> (oedema of tongue) • <i>bhojanasyāvarodha</i> (obstruction to food) • <i>ugra mūrcchā</i> (severe fainting) 	<ul style="list-style-type: none"> • similar to <i>sarpa-vega</i> (snake bite) • <i>sphoṭa</i> (blisters) • <i>bhranti</i> (giddiness) • <i>dāha</i> (burning sensation) • <i>jvara</i> (fever) • oozing of <i>kṛṣṇa śoṇita</i> (blackish blood) from <i>kha</i> (bodily channels)

Table 14.3 : Classification of *vṛścikas* with their features

Type of <i>vṛścika</i>	As per <i>Ācārya Suśruta</i>	As per <i>Ācārya Vṛddha Vāgbhaṭa</i>
1. <i>Mandaviṣā vṛścika</i> (mildly toxic scorpion)	<ul style="list-style-type: none"> • <i>kṛṣṇa</i> (black), <i>śyāva</i> (blackish), <i>karbura</i> (variegated), <i>pāṇḍu</i> (pale), <i>gomūtrābha</i> (resembling cow's urine), <i>karkaśa</i> (rough), <i>mecaka</i> (bluish), <i>pīta</i> (yellowish), <i>dhūmra</i> (smoky), <i>romaśa</i> (hairy), <i>śāḍvalābha</i> (grass like) and <i>rakta</i> (reddish) with <i>śveta udara</i> (whitish abdomen) • their <i>pucchadeśa</i> (tail region) possess many <i>parvas</i> (joints) in comparison to others 	<ul style="list-style-type: none"> • <i>pīta</i> (yellow), <i>sīta</i> (white), <i>śyāva</i> (bluish), <i>rukṣa</i> (dry), <i>karbura</i> (rough), <i>mecaka</i> (dark brown) in colour • <i>romaśa</i> (hairy) • <i>bahuparva</i> (with many joints) • <i>lohita</i> (reddish) & <i>pāṇḍura</i> (whitish) <i>udara</i> (abdomen)
2. <i>Madhyaviṣā vṛścika</i> (moderately toxic scorpion)	<ul style="list-style-type: none"> • <i>rakta</i> (reddish), <i>pīta</i> (yellowish) and <i>kapila</i> (brown) • <i>dhūmra</i> (smoky) <i>udara</i> (abdomen) • three <i>dhūmra parvas</i> (smoky joints) 	<ul style="list-style-type: none"> • <i>dhūmra udara</i> (smoky abdomen) • three <i>parvas</i> (joints) • <i>kapila</i> (brown) & <i>aruṇa</i> (reddish) in colour
3. <i>Mahāviṣā vṛścika</i> (highly toxic scorpion)	<ul style="list-style-type: none"> • <i>śveta</i> (whitish), <i>citra</i> (variegated), <i>śyāmala</i> (bluish), <i>lohitābha</i> (reddish), <i>rakta-śveta</i> (red with white) and <i>rakta-nīla</i> (red with blue) <i>udara</i> (abdomen); another <i>pīta-arakta</i> (yellow with slight red) or <i>nīla-pīta</i> (blue-yellow); another again <i>rakta-nīla</i> (red-blue), <i>nīla-śukla</i> (blue-white), <i>rakta-babhru</i> (red-grey), similar to <i>madhyaviṣā vṛścikas</i> with <i>parva</i> (joints) or without <i>parva</i> (joints) • varied <i>rūpa</i> (features) and <i>varṇa</i> (colours) • severe and extremely fatal to cause death 	<ul style="list-style-type: none"> • <i>pīsaṅga</i> (reddish brown), <i>śabala</i> (spotted), <i>citra</i> (variegated), <i>śoṇitābha</i> (bloody red), <i>agnyābha</i> (fiery red) • with one <i>parva</i> (joint) • <i>raktāsīta udara</i> (reddish-black abdomen)



Viṣa (sting/poison) of vṛścika (scorpion) causes *agnivat dāha* (burning sensation like a fire) and does a quick *ūrdhva ārohaṇa* (upward movement) and latter settles at the site of *damśa* (bite).

Similar views are expressed by Ācārya Vṛddha Vāgbhaṭa; he quotes -

वृश्चिकस्य विषं तीक्ष्णमादौ दहति बह्विवत्।
ऊर्ध्वमारोहति क्षिप्रं दंशे पश्चान्तु तिष्ठति॥
दंशः सद्योतिरुक् श्यावस्तुद्यते स्फुटतीव च।

AS.Ut. 43.14

Viṣa (sting/poison) of vṛścika (scorpion) is extremely *tikṣṇa* (sharp); initially, it causes *vahnivat dāha* (burning sensation like a fire) and does a quick *ūrdhva ārohaṇa* (upward movement) and latter settles at the site of *damśa* (bite) resulting in *atiruk* (excruciating pain), *śyāva* (bluish discolouration), *toda* (pricking pain) and *sphuṭana* (bursting pain).

Prognosis of vṛścika (scorpion) bite

Citing features of incurable vṛścika (scorpion) bite, Ācārya Caraka quotes -

दष्टोऽसाध्यस्तु दृग्घ्राणरसनोपहतो नरः।

मांसैः पतद्भिरत्यर्थं वेदनातो जहात्यमून॥ CS.Ci. 23.151

Daṣṭa (bite) of *asādhyā vṛścika* (incurable scorpion) results in *upahata* (destruction) of *dr̥k* (vision), *ghrāṇa* (smell) and *rasanā* (taste); there is loss of *māmsa* (muscle tissue) and excruciating *vedanā* (pain) and ultimately loss of life.

Treatment of vṛścika (scorpion) bite:

General treatment

Ācārya Caraka quotes :

वृश्चिके स्वेदमभ्यंगं घृतेन लवणेन च।

सर्काश्रोष्णान् प्रयुञ्जीत भोज्यं पानं च सर्पिषः॥

CS.Ci. 23.173

- The site of bite should be subjected to *svedana* (fomentation); *abhyāṅga* (anointing) of whole body of the patient with *ghṛta* (ghee) and *lavāṇa* (salt) should be done.
- *Uṣṇa seka* (warm irrigation) is also prescribed.

- Patient should be asked to consume *ghṛta* (ghee) as per his digestive capacity.

Specific treatment of vṛścika (scorpion) bite:

Treatment of bite from *mahāviṣā vṛścikas* (highly toxic scorpions) and *madhyaviṣā vṛścikas* (moderately toxic scorpions)

Drugs useful in treatment of vṛścika (scorpion) bite

- | | |
|--------------------|------------------|
| • <i>karañja</i> | • <i>palāśa</i> |
| • <i>kārpāsa</i> | • <i>rohiṣa</i> |
| • <i>kāsamarda</i> | • <i>śaivāla</i> |
| • <i>jīraka</i> | • <i>śuṅṭhī</i> |

As per Ācārya Suśruta :

उग्रमध्यविषैर्दष्टं चिकित्सेत् सर्पदष्टवत्।

आदंशं स्वेदितं चूर्णैः प्रच्छिन्नं प्रतिसारयेत्॥

रजनीसैन्धवव्योषशिरीषफलपुष्पजैः।

मातुलुंगाप्लगोमूत्रपिष्टं च सुरसाग्रजम्॥

लेपे, स्वेदे सुखोष्णं च गोमयं हितमिष्यते।

पाने क्षीदयुतं सर्पिः क्षीरं वा बहुशर्करम्॥ SS.K. 8.67-69

- Bite from *mahāviṣā* or *ugraviṣā vṛścikas* (highly toxic scorpions) and *madhya-viṣā vṛścikas* (moderately toxic scorpions) should be treated as bitten by *sarpa* (snake).
- The bite-site should be subjected to *svedana* (fomentation) and followed by *pracchāna* (scraping); after this *pratisāraṇa* (rubbing) with powders of *rajanī* (*haridrā*), *saindhava*, *vyoṣa* (*trikaṭu*) and *phala* (fruits) & *puṣpa* (flowers) of *śirīṣa* should be done.
- For *lepa* (paste anointing), *surasāgrajam* (tender leaves of basil) pounded with *mātuluṅgāmla* (juice) and *gomūtra* (cow's urine) should be used; *sukhoṣṇa gomaya* (warm cowdung) is ideal for *svedana* (fomentation); for *pāna* (drinking), *sarpiḥ* (ghee) mixed with *kṣaudra* (honey) or *kṣīra* (milk) added with lots of *śarkarā* (sugar) is advisable.

Treatment of bite from *manda-viṣā vṛścikas* (mildly toxic scorpions)

As per Ācārya Suśruta-

दंशं मन्दविषाणां तु चक्रतैलेन सेचयेत्।

विदारीगणसिद्धेन सुखोष्णोपाधवा पुनः॥

कुर्याच्चोत्कारिकास्वेदं विषघ्नैरुपनाहयेत् ।
 गुडोदकं वा सुहिमं चातुर्जातकसंयुतम् ॥
 पानमस्मै प्रदातव्यं क्षीरं वा सगुडं हिमम् ।
 शिखिकुकुटबर्हाणि सैन्धवं तैलसर्पिषी ॥
 धूमो हन्ति प्रयुक्तस्तु शीघ्रं वृश्चिकजं विषम् ।
 कुसुम्भपुष्पं रजनी निशा वा कोद्रवं तृणम् ॥
 एभिर्घृताक्तैर्धूपस्तु पायुदेशे प्रयोजितः ।
 नाशयेदाशु कीटोत्थं वृश्चिकस्य च यद्विषम् ॥

SS.K. 8.70-74

- The site of bite by *mandaviṣā vṛścikas* (mildly toxic scorpions) should be subjected to *secana* (irrigation) using *cakra taila* or warm *taila* processed with drugs of *vidāryādi gaṇa*; then the site should be subjected to *svedana* (fomentation) with *utkārikā* and *viṣaghna upanāha* (anti-poisonous poultice) be applied.
- The patient is asked to drink *suhima guḍodaka* (well cooled jaggery water) added with *caturjāta* or *hima kṣīra* (cooled milk) with *guḍa* (jaggery).
- *Dhūma* (*dhūpana* - fumigation) using feathers of *śikhi* (peacock) and *kukkuṭa* (cock), *saindhava*, *taila* (oil) and *sarpīḥ* (ghee) destroys *vṛścika*'s poison.
- Alternatively, *dhūpana* (fumigation) of *pāyudeśa* (anal region) using *kusumbha puṣpa*, *rajanī* (*mañjiṣṭhā*), *niśā* (*haridrā*), *kodrava tṛṇa* mixed together with *ghṛta* (ghee) can be given to eradicated *viṣa* (poison) of *kīṭa* (insects) and *vṛścika* (scorpions).

Scorpion bite:

Facts

- More than 1250 species of scorpions are found worldwide.
- Scorpions are more poisonous than snakes.
- Scorpion venom has both neurotoxic and hemotoxic actions.

Signs and symptoms

- ♦ severe localized pain and burning sensation
- ♦ edema
- ♦ reddening of the bite-site

- ♦ nausea
- ♦ vomiting
- ♦ restlessness
- ♦ profuse sweating
- ♦ convulsions

Treatment

- ♦ Application of tourniquet
- ♦ Incision (if required)
- ♦ Washing of the bite-site
- ♦ Injection of local anaesthetic agents
- ♦ Calcium gluconate i.v.
- ♦ Barbiturates etc.

Medico-legal aspects

- Accidental

Post-mortem appearance

- Signs of hemorrhage in nose, mouth etc.

2. Śatapadī (centipedes)

Introduction

The word centipede is derived from Latin words 'centi' meaning hundred and 'pedis' meaning legs/feet.

Centipedes are arthropods of the class Chilopoda; they are elongated creatures with linear series of body segments (metameric) and a pair of legs per body segment.

Their size varies from few millimeters to nearly twelve inches; their colour is brown-red.

Their geographical distribution is world wide and nearly three thousand of described species are found.

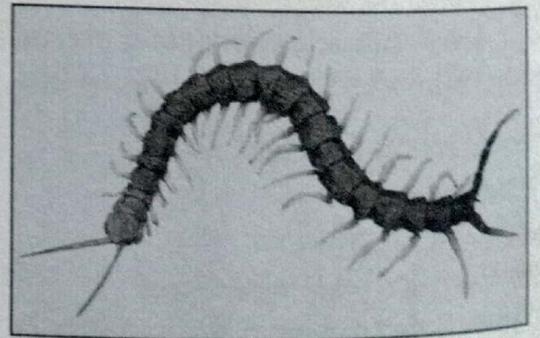


Fig. 14.2 : Śatapadī (centipedes)

Classification of śatapadīs (centipedes)

Eight kinds of śatapadīs (centipedes) are enumerated by Ācārya Suśruta; he quotes -

शतपद्यस्तु - परुषा, कृष्णा, चित्रा, कपिला,
 पीतिका, रक्ता श्वेता, अग्निप्रभा, इत्यष्टौ । SS.K. 8.30

- ◆ *paruṣā*
- ◆ *kṛṣṇā*
- ◆ *citrā*
- ◆ *kapilā*
- ◆ *pītikā*
- ◆ *raktā*
- ◆ *śvetā*
- ◆ *agniprabhā*

Signs and symptoms of *śatapadīs'* (centipedes') bite

(I) As per Ācārya Suśruta :

ताभिर्दष्टे शोफो वेदना दाहश्च हृदये श्वेताग्निप्रभाभ्या-
मेतदेव दाहो मूर्च्छा चातिमात्रं श्वेतपिडकोत्पत्तिश्च ॥

SS.K. 8.30

Bite of *śatapadīs* (centipedes) cause

- *śopha* (localized oedema)
- *vedanā* (pain)
- *hrdaya-dāha* (burning sensation in the cardiac region);

Śvetā and *agniprabhā's* bite results in more intense *dāha* (burning sensation) and *mūrcchā* (fainting) along with rise of *śveta piḍakās* (whitish eruptions).

(II) As per Ācārya Vṛddha Vāgbhaṭa

पीतः शतपदीदंशः स्वेदरुग्नागशोफवान् ।

अतसीपुष्पवर्णो वा पिटकावन्ध्रमप्रदः ॥ AS.Ut. 43.12

Bite of *śatapadīs* (centipedes) is *pīta* (yellowish) with

- *sveda* (sweating)
- *ruk* (pain)
- *rāga* (redness)
- *śopha* (oedema) or
- it resembles *puṣpa* (flower) of *atasī* with *piṭakās* (eruptions) around it and
- may produce *bhrama* (giddiness).

Table 14.4 : Signs and symptoms of *śatapadīs'* (centipedes') bite

Ācārya Suśruta's view	Ācārya Vṛddha Vāgbhaṭa's view
<ul style="list-style-type: none"> • <i>śopha</i> (localized oedema) • <i>vedanā</i> (pain) • <i>hrdaya-dāha</i> (burning sensation in the cardiac region) • bite by <i>śvetā</i> and <i>agniprabhā</i> is more intense in <i>dāha</i> (burning sensation) and <i>mūrcchā</i> (fainting) along with rise of <i>śveta piḍakās</i> (whitish eruptions) 	<ul style="list-style-type: none"> • site of bite is <i>pīta</i> (yellowish) • <i>sveda</i> (sweating) • <i>ruk</i> (pain) • <i>rāga</i> (redness) • <i>śopha</i> (oedema) • resembles <i>puṣpa</i> (flower) of <i>atasī</i> with <i>piṭakās</i> (eruptions) around it • <i>bhrama</i> (giddiness)

Treatment of *śatapadīs'* (centipedes') bite

(A) As per Ācārya Suśruta-

कुंकुमं तगरं शिग्रु पद्मकं रजनीद्वयम् ।

अगदो जलपिष्टोऽयं शतपद्विषनाशनः ॥ SS.K. 8.49

Kuṅkuma, *tagara*, *śigru*, *padmaka*, *haridrā* and *dāruharidrā* pounded with water is an excellent *agada* (anti-poisonous recipe) for *śatapadī viṣa* (bite of centipede).

(B) As per Ācārya Vṛddha Vāgbhaṭa -

स्वर्जिकाजशकृत्क्षारः सुरसः साक्षिपीडकः ।

मदिरामण्डसंयुक्तो हितः शतपदीविषे ॥ AS.Ut. 43.36

Svarjikā kṣāra, *śakṛtkṣāra* (alkali made from dung of cow), *surasā* and *akṣipīḍaka* are triturated with *madirā maṇḍa* (scum of alcohol) and given to patient bitten by *śatapadī* (centipede).

Centipede bite :

Signs and symptoms

- localized swelling
- intense pain
- necrosis (of the bite-site)

Treatment

- Symptomatic treatment

3. Lūtā-viṣa (spider venom)

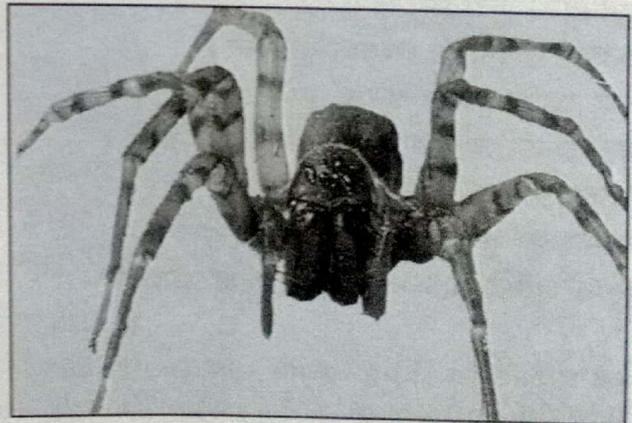


Fig. 14.3 : Lūtā-viṣa (spider venom)

Introduction

In India we come across many varieties of spiders; some are common in house hold and these are less toxic; some are found in dense forests, abandoned houses, dumped materials etc. and these are of varied shapes and sizes.

Āyurvedic classics mention fatally toxic kinds of spiders. Citing graveness of their bite Ācārya Suśruta quotes -

लूताविषं घोरतमं दुर्विज्ञेयतमं च तत् ।
दुश्चिकित्स्यतमं चापि भिषग्भिर्मन्दबुद्धिभिः ॥

SS.K. 8.75

The *lūtāviṣa* (bite of spider) is *ghoratama* (extremely severe), *durvijñeya* (difficult to comprehend) and *duścikitsya* (difficult to treat) by a *mandabuddhi bhiṣak* (physician of low intelligence).

प्रोद्भिद्यमानस्तु यथाऽङ्कुरेण न व्यक्तजातिः प्रविभाति
वृक्षः । तद्दुहुरालक्ष्यतमं हि तासां विषं शरीरे प्रविकीर्ण-
मात्रम् ॥

SS.K. 8.79

As a *vrkṣa* (tree) fails to manifest with features at the very stage of germination, the *lūtāviṣa* (bite of spider) is *durālakṣyatama* (most difficult to comprehend) at the very outset when the *viṣa* (poison) has just entered the *śarīra* (body). *Lūtāviṣa* (bite of spider) takes seven days to manifest itself completely and thus kill.

Mythological events related to origin of *lūtā* (spider)

Ācārya Suśruta quotes :

विश्वामित्रो नृपवरः कदाचिदृषिसत्तमम् ।

वशिष्ठं कोपयामास गत्वाऽऽश्रमपदं किल ॥

कुपितस्य मुनेस्तस्य ललाटात् स्वेदबिन्दवः ।

अपतन् दर्शनादेव रवेस्तत्समतेजसः ॥

तृणे महर्षिणा लूने धेन्वर्थं संभृतेऽपि च ।

ततो जातास्त्विमा घोरा नानारूपा महाविषाः ।

अपकाराय वर्तन्ते नृपसाधनवाहने ॥

यस्माल्लूनं तृणं प्राप्ता मुनेः प्रस्वेदबिन्दवः ।

तस्माल्लूतेति भाष्यन्ते संख्यया ताश्च षोडश ॥

SS.K. 8.90-93

Once *nṛpavara* (Emperor) *Viśvāmitra* made a visit to the hermitage of *Āṣi* (sage) *Vaśiṣṭha* and accidentally he evoked *kopa* (anger) of the sage; this led to eruption of *sveda-bindu* (sweat drops) on the *lalāṭa* (forehead) of the great sage and this had *tejah* (lustre) of *ravi* (Sun); the sweat fell on the cut *tṛṇa* (hay) for *dhenu* (cows) of the sage; this gave rise to *ghora* (terrifying) creatures with varied *rūpa* (features) and possessing *mahāviṣa* (virulent toxin); these creatures created

huge nuisance in the *sādhana* (accessories) and *vāhana* (vehicle) of the *nṛpa* (Emperor).

Born of the *sveda* (sweat) of great sage and fallen on cut *tṛṇa* (grass) they were named *lūtās* and they were sixteen.

Day-wise signs and symptoms

Day-wise signs and symptoms are mentioned here:

Day 1: ईषत्सकण्डु प्रचलं सकोटमव्यक्तवर्णं प्रथमे-
ऽहनि स्यात् ।

SS.K.8.80

Lūtāviṣa (venom of spider), on first day of bite, causes *iṣat kaṇḍū* (mild itching), *koṭha* (allergic rashes) with *avyakta varṇa* (unmanifest colour); the *viṣa* (poison) is *pracala* (shifting) in nature.

Day 2: अन्तेषु शूनं परिनिम्नमध्यं प्रव्यक्तरूपं च दिने
द्वितीये ॥

SS.K.8.80

Lūtāviṣa (venom of spider), on second day of bite, has *pravyakta rūpa* (more manifestation) and the *koṭha* (allergic rash) is *śūna* (swollen) in the *antaḥ* (periphery) and *parinimna* (depressed) in the *madhya* (mid region).

Day 3: त्र्यहेण तद्दर्शयतीह रूपं विषम् ।

SS.K.8.81

Lūtāviṣa (venom of spider), on third day of bite, has more clear *rūpa darśana* (manifestation of features).

Day 4: चतुर्थेऽहनि कोपमेति ।

SS.K.8.81

Lūtāviṣa (venom of spider), on fourth day of bite, attains *kopa* (aggravation).

Day 5: अतोऽधिकेऽह्नि प्रकरोति जन्तोर्विषप्रकोप-
प्रभवान् विकारान् ॥

SS.K.8.81

Lūtāviṣa (venom of spider), on fifth day of bite, results in *viṣa-prakopaja vikāras* (diseases due to poisons).

Day 6: षष्ठे दिने विप्रसृतं तु सर्वान् मर्मप्रदेशान् भृशान्-
वृणोति ।

SS.K.8.82

Lūtāviṣa (venom of spider), on sixth day of bite, attains *prasāra* (dispersion) and does *āvṛṇaṇa* (enveloping) of *marma-pradeśa* (vital regions).

Day 7: तत् सप्तमेऽत्यर्थं परीतगात्रं व्यापादयेन्मत्स-
मतिप्रवृद्धम् ॥

SS.K.8.82

Lūtāviṣa (venom of spider), on seventh day of bite, is *atipravṛddha* (severely aggravated) and it inflicts the whole *gātra* (body); thus resulting in *mṛtyu* (death).

Table No. 14.5

S.No.	Day	Signs and symptoms
1.	First day	<ul style="list-style-type: none"> • <i>iṣat kaṇḍū</i> (mild itching) • <i>koṭha</i> (allergic rashes) with <i>avyakta varṇa</i> (unmanifest colour) • <i>viṣa</i> (poison) is <i>pracala</i> (shifting) in nature
2.	Second day	<ul style="list-style-type: none"> • <i>pravyakta rūpa</i> (more manifestation) • <i>koṭha</i> (allergic rash) is <i>śūna</i> (swollen) in the <i>antaḥ</i> (periphery) and <i>parinimna</i> (depressed) in the <i>madhya</i> (mid region)
3.	Third day	<ul style="list-style-type: none"> • more clear <i>rūpa darśana</i> (manifestation of features)
4.	Fourth day	<ul style="list-style-type: none"> • attains <i>kopa</i> (aggravation)
5.	Fifth day	<ul style="list-style-type: none"> • <i>viṣa-prakopaja vikāras</i> (diseases due to poisons)
6.	Sixth day	<ul style="list-style-type: none"> • attains <i>prasāra</i> (dispersion) • <i>āvaraṇa</i> (enveloping) of <i>marma-pradeśa</i> (vital regions)
7.	Seventh day	<ul style="list-style-type: none"> • <i>atipravṛddha</i> (severely aggravated) • inflicts the whole <i>gātra</i> (body) • resulting in <i>mṛtyu</i> (death)

Classification of *lūtā* (spiders)

As per *Ācārya Suśruta* :

कृच्छ्रसाध्यास्तथाऽसाध्या लूतास्तु द्विविधाः स्मृताः ।
 तासामष्टौ कृच्छ्रसाध्या वर्ज्यास्तावत्य एव तु ॥
 त्रिमण्डला तथा श्वेता कपिला पीतिका तथा ।
 आलमूत्रविषा रक्ता कसना चाष्टमी स्मृता ॥
 सौवर्णिका लाजवर्णा जालिन्येणीपदी तथा ।
 कृष्णाऽग्निवर्णा काकाण्डा मालागुणाऽष्टमी तथा ॥

SS.K. 8.94-95,97

Lūtā (spiders), on the basis of prognosis, are of two kinds -

- *kr̥cchrasādhyā lūtā* (difficult to cure spider bite)
- *asādhyā lūtā* (incurable spider bite).

Each group has eight *lūtās* (spiders); and their names are :

Table No. 14.6

<i>Kr̥cchrasādhyā lūtās</i> (difficult to cure spiders)	<i>Asādhyā lūtās</i> (incurable spiders)
1. <i>trimaṇḍalā</i>	1. <i>sauvarṇikā</i>
2. <i>śvetā</i>	2. <i>lajavarṇā</i>
3. <i>kapilā</i>	3. <i>jālinī</i>
4. <i>pitikā</i>	4. <i>eṇipadī</i>
5. <i>ālaviṣā</i>	5. <i>kṛṣṇavarṇā</i>
6. <i>mūtraviṣā</i>	6. <i>agnivarṇā</i>
7. <i>raktā</i>	7. <i>kakāṇḍā</i>
8. <i>kasanā</i>	8. <i>mālaguṇā</i>

Symptoms of bite by difficult to cure *lūtā* (spider)

Ācārya Suśruta has elaborated general and specific features of bite by these *lūtās*. He quotes -

[ताभिर्दष्टे शिरोदुःखं कण्डूदंशे च वेदना ।

भवन्ति च विशेषेण गदाः श्लैष्मिकवातिकाः ॥

SS.K. 8.96

Bite of *kr̥cchra sādhyā lūtās* (difficult to cure spiders) causes -

- *śiroduḥkham* (headache)
- *kaṇḍū* (itching)
- *vedanā* (pain) at the site of *damśa* (bite)
- especially *ślaiṣmika* and *vātika gada* (disorders).

Symptoms of bite of incurable *lūtā* (spider)

As per *Ācārya Suśruta* :

ताभिर्दष्टे दंशकोथः प्रवृत्तिः क्षतजस्य च ।
 ज्वरो दाहोऽतिसारश्च गदाः स्युश्च त्रिदोषजाः ॥
 पिडका विविधाकारा मण्डलानि महान्ति च ।
 महान्तो मृदवः शोफा रक्ताः श्यावाश्चलास्तथा ॥

SS.K. 8.98-99

Bite of *asādhyā lūtās* (incurable spiders) causes

- *damśakotha* (putrefaction of bite site)
- *kṣatajasya pravṛttiḥ* (bleeding from site)
- *jvara* (fever)
- *dāha* (burning sensation)
- *atisāra* (diarrhoea)
- *tridoṣaja gadas* (disorders);

Besides, *pidakās* (boils) of various *ākāras* (shapes), *mahān maṇḍala* (large circular patches) and *śopha*

(oedema) which is *mahā* (large), *mṛdu* (soft), *rakta* (reddish), *śyāva* (blackish) and *cala* (shifting) in nature.

Guidelines for uncertain nature of bite

As per Ācārya Suśruta :

सविषं निर्विषं चैतदित्येवं परिशंकिते ।

विषघ्नमेव कर्तव्यमविरोधि यदीषघम् ॥ SS.K. 8.76

In the event of doubt whether the bite of *lūtā* (spider) is either *saviṣa* (poisonous) or *nirviṣa* (non-poisonous), it is advised to use *visaghna auśadha* (anti-poisonous drugs) that are not contradictory to *dhātus* (bodily tissues).

Specific signs & symptoms Difficult to cure

(1) *Lūtā* named *Trimāṇḍalā*

As per Ācārya Suśruta :

त्रिमण्डलाया दंशेऽसृक् कृष्णं स्रवति दीयते ।

बाधिर्यं कलुषा दृष्टिस्तथा दाहश्च नेत्रयोः ॥ SS.K. 8.101

Bite by *lūtā* named *trimāṇḍalā* causes -

- discharge of *kṛṣṇa asṛk* (blackish blood)
- *dāraṇa* (cracking) of bite-site
- *bādhirya* (deafness)
- *kaluṣa dṛṣṭi* (blurred vision)
- *netradāha* (burning sensation in eyes).

(2) *Lūtā* named *śvetā*

As per Ācārya Suśruta :

श्वेतायाः पिडका दंशे श्वेता कण्डूमती भवेत् ।

दाहमूर्च्छा ज्वरवती विसर्पक्लेदरुक्करी ॥ SS.K. 8.103

Bite by *lūtā* named *śvetā* causes :

- *śvetapiḍakā* (whitish blisters) with *kaṇḍū* (itching)
- *dāha* (burning sensation)
- *mūrcchā* (fainting)
- *jvara* (fever)
- *visarpa* (cellulitis)
- *kleda* (discharge)
- *ruk* (pain).

(3) *Lūtā* named *kapilā*

As per Ācārya Suśruta :

आदंशे पिडका ताम्रा कपिलायाः स्थिरा भवेत् ।

शिरसो गौरवं दाहस्तिमिरं भ्रम एव च ॥ SS.K. 8.105

Bite by *lūtā* named *kapilā* causes :

- *tāmra piḍakā* (coppery blisters) which are *sthira* (static/stable)
- *śiraḥgaurava* (heaviness of head)
- *dāha* (burning sensation)
- *timira* (visual defect)
- *bhrama* (giddiness).

(4) *Lūtā* named *pītikā*

As per Ācārya Suśruta :

आदंशे पीतिकायास्तु पिडका पीतिका स्थिरा ।

भवेच्छर्दिज्वरः शूलं मूर्ध्नि रक्ते तथाऽक्षिणी ॥

SS.K. 8.107

Bite by *lūtā* named *pītikā* causes :

- *pītikā piḍakā* (yellowish blister) which is *sthira* (static or stable)
- *chardi* (vomiting)
- *jvara* (fever)
- *mūrcchā śūla* (headache)
- *rakta akṣi* (redened eyes).

(5) *Lūtā* named *ālaviṣā*

As per Ācārya Suśruta :

रक्तमण्डनिभे दंशे पिडकाः सर्षपा इव ।

जायन्ते तालुशोषश्च दाहश्चालविषादिते ॥ SS.K. 8.109

Bite by *lūtā* named *ālaviṣā* causes :

- *raktamaṇḍa piḍakā* (red scum like blister)
- *sarṣapa* (mustard) like or shaped *piḍakā* (blister)
- *tāluśoṣa* (dried palate)
- *dāha* (burning sensation).

(6) *Lūtā* named *mūtraviṣā*

As per Ācārya Suśruta :

पूतिर्मूत्रविषादंशो विसर्पी कृष्णशोणितः ।

कासश्वासवमीमूर्च्छाज्वरदाहसमन्वितः ॥ SS.K. 8.111

Bite by *lūtā* named *mūtraviṣā* causes :

- *pūtitva* (putrefied odour)
- *visarpa* (cellulitis)
- *kṛṣṇa śoṇita* (blackish blood)
- *kāsa* (cough)
- *śvāsa* (dyspnoea/asthma)
- *vamī* (vomiting)
- *mūrcchā* (fainting)
- *jvara* (fever)
- *dāha* (burning sensation).

(7) *Lūtā* named *raktā*

As per *Ācārya Suśruta* :

आपाण्डुपिडको दंशो दाहक्लेदसमन्वितः ।

रक्ताया रक्तपर्यन्तो विज्ञेयो रक्तसंयुतः ॥ SS.K. 8.113

Bite by *lūtā* named *raktā* causes :

- *pāṇḍu piḍakā* (pale blisters) with *rakta-paryanta* (reddish margins) which are *raktasamyukta* (bleeding)
- *dāha* (burning sensation)
- *kleda* (moistness).

(8) *Lūtā* named *kasanā*

As per *Ācārya Suśruta* :

पिच्छिलं कसनादंशादुधिरं शीतलं स्रवेत् ।

कासश्वासौ च तत्रोक्तं रक्तलूताचिकित्सितम् ॥

SS.K. 8.115

Bite by *lūtā* named *kasanā* causes :

- discharge of *picchila* (slimy) and *śītala* (cold) *rudhira* (blood)
- *kāsa* (cough)
- *śvāsa* (dyspnoea).

Incurable

(9) *Lūtā* named *kṛṣṇā* vomit

As per *Ācārya Suśruta* :

पुरीषगन्धिरल्पासृक् कृष्णाया दंश एव तु ।

ज्वरमूर्च्छावमीदाहकासश्वाससमन्वितः ॥ SS.K. 8.116

Bite by *lūtā* named *kṛṣṇā* causes :

- *purīṣagandhi* (faecal odour)
- *alpa asṛk* (minimal bleeding)
- *jvara* (fever)
- *mūrcchā* (fainting)
- *vamī* (vomiting)
- *dāha* (burning sensation)
- *kāsa* (cough)
- *śvāsa* (dyspnoea).

(10) *Lūtā* named *lāja* or *agnivaktrā*

As per *Ācārya Suśruta* :

दंशे दाहोऽग्निवक्त्रायाः स्रावोऽत्यर्थं ज्वरस्तथा ।

चोषकण्डूरोमहर्षा दाहविस्फोटसंयुतः ॥ SS.K. 8.118

Bite by *lūtā* named *lāja* or *agnivaktrā* causes

- *dāha* (burning sensation) at the site of *damśa* (bite)

- *atyartha srāva* (profuse discharge)
- *jvara* (fever)
- *coṣa* (sucking pain)
- *kaṇḍū* (itching)
- *romaharṣa* (horripilation)
- *dāha* (burning sensation)
- *sphoṭa* (blisters).

(11) *Lūtā* named *sauvarṇikā*

As per *Ācārya Suśruta* :

ध्यामः सौवर्णिकादंशः सफेनो मत्स्यगन्धकः ।

श्वासः कासो ज्वरस्तृष्णा मूर्च्छा चात्र मुदारुणा ॥

SS.K. 8.122

Bite by *lūtā* named *sauvarṇikā* causes -

- *dhyāma* (blackish red) discolouration at the site of *damśa* (bite)
- *saphena* (frothy)
- *matsyagandhi* (fishy in odour)
- *śvāsa* (dyspnoea)
- *kāsa* (cough)
- *jvara* (fever)
- *trṣṇā* (profuse thirst)
- *dāruṇa mūrccchā* (severe fainting).

(12) *Lūtā* named *lājavarṇā*

As per *Ācārya Suśruta* :

आदंशे लाजवर्णाया ध्यामं पूति स्रवेदसृक् ।

दाहो मूर्च्छाऽतिसारश्च शिरोदुःखं च जायते ॥

SS.K. 8.123

Bite by *lūtā* named *lājavarṇā* causes :

- *dhyāma* (blackish red) discolouration at the site of *damśa* (bite)
- *pūtitva* (foul odour)
- *asṛk srāva* (bleeding)
- *dāha* (burning sensation)
- *mūrcchā* (fainting)
- *atisāra* (diarrhoea)
- *śiroduḥkham* (headache).

(13) *Lūtā* named *jālinī*

As per *Ācārya Suśruta* :

घोरो दंशस्तु जालिन्या राजिमानवदीर्यते ।

स्तम्भः श्वासस्तमोवृद्धिस्तालुशोषश्च जायते ॥

SS.K. 8.124

Bite by *lūtā* named *jālīnī* is *ghora* (lethal/ terrible) and causes :

- appearance of *rājī* (streaks)
- *avadaraṇa* (cracking) of site
- *stambha* (stiffness) of site
- *śvāsa* (dyspnoea)
- *tamovṛddhi* (black outs)
- *tāluśoṣa* (dried palate).

(14) *Lūtā* named *eṇīpadī*

As per *Ācārya Suśruta* :

एणीपद्मास्तथा दंशो भवेत् कृष्णतिलाकृतिः ।

तृष्णामूर्च्छाज्वरच्छर्दिकासश्वाससमन्वितः ॥ SS.K. 8.125

Bite by *lūtā* named *eṇīpadī* causes :

- ♦ site of bite resembles *kṛṣṇatila* (black sesame)
- ♦ *trṣṇā* (thirst)
- ♦ *mūrccā* (fainting)
- ♦ *jvara* (fever)
- ♦ *chardi* (vomiting)
- ♦ *kāsa* (cough)
- ♦ *śvāsa* (dyspnoea).

(15) *Lūtā* named *kākāṇḍā*

As per *Ācārya Suśruta* :

दंशः काकाण्डिकादष्टे पाण्डुरक्तोऽतिवेदनः ।

तृष्णामूर्च्छाश्वासहृद्गोहिवक्काकासाः स्युरुच्छ्रिताः ॥

SS.K. 8.126

Bite by *lūtā* named *kākāṇḍā* causes :

- *pāṇḍu rakta* (pale red) discolouration of site
- *ativedanā* (profuse pain)
- *trṣṇā* (thirst)
- *mūrccā* (fainting)
- *śvāsa* (dyspnoea)
- *hydroga* (cardiac discomfort)
- *hikkā* (hiccough)
- *kāsa* (cough).

(16) *Lūtā* named *mālāguṇā*

As per *Ācārya Suśruta* :

रक्तो मालागुणादंशो धूमगन्धोऽतिवेदनः ।

बहुधा च विशीर्येत दाहमूर्च्छाज्वरान्वितः ॥ SS.K. 8.127

Bite by *lūtā* named *mālāguṇā* causes :

- *rakta* (reddish) discolouration of site of *daṁśa* (bite)
- *dhūmagandha* (smoky odour)
- *ativedanā* (profuse pain)

- *bahudhā viśirṇa* (considerable slough/ened/ cracked)
- *dāha* (burning sensation)
- *mūrccā* (fainting)
- *jvara* (fever).

Induction of *viṣa* by *lūtā* (spider)

As per *Ācārya Vṛddha Vāgbhaṭa* :

श्वासदंष्ट्राशकृन्मूत्रशुक्रलालानखात्तवैः ।

अष्टाभिरुद्धमन्त्येता विषं वक्त्राद्विशेषतः ॥ AS.Ut. 44.12

Lūtā (spider) inducts its toxins through following eight: *śvāsa* (breathe), *daṁṣṭrā* (bite or sting), *śakṛt* (faeces), *mūtra* (urine), *śukra* (semen), *lālā* (saliva), *nakha* (nails) and *ārtava* (menstrual blood); but specially through *vaktra* (mouth).

Symptoms of *lūtāviṣa* (spider venom) - as per the site of Induction

As per *Ācārya Vṛddha Vāgbhaṭa* :

श्वासेन दंशः सहसा सूयते ज्वरदाहवान् ।

दंष्ट्राकृतस्तूग्रतरो विवर्णः कठिनः स्थिरः ॥

गम्भीरशोफवांस्तोदवेदनादाहसंयुतः ।

दुर्गन्धी शकृता दाहकण्डूचिमिचिमान्वितः ॥

पच्यते चाशु पक्वश्च पाण्डुः पीलुफलोपमः ।

मूत्रेण रक्तपर्यन्तो मध्ये कृष्णो विशीर्यते ॥

आवर्त्तसदृशः शूनः पूतिः सर्पति दह्यते ।

शुक्लेन ग्रन्थिसंस्थानः कठिनस्तीव्रवेदनः ॥

अल्पमूलोऽल्परुक्कोठो लालया कण्डुरो मृदुः ।

नखेन चोषपिटकाकण्डूधूमायनान्वितः ।

किंशुकोदरवर्णस्तु रजसा चञ्चुमालवान् ॥ AS.Ut. 44.13

- Contact with *śvāsa* (breathe) of *lūtā* (spider) results in

a. acute *śoṭha* (oedema) associated with

i. *jvara* (fever) and

ii. *dāha* (burning sensation).

- Contact with *daṁṣṭrā* (fangs) of *lūtā* (spider) is *ugratarā* (virulent) and

a. site of contact/ bite is *vivarna* (discoloured), *kāṭhina* (hard) and *sthira* (stable);

b. the patient develops

- i. *gambhīra śopha* (profound swelling)
 - ii. *toda* (pricking pain)
 - iii. *vedanā* (pain) and
 - iv. *dāha* (burning sensation).
- Contact with *śakṛt* (faeces) of *lūtā* (spider) causes
 - a. *śopha* (oedema) which is *durgandhi* (foul smelling) along with *dāha* (burning sensation)
 - b. *kaṇḍū* (itching)
 - c. *cimicīma* (tingling sensation)
 - d. this oedema is quick in *pācana* (ripening) and when *pakva* (ripe) it is *pāṇḍu* (pale) and similar to fruit of *pīlu*.
 - Contact with *mūtra* (urine) of *lūtā* (spider) results in
 - a. *śopha* (oedema) which is *raktapar-yanta* (reddish at margins) and *kṛṣṇa* (blackish) in *madhya* (middle)
 - b. it is *viśīrṇa* (sloughening), similar to *āvarta* (whirl), *pūti* (foetid) in odour, *sarpa* (spreading outwards) and causes *dāha* (burning sensation).
 - Contact with *śukra* (semen) of *lūtā* (spider) results in
 - a. *granthi* (cystic eruptions) which are *kaṭhina* (hard) and
 - b. *tīvra vedanā* (intense pain).
 - Contact with *lālā* (saliva) of *lūtā* (spider) causes
 - a. *śoṭha* (oedema) of *alpamūla* (superficial in nature) along with *alparuk* (mild pain)
 - b. *koṭha* (urticaria like rashes)
 - c. *kaṇḍura* (itching) and
 - d. *mṛdu* (mild) to touch.
 - Scratching with *nakha* (nails) of *lūtā* (spider) causes
 - a. *coṣa* (pricking pain)
 - b. *piṭakā* (blisters)

c. *kaṇḍū* (itching) with sensation of *dhūmāyana* (emanating smoke).

- Contact with *rajaḥ* (menstrual blood) of *lūtā* (spider) causes

a. eruptions resembling *varṇa* (colour) of *kiṁśukodara* and shaped like a *cañcumāla* (garland).

Ācārya Vṛddha Vāgbhaṭa says 'though all the *lūtās* (spiders) aggravate all the three *doṣas*, they are dominant in *pitta* and *kapha doṣas*'; he quotes -

त्रिदोषाः प्रायशः सर्वा लूताः पित्तकफाधिकाः ॥

AS.Ut. 44.19

Treatment of *lūtāviṣa* (spider venom)

General treatment

As per Ācārya Suśruta :

नस्याञ्जनाभ्यञ्जनपानधूमं तथाऽवपीडं कवलग्रहं च ।

संशोधनं चोभयतः प्रगाढं कुर्यात्सिरामोक्षणमेव चात्र ।

SS.K. 8.134

Following therapeutic modules are found to be useful while treating *lūtāviṣa* (spider venom):

- *nasyakarma* (medicated errhines)
- *añjanakarma* (medicated collyrium)
- *abhyañjana* (massage)
- *pāna* (oral drugs)
- *dhūmapāna* (medicated smoking)
- *avapīda* (powder snuff)
- *kavalagraha* (gargles)
- *ūrdhva saṁśodhana* (emesis)
- *adho saṁśodhana* (purgation)
- *sirā-mokṣaṇa* (blood letting).

In all kinds of *lūtāviṣa* (spider venom) bark of *śleṣmātaka* and *akṣīva-pippala* should be prescribed; he quotes -

सर्वासामेव युञ्जीत विषे श्लेष्मातकत्वचम् ।

भिषक् सर्वप्रकारेण तथा चाक्षीवपिप्पलम् ॥

SS.K. 8.120

Drugs useful in treatment of *lūtāviṣa* (spider venom)

- | | |
|-----------------------|----------------------|
| ◆ <i>arkaparṇī</i> | ◆ <i>svarṇakṣīri</i> |
| ◆ <i>kārpāsa</i> | ◆ <i>tvak</i> |
| ◆ <i>raktacandana</i> | ◆ <i>vaikāṁkata</i> |
| ◆ <i>śaivāla</i> | ◆ <i>hrībera</i> |
| ◆ <i>sārivā</i> | |

Treatment of *asādhyā lūtā* (incurable spider bite) should be, after declaring its incurability, as per dominant *doṣa*; *dāha* (agnikarmacauterization) and *chedana* (excision) should be avoided at all times; he quotes -

असाध्याव्यर्थाभिहितं प्रत्याख्यायाशु योजयेत् ।

दोषोच्छ्रयविशेषेण दाहच्छेदविद्यर्जितम् ॥ SS.K. 8.128

Bite by *sādhyā* (curable) kind of *lūtā* (spider) should be treated by promptly excising the site with *vrddhipatra* (scalpel); he quotes -

साध्याभिराभिर्लूताभिर्दष्टमात्रस्य देहिनः ।

वृद्धिपत्रेण मतिमान् सम्यगादंशमुद्धरेत् ॥ SS.K. 8.129

Skilled clinician should do *utkartana* (excision) of bite-site if it is other than *marma* (vital part), having mild *svayathu* (swelling) and no *jvara* (fever) etc.; he quotes -

अमर्माणि विधानज्ञो वर्जितस्य ज्वरादिभिः ।

दंशस्योल्कर्तनं कुर्यादल्पश्वयथुकस्य च ॥ SS.K. 8.130

This should be followed by application of *agada* (anti-poisonous formulae) mixed with *madhu* (honey) and *saindhava* (rock salt) or paste of *priyaṅgu*, *rajanī*, *kuṣṭha*, *samaṅgā* and *madhuka*.

The patient should gulp preparation of *sārivā*, *madhuka*, *drākṣā*, *payasyā* and *kṣīramo-ṛaṭa* or *vidārī*, *gokṣura*, *kṣaudra* (honey) and *madhuka*.

Secana (irrigation) with *suṣīta kaṣāya* (cooled decoction) of *tvak* (bark) of *kṣīri* (latex producing) plants is beneficial.

Other *upadravas* (complications) should be managed as per *doṣas* using appropriate *viṣaghna* (anti-poisonous formulations). He quotes -

मधुसैन्यवसंयुक्तैरगदैर्लेपयेत्ततः ।

प्रियंगुरजनीकुष्ठसर्मगामधुकैस्तथा ॥

सारिखां मधुकं द्राक्षां पयस्यां क्षीरमोष्टम् ।

विदारीगोक्षुरक्षीदमधुकं पाययेत् वा ॥

क्षीरिणां त्वक्कपायेण सुशीतेन च सेचयेत् ।

अद्रव्यान् यथादोषं विषर्जेत् साधयेत् ॥

SS.K. 8.131-133

Formulations quoted by Śrī Bhojarāja (author of *Rajamārtandah*) for *lūtāviṣa* (spider venom)
मञ्जिष्ठागजकेसरपत्रकरजनीप्रलेपिता लूता ।
नश्यति गण्डस्नु नृणां कुतंगुदीत्वक्प्रलेपानाम् ।

- *pralepa* (anointment) of *mañjiṣṭhā* + *gajakeśara* + *patra* + *rajanī*
- *pralepa* (anointment) of *iṅgudītvak* over the *ganḍa* (cheeks)

Formulation for treating *lūtāviṣa* (spider venom)

Ācārya Govindadāsa Sena quotes :

रजनीयुग्मपत्तंगमञ्जिष्ठानागकेशरैः ।

शीताम्बुपिष्टैरालेपः सद्यो लूताविषं हरेत् ॥ BR 72.38

Ālepa (anointment) made of *rajanī*, *dāruharidrā*, *pattanṅga*, *mañjiṣṭhā*, *nāgakeśara* and *śītāmbu* (cold water) helps abate *lūtāviṣa* (spider venom).

4. Spider

Facts

- Spider venoms are either cytotoxic or neurotoxic.
- Black widow spider's bite is neurotoxic and violent spider's bite is cytotoxic.
- Spider's bite is known as arachnidism.

Signs and symptoms

- localized swelling
- pain at the site
- reddening at the site
- muscle cramps
- delirium
- convulsions

Treatment

- Anti-venin
- Adrenaline
- Antihistamines
- Analgesics
- Symptomatic treatment etc.

Bee, wasp and hornet stings

Introduction

Bite of bee, wasp and hornet is painful with occurrence of localized swelling and redness;

intense burning sensation and pain are also seen; giddiness and inter-mittent fever is also seen.



Fig. 14.4 : Bee

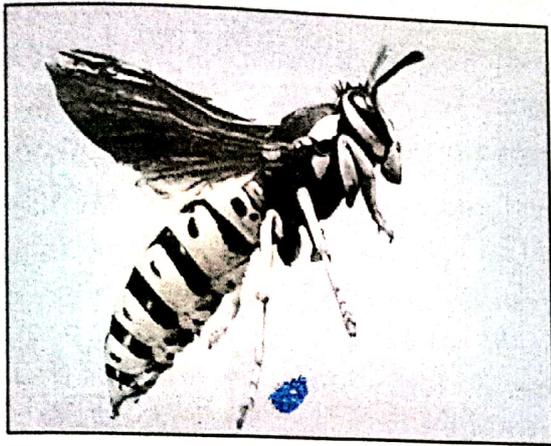


Fig. 14.5 : Wasp

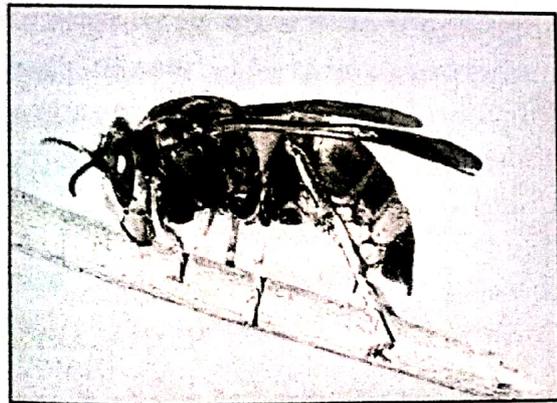


Fig. 14.6 : Hornet

Treatment

- Sting should be extracted from the site by pressing the surrounding areas; nails and pointed knife can be used.
- In case of virulence of poisoning following are prescribed -
 - Brhad yogarāja guggulu
 - Śiraḥśulādivajra rasa
 - Śiraḥśulādi lepa

Modern treatment

- Adrenaline 0.5 ml s.c.
- Prednisolone 20 mg

External applications:

- Leaves of *tulasī* mixed with *ghṛta* (ghee) and *saindhava* (rock salt) can be applied.
- Application of *marica*, *saindhava lavaṇa*, *sauvarcala lavaṇa* and *śuṅṭhī* mixed with juice of leaves of *nāgavallī* is helpful.
- Śatadhauta ghṛta
- Sahasradhauta ghṛta
- Daśāṅga lepa etc.

Mūṣaka viṣa (Rat bite poisoning)

Introduction

Mūṣaka viṣa (rat bite poisoning) is enlisted among sixteen kinds of *jāṅgama-viṣas* (animal poisons) and its *viṣa* (poison) resides in its *śukra* (semen); Ācārya Suśruta quotes -

मूषिकाः शुक्रविषाः । SS.K. 3.5

Ācārya Suśruta had described this in the seventh chapter of *Kalpasthāna*.

Synonyms of *mūṣaka*

Ācārya Narahari Paṇḍita, author of *Rājanighaṅṭu*, has quoted ten synonyms for *mūṣaka*; these are -

मूषिको मूषकः पिङ्गोऽप्याखुरुन्दुरुको नखी ।

खनको विलकारी च धान्यारिश्च बहुप्रजः ॥

Rājanighaṅṭu Simhādivargaḥ 68

- | | |
|--------------------|------------|
| ▪ <i>mūṣika</i> | (मूषिका) |
| ▪ <i>mūṣaka</i> | (मूषक) |
| ▪ <i>piṅga</i> | (पिङ्ग) |
| ▪ <i>ākhu</i> | (आखु) |
| ▪ <i>unduruka</i> | (उन्दुरुक) |
| ▪ <i>nakhī</i> | (नखी) |
| ▪ <i>khanaka</i> | (खनक) |
| ▪ <i>vilakāra</i> | (विलकार) |
| ▪ <i>dhānyāri</i> | (धान्यारि) |
| ▪ <i>bahupraja</i> | (बहुप्रज) |

Reference

- *Suśruta Samhitā* - 7th chapter of *Kalpa-sthāna*
- *Aṣṭāṅga Hṛdayam* - 38th chapter of *Uttara-sthāna*

- *Aṣṭāṅga Saṅgraha*- 46th chapter of *Uttara-sthāna*

Numbers

As per *Ācārya Suśruta* :

पूर्व शुक्रविषा उक्ता मूषिका ये समासतः ।
नामलक्षणभेदज्वरघटादश निबोध मे ॥
लातनः कभदे पुत्रकःकृष्णो हंसिरश्चिक्वि (क्वि)
रस्तथा ।
चूचुन्दरोऽलसश्चैव कषायदशनोऽपि च ॥
कुलिङ्गश्चाजितश्चैव चपलः कपिलस्तथा ।
कोकिलोऽरुणसंज्ञश्च महाकृष्णस्तथोन्दुरः ॥
श्वेतेन महता सार्धं कपिलेनाखुना तथा ।
मूषिकश्च कपोताभस्तथैवाष्टादश स्मृताः ॥ SS.K. 7.3-6

Mūṣika (rat) are categorized into *śukravīṣas* (semen poisons); their eighteen kinds are -

- | | |
|-----------------------|---------------------|
| • <i>lālana</i> | • <i>ajita</i> |
| • <i>putraka</i> | • <i>capala</i> |
| • <i>kṛṣṇa</i> | • <i>kapila</i> |
| • <i>hamsira</i> | • <i>kokila</i> |
| • <i>cikvira</i> | • <i>aruṇa</i> |
| • <i>chucchundara</i> | • <i>mahākṛṣṇa</i> |
| • <i>alasa</i> | • <i>mahāśveta</i> |
| • <i>kaṣāyadaśana</i> | • <i>mahākapila</i> |
| • <i>kuliṅga</i> | • <i>kapotābha</i> |

Abode of poison in *mūṣaka* (rat)

Abode of poison in *mūṣaka* (rat) is its *śukra* (semen). Contact with this *śukra* (semen) or contact with nails, teeth or any other body part covered with *śukra* (semen) can cause vitiation of *rakta* (blood) and subsequently yellowish discolouration of the site; *Ācārya Suśruta* quotes -

मूषिकाः शुक्रविषाः । SS.K. 3.5

पूर्व शुक्रविषा उक्ता मूषिका ये समासतः । SS.K. 7.3

As per *Ācārya Vāgbhaṭa* :

शुक्रं पतति यत्रैषां शुक्रदिग्धैः स्पृशन्ति वा ।

यदङ्गमङ्गैस्तत्रास्त्रे दूषिते पाण्डुतां गते ॥ AH.Ut. 38.3

The body part coming in contact with *śukra* (semen) of rat directly or through cloth contaminated by it causes vitiation of *asra* or *rakta* (blood) and subsequent *pāṇḍutā* (pallor).

Generalized signs and symptoms of *mūṣika-damśa* (rat bite)

As per *Ācārya Caraka* :

आदंशाच्छ्रेणितं पाण्डु मण्डलानि ज्वरोऽरुचिः ।

लोमहर्षश्च दाहश्चाप्याखुदूषीविषादिते ॥ CS.Cl. 23.147

Bite by *mūṣika* (rat) causes *pāṇḍu śonita* (pale blood), *maṇḍala* (circular patches), *jvara* (fever), *aruci* (anorexia), *lomaharṣa* (horripilation) and *dāha* (burning sensation).

As per *Ācārya Suśruta* :

जायन्ते ग्रन्थयः शोफाः कर्णिका मण्डलानि च ।

पीडकोपचयश्चोग्रो विसर्पाः किटिभानि च ॥

पर्वभेदो रुजस्तीव्रा मूर्च्छाङ्गसदनं ज्वरः ।

दौर्बल्यमरुचिः श्वासो वमथुलोमहर्षणम् ॥

दष्टरूपं समासोक्तमेतद्व्यासमतः शृणु । SS.K. 7.8-10

Generalized signs and symptoms of *mūṣika-damśa* (rat bite) are -

- | | |
|--|------------------------------------|
| • <i>granthi</i> (nodules) | • <i>tīvra ruḍā</i> (severe pain) |
| • <i>śopha</i> (oedema) | • <i>mūrccā</i> (fainting) |
| • <i>karṇikā</i> (auricular growths) | • <i>aṅgasadana</i> (malaise) |
| • <i>maṇḍala</i> (circular patches) | • <i>jvara</i> (fever) |
| • appearance of numerous <i>piḍakās</i> (blisters) | • <i>daurbalya</i> (weakness) |
| • <i>visarpa</i> (cellulitis) | • <i>aruci</i> (anorexia) |
| • <i>kiṭibha</i> (psoriasis like lesions) | • <i>śvāsa</i> (dyspnoea) |
| • <i>parvabheda</i> (joint pain) | • <i>vamathu</i> (vomiting) |
| | • <i>lomaharṣa</i> (horripilation) |

Specific signs and symptoms of *mūṣika-damśa* (rat bite)

As per *Ācārya Suśruta* :

लालाम्रावो लालनेन हिव्का छर्दिश्च जायते ॥

तण्डुलीयककल्कं तु लिह्यात्तत्र समाक्षिकम् ।

पुत्रकेणाङ्गसादश्च पाण्डुवर्णश्च जायते ॥

चीयते ग्रन्थिभिश्चाङ्गमाखुशावकसन्निभैः ।

शिरीषेगुदकल्कं तु लिह्यात्तत्र समाक्षिकम् ॥

कृष्णेन दंशे शोफोऽसृक्छर्दिः प्रायश्च दुर्दिने ।

शिरीषफलकुष्ठं तु पिबेत् किंशुकभस्मना ॥

हंसिरेणान्निविद्वेषो जुम्भा रोम्णां च हर्षणम् ।

पिबेदारवधादिं तु सुवान्तस्तत्र मानवः ॥

पिबिष्व (हिक) रेण शिरोदुःखं शोफो हिकका वमिस्तथा ।

जलिनीमदनाकोठकषायैर्वामयेतु तम् ॥

श्वनालर्षभीक्षारं बृहत्पोश्चात्र दापयेत् ।

धुधुन्दरेण तु छर्दिज्वरो दौर्बल्यमेव च ॥

श्रीवास्तम्भः पृष्ठशोफो गन्धाज्ञानं विसूचिका ।

चर्ष्यं हरीतकी शुण्ठी विडंगं पिप्पली मधु ॥

अंकोठबीजं च तथा पिबेदत्र विषापहम् ।

श्रीवास्तम्भोऽलसेनोर्ध्ववायुर्दशे रुजा ज्वरः ॥

मह्यगदं ससर्पिष्कं लिह्यात्तत्र समाक्षिकम् ।

निद्रा कषायदन्तेन हृच्छेषः काश्यमेव च ॥

ह्रौद्रेपेताः शिरीषस्य लिह्यात् सारफलत्वचः ।

कुलिङ्गेन रुजः शोफो राज्यश्च दंशमण्डले ॥

सहं ससिन्धुवारे च लिह्यात्तत्र समाक्षिके ।

अजितेनांगकृष्णात्वं छर्दिमूर्च्छं च हृद्ग्रहः ॥

मुक्क्षीरपिष्टां पालिन्दीं मञ्जिष्ठां मधुना लिहेत् ।

चपलेन भवेच्छर्दिमूर्च्छं च सह तृष्णाया ॥

ह्रौद्रेण त्रिफलां लिह्याद्भद्रकाष्ठजटान्विताम् ।

कपिलेन व्रणे कोथो ज्वरो ग्रन्थ्युद्गमः सतृट् ॥

लिह्यान्मधुयुतां श्वेतां श्वेतां चापि पुनर्नवाम् ।

ग्रन्थयः कोकिलेनोग्रा ज्वरो दाहश्च दारुणः ॥

वर्षाभूनीलिनीक्वाथकल्कसिद्धं घृतं पिबेत् ।

अरुणेनानिलः क्रुद्धो वातजान् कुरुते गदान् ॥

मह्यकृष्णेन पित्तं च श्वेतेन कफ एव च ।

महता कपिलेनासूक् कपोतेन चतुष्टयम् ॥

भवन्ति चैषां दंशेषु ग्रन्थिमण्डलकर्णिकाः ।

पिडकोपचयश्चोग्रः शोफश्च भृशदारुणः ॥ SS.K. 7.10-27

▪ Bite of *lālana-mūṣika* causes *lālāsrāva* (salivation), *hikkā* (hiccough) and *chardi* (vomiting).

▪ Bite of *putraka-mūṣika* causes *aṅgasāda* (malaise) and *pāṇḍuvarṇatā* (pallor) along with formation of *granthi* (cysts) resembling *ākhuśāvaka* (young ones of rat).

▪ Bite of *kṛṣṇa-mūṣika* causes *śopha* (oedema) and *asṛkchardi* (haematemesi) on a *durdina* (non-conducive day).

▪ Bite of *hamsira-mūṣika* causes *annavidveṣa* (anorexia), *jṛmbhā* (yawning) and *romaharṣa* (horripilation).

▪ Bite of *ciktira-mūṣika* causes *śiroduhkhā* (headache), *śopha* (swelling), *hikkā* (hiccough) and *vamana* (vomiting).

- Bite of *chucchundara-mūṣika* causes *tr̥ṣṇā* (thirst), *chardi* (vomiting), *jvara* (fever), *daurbalya* (weakness), *grīvāstambha* (neck stiffness), *pr̥ṣṭhāśopha* (swellin in back), *gandhājñāna* (anosmia) and *visūcikā* (pricking abdominal pain).
- Bite of *alasa-mūṣika* causes *grīvāstambha* (neck stiffness), *ūrdhvavāyu* (upward movement of *vāta*), *rujā* (pain at the bite-site) and *jvara* (fever).
- Bite of *kaśāyadaśana-mūṣika* causes *nidrā* (sleepiness), *hṛcchoṣa* (atrophy of cardiac muscles) and *kārśya* (emaciation).
- Bite of *kuliṅga-mūṣika* causes *rujā* (pain), *śopha* (oedema) and apperance of *rāji* (streak) in *daṁśamaṇḍala* (area of bite).
- Bite of *ajita-mūṣika* cause *saṅgākṛṣṇatvam* (blackishness of body parts), *chardi* (vomiting), *mūrccā* (fainting) and *hṛdgraha* (cardiac distress).
- Bite of *capala-mūṣika* causes *chardi* (vomiting), *mūrccā* (fainting) and *tr̥ṣṇā* (thirst).
- Bite of *kapila-mūṣika* causes formation of *kotha* (sloughening) of *vraṇa* (ulcers), *granthi* (cystic swelling) along with *jvara* (fever) and *tr̥ṣṇā* (thirst).
- Bite of *kokila-mūṣika* causes formation of *ugra granthi* (severe cysts), *jvara* (fever) and *dāruṇa dāha* (intese burning).
- Bite of *aruṇa-mūṣika* causes aggravation of *vāta* along with *vātaja gadas* (disorders).
- Bite of *mahākṛṣṇa-mūṣika* causes aggravation of *pitta*.
- Bite of *mahāśveta-mūṣika* causes aggravation of *kapha*.
- Bite of *mahākapila-mūṣika* causes aggravation of *rakta*.
- Bite of *kapotābha-mūṣika* causes aggravation of all four i.e. *vāta-pitta-kapha-rakta*.

In bites of these last five, *granthi* (cysts), *maṇḍala* (circular patches), *karṇikā* (auricular growths) and *pidakā* (boils) appear severely with *ugra śopha* (intense swelling).

Signs and symptoms of incurable *mūṣika-damśa* (rat bite)

As per Ācārya Caraka :

मूर्च्छगणशोथवैवर्ण्यक्लेदशब्दाश्रुतिज्वराः ।
शिरोगुरुत्वं लालासृक्छर्दिश्चासाध्यमूषिकैः ॥

CS.Ci. 23.148

Bite by incurable *mūṣika* (rat) is manifested by -

- *mūrcchā* (fainting)
- *damśaśoṭha* (swelling at the site)
- *vaivarṇya* (discolouration)
- *kleda* (moistness)
- *śabdāsruti* (intolerance to sound)
- *jvara* (fever)
- *śirogurutva* (heaviness of head)
- *lālāsrāva* (profuse salivation)
- *asṛkcchardi* (haematemesis).

Similar signs and symptoms are quoted by Ācārya Vāgbhaṭa; he quotes :

मूर्च्छगणशोथवैवर्ण्यक्लेदशब्दाश्रुतिज्वराः ॥
शिरोगुरुत्वं लालासृक्छर्दिश्चासाध्यलक्षणम् ।

AH.Ut. 38.6-7

He continues -

शूनवस्तिं विवर्णोष्ठमाखाभैर्ग्रन्थिभिश्चितम् ॥

छुच्छुन्दरसगन्धं च वर्जयेदाखुदूषितम् । AH.Ut. 38.7-8

When poison of *ākhu* (rat) results in *śūnabasti* (oedematous bladder), *vivarṇa oṣṭha* (discoloured lips), formation of *ākḥvābha granthi* (elevations similar to rat) and emitting of *chucchundara gandha* (rat like odour) then the patient should be rejected of treatment (i.e. he is incurable).

Treatment of poisoning due to *mūṣika-damśa* (rat bite)

Principles of treatment of *mūṣika-damśa* (rat bite)

As per Ācārya Suśruta :

सिराश्च स्त्रावयेत् प्राप्ताः कुर्यात् संशोधनानि च ।

सर्वेषां च विधिः कार्यो मूषिकाणां विषेष्वयम् ॥

दग्ध्वा विस्त्रावयेद्दंशं प्रच्छिन्नं च प्रलेपयेत् ।

SS.K. 7.32-33

Following therapeutic measures should be employed while treating *mūṣika-damśa* (rat bite) -

- *sirāvedha* (vene-puncture)
- *dahanakarma* (cauterization)

- *lepana* (anointment)
- *vamana* (emesis)
- *virecana* (purgation)
- *śirovirecana* (nasal errhines)
- *añjanakarma* (collyrium).

Drugs useful in treatment of *mūṣika-damśa* (rat bite)

- | | |
|--------------------|---------------------|
| ♦ <i>āsphota</i> | ♦ <i>śarapuṅkhā</i> |
| ♦ <i>iṅgudī</i> | ♦ <i>sindhuvāra</i> |
| ♦ <i>kākādanī</i> | ♦ <i>śirīṣa</i> |
| ♦ <i>kākamācī</i> | ♦ <i>taṇḍulīya</i> |
| ♦ <i>kośātakī</i> | ♦ <i>tilaka</i> |
| ♦ <i>saireyaka</i> | ♦ <i>vacā</i> |

Local applications for *mūṣika-damśa* (rat bite)

As per Ācārya Suśruta :

दग्ध्वा विस्त्रावयेद्दंशं प्रच्छिन्नं च प्रलेपयेत् ।

शरीषरजनीकुष्ठकुंकुमैरमृतायुतैः ॥

SS.K. 7.33

Dahana-karma (cauterization) of site should be followed by *pracchāna* (scarifying) therapy and application of *lepa* (anointment) made of *śirīṣa*, *rajanī* (*haridrā*), *kuṣṭha*, *kuṅkuma* and *amṛtā* (*guḍūcī*).

As per Ācārya Vāgbhaṭa :

आखुना दष्टमात्रस्य दंशं काण्डेन दाहयेत् ॥

दर्पणेनाथवा तीव्ररुजा स्यात्कर्णिकाऽन्यथा ।

दग्धं विस्त्रावयेद्दंशं प्रच्छिन्नं च प्रलेपयेत् ॥

शरीषरजनीवक्रकुंकुमामृतवल्लिभिः । AH.Ut. 38.16-18

Immediately after the bite by *mūṣika* (rat), the site should be subjected to *dahana-karma* (cauterization) using *kāṇḍa* (reed) or *darpaṇa* (glass piece); failing to do so will result in *tīvra rujā* (excruciating pain) and formation of *karnikās* (auricular growths). This should be followed by application of *lepa* (anointment) made of *śirīṣa*, *rajanī* (*haridrā*), *vakra* (*tagara*), *kuṅkuma* and *amṛtavallī* (*guḍūcī*).

Treatment of *karnikās* (keloid like growth) due to *mūṣika-damśa* (rat bite)

As per Ācārya Suśruta :

स्थिराणां रुजतां वाऽपि व्रणानां कर्णिकां भिषक् ।

पाटयित्वा यथादोषं व्रणवच्चापि शोधयेत् ॥ SS.K. 7.42

Sthira (hard) and *rujā* (painful) *vraṇa karnikā* (eruptions around bite) are treated by *pāṭana*

(incising) the eruption and followed by *braṇa śodhana* (wound cleansing) regimen as per *doṣa*.

As per *Ācārya Vṛddha Vāgbhaṭa* :

स्थिरा मन्दरुजा प्रच्छेत् कर्णिकां पातयेत् वा ।
श्यामा लांगलिका दन्ती किणिही गिरिकर्णिका ॥
आषुवृक्षो महावृक्षश्चिवृदञ्जनकी स्नुही ।
कर्णिकापातनं कल्कमेकैकं तिलकल्कवत् ॥

AS.Ut. 46.41-42

For *karnikās* (eruptions) that are *sthira* (hard) and *mandarujā* (mildly painful), *pātana* (incising) should be followed by application of *lepas* (anointments) -

- *śyāmā* mixed with paste of *tila* or
- *lāngalikā* mixed with paste of *tila* or
- *dantī* mixed with paste of *tila* or
- *kiṇihī* mixed with paste of *tila* or
- *girikarnikā* mixed with paste of *tila* or
- *ākhuvṛkṣa* mixed with paste of *tila* or
- *mahāvṛkṣa* mixed with paste of *tila* or
- *trivṛt* mixed with paste of *tila* or
- *añjanakī* mixed with paste of *tila* or
- *snuhī* mixed with paste of *tila*.

Therapy after falling of *karnikās* (keloid like growth)

As per *Ācārya Vṛddha Vāgbhaṭa* :

क्षीरिप्रवालमञ्जिष्ठा बलादार्वी हयाह्वयाः ।
रोपण्यः कल्कतास्तैलं घृतं वा साधितं तथा ।
द्विनिशा तिलयष्ट्याहृतगरोशीरपद्मकैः ॥ AS.Ut. 46.43

- *Kalka* (paste), *taila* (oil) or *ghṛta* (ghee) prepared from *pravāla* (leaf buds) of *kṣīrivṛkṣa* (latex producing trees), *mañjiṣṭhā*, *balā*, *dārvī* and *hayāuhvayā* heal the ulcer forming after removal of *karnikās*.
- Similarly preparations of *niśā*, *dārvī*, *tila*, *yaṣṭimadhu*, *tagara*, *uśīra* and *padmaka* help.

Generalized treatment of *mūṣika-damśa* (rat bite)

Importance of *saṁśodhana karma*

As per *Ācārya Suśruta* :

मूषिकाणां विषं प्रायः कुप्यत्यध्रेष्वनिर्हृतम् ।
तत्राप्येष विधिः कार्थो यश्च दूषीविषापहः ॥ SS.K. 7.41

In general, the *mūṣika viṣa* (poisoning by rat), if not eliminated, aggravates in *abhra* (cloudy)

weather; in such condition, *vamana* (emesis) etc. measures along with regimen for *dūṣīviṣa* should be adopted.

Vamana karma (emesis)

As per *Ācārya Suśruta* :

छर्दनं जालिनीक्याथैः शुकाख्याकोटयोरपि ।
शुकाख्याकोषवत्योश्च मूलं मदन एव च ॥
देवदालीफलं चैव दध्ना पीत्वा विषं वमेत् ।
सर्वमूषिकदष्टानामेष योगः सुखावहः ॥
फलं यच्चा देवदाली कुष्ठं गोमूत्रपेषितम् ।
पूर्वकल्पेन योज्याः स्युः सर्वान्दुरुविषच्छिद्रः ॥

SS.K. 7.34-36

Formulations for *chardana* (*vamana* - emesis)

- *kvātha* (decoction) of *jālinī*
- *kvātha* (decoction) of *śukanāsā* and *aṅkoṭha*
- *mūla* (root) of *śukanāsā* and *koṣavatī*, *phala* (fruits) of *madana* and *devadālī* with *dadhi* (curd)
- *madanaphala*, *vacā*, *devadālī* and *kuṣṭha* pounded with *gomūtra* (cow's urine) and taken with *dadhi* (curd)

Virecana karma (purgation)

As per *Ācārya Suśruta* :

विरेचने त्रिवृहन्तीत्रिफलाकल्क इष्यते । SS.K. 7.37

Formulation for *virecana* (purgation) is *kalka* (paste) of *trivṛt*, *dantī* and *triphalā* (*harītakī* + *āmalakī* + *bibhitakī*).

Śirovirecana (nasal errhines)

As per *Ācārya Suśruta* :

शिरोविरेचने सारः शिरीषस्य फलानि च ॥ SS.K. 7.37

For *śirovirecana* (nasal errhines) powdered *sāra* (heartwood) and *phala* (fruits) of *śirīṣa* (*Albizzia lebbek*) are used.

Añjana karma (medicated collyriums)

As per *Ācārya Suśruta* :

हितस्त्रिकटुकाढ्यश्च गोमयस्वरसोज्जने । SS.K. 7.38

For *añjana karma* (medicated collyriums) *gomaya rasa* (juice of cowdung) with plentiful *trikaṭu* (*pippalī* + *marica* + *śunṭhī*) is useful.

Oral medications

As per Ācārya Suśruta :

कपित्थगोमयसौ लिह्यान्माक्षिकसंयुतौ ॥

रसाञ्जनहरिद्रेन्द्रयवकदलीषु वा कृतम् ।

प्रातः सातिविषं कल्कं लिह्यान्माक्षिकसंयुतम् ॥

तण्डुलीयकमूलेषु सर्पिः सिद्धं पिबेन्नरः ।

आस्फोटमूलसिद्धं वा पञ्चकापित्थमेव वा ॥

SS.K. 7.38-40

- Rasa (juice) of *kapittha* or *gomaya* should be mixed with *mākṣika* (honey) and licked.
- Paste of *rasāñjana*, *haridrā*, *indrayava*, *kaṭvī* and *ativiṣā* should be mixed with *mākṣika* (honey) and taken in morning hours.
- *Sarpi* (ghee) processed with *mūla* (roots) of *taṇḍuliyaka* or of *āsphota* or with five parts of *kapittha* are useful.

As per Ācārya Caraka :

त्वचं च नागरं चैव समांशं श्लक्ष्णपेषितम् ।

पेयमुष्णाम्बुना सर्वं मूषिकाणां विषापहम् ॥

CS.Ci. 23.205

Tvak and *nāgara* (*śuṅṭhī*) in equal quantities are made into a fine paste and consumed along with *uṣṇāmbu* (warm water); this pacifies all kinds of *mūṣika viṣa* (rat bite poisoning).

Popular formulation

Ācārya Vṛddha Vāgbhaṭa (AS.Ut. 46.15), Ācārya Vāgbhaṭa (AH.Ut. 38.18-19), Ācārya Cakrapāṇi (CD.Viṣacikitsā. 19), Ācārya Govindadāsa Sena (BR. 72.24), Ācārya Vṛnda (Vṛndamādhava 68.39) and others have enumerated a common formulation to tackle *mūṣaka viṣa* (rat bite poisoning) and *karnikās* (keloid like growth) resulting from rat bite. Here we quote from *Aṣṭāṅga Hṛdayam*-

अगारधूममज्जिष्ठारजनीलवणोत्तमैः ।

लेपो जयत्याखुविषं कर्णिकायाश्च पातनः ॥

AH.Ut. 38.18-19

Equal quantity of *āgāradhūma* (*grhadhūma*), *mañjiṣṭhā*, *rajanī* and *lavāṇa* should be applied as a *lepa* (anointment) on the site of bite; this, done for few days, pacifies the *mūṣikaviṣa* (rat poison) and facilitates falling off *karnikā* (keloid like out growths).

Various formulations

- *Aśvakañcukī rasa*
- *Bṛhad yogarāja guggulu*
- *Ākhuvliṣāntaka rasa*
- *Mṛtyupāśacchedī ghṛta*

Ākhuvliṣāntaka Rasa**Reference**

- *Yogaratnākara Viṣacikitsā*

Sūtra:

रसं गन्धं विषं चैव त्र्युषणं टंकरोहिणी ।

पुनर्नवारसैर्मर्द्यं गोमूत्रे च द्विगुञ्जकम् ॥

पिबेदायुविषातानां सर्वं हरति तद्विषम् ।

विषदष्टोद्धवानन्यान्हान्यादायुविषान्तकः ॥ YR.

Content

- *śuddha pārada* (one part)
- *śuddha gandhaka* (one part)
- *śuddha vatsanābha* (one part)
- *śuṅṭhī* (one part)
- *marica* (one part)
- *pippalī* (one part)
- *śuddha ṭaṅkaṇa* (one part)
- *kuṭakī cūrṇa* (one part)

Bhāvanā dravya- *Punarnavā svarasa*

Anupāna - *Gomūtra*

Dose - 2 *guñjā* (250 mg)

5. Rat-bite Fever**Introduction**

Rat-bite fever is a disease caused by infected rodents.

Causes

Caused by two bacterias which are found in the mouths of rodents; viz.

- *Streptobacillus moniliformis*
- *Spirillum minus*

Signs and symptoms

- fever with chills
- arthralgia
- redness at the site of bite
- swelling at the site of bite
- rash
- lymphadenopathy near the site of bite

Treatment

- Antibiotics (Penicillin/Tetracyclines x 7 - 14 days)

6. Alarka-viṣa (Rabies)

Synonyms

- Jalasantrāsa
- Jalatrāsa

Introduction to alarka-viṣa (Rabies)

In general, *alarka-viṣa* is used for bite by rabid dogs; on a larger scale, it includes bite by all kinds of canines. This is also known as hydrophobia or lyssa.

In this work, we shall only consider bite by rabid dogs.

Bite, in general, of all dogs is non-poisonous; bite attains toxicity only when the dog itself is afflicted by toxicity.

Āyurveda has shed enough light on this topic.

As per Ācārya Vṛddha Vāgbhaṭa :

शुनः श्लेष्मोल्बणा दोषाः संज्ञां संज्ञावहाश्रिताः ।

मुष्णन्तः कुर्वन्ते क्षोभं धातूनामतिदारुणम् ॥

लालावनन्धबधिरः सर्वतः सोऽभिधावति ।

स्रस्तपुच्छहनुस्कन्धः शिरो दुःखी नताननः ॥ AS.Ut. 46.7

Doṣas with predominance of *śleṣma* invade the *sañjñāvaha srotas* (channel carrying sense) of the *śunah* (dog) and derange his *sañjñā* (senses) along with *atidāruṇa kṣobha* (intense disruption) of *dhātus* (bodily tissues); then such a dog runs all over with dribbling *lālā* (saliva), *andha* (blindness), *badhira* (deafness) and *srasta* (hiding) *puccha* (tails) with bentdown *hanu* (lower jaw) and *skandha* (shoulders), with *śiroduḥkha* (headache) and *nata ānana* (dejected face).

Signs and symptoms of alarka-viṣa (rabies)

As per Ācārya Suśruta :

सुप्तता जायते दंशे कृष्णं चातिस्रवत्यसूक् ॥ SS.K. 7.45

Bite of *alarka* (rabid) animal is manifested by *suptatā* (numbness) and *kṛṣṇa* (blackish discolouration) of site alongwith excessive discharge of *asṛk* (blood).

As per Ācārya Vṛddha Vāgbhaṭa :

दंशस्तेन विदष्टस्य सुप्तः कृष्णं क्षरत्यसूक् ॥

हृच्छिरोरुज्वरस्ताम्भतृष्णामूर्च्छाद्भवोऽनु च ।

AS.Ut. 46.8

Bite of *alarka* (rabid dog) causes

- suptatā* (sleepiness)
- oozing of *kṛṣṇa asṛk* (blackish blood)
- hṛdruk* (cardiac discomfort)
- śiroruk* (headache)
- jvara* (fever)
- stambha* (stiffness)
- tṛṣṇā* (morbidthirst)
- mūrccā* (fainting).

Signs of Incurability of alarka-viṣa (Rabies)

As per Ācārya Suśruta :

येन चापि भवेदष्टस्तस्य चेष्टां रुतं नरः ॥

बहुशः प्रतिकुर्वाणः क्रियाहीनो विनश्यति ।

SS.K. 7.46-47

The victim duplicating closely the *ceṣṭā* (movements) and voice of the biting animal becomes *kriyāhīna* (paralyzed) and succumbs to death.

दंष्ट्रिणा येन दष्टश्च तदूपं यस्तु पश्यति ॥

अप्सु वा यदि वाऽऽदर्शोऽरिष्टं तस्य विनिर्दिशेत् ।

expect

SS.K. 7.47-48

If the victim envisages the *rupa* (image) of biting animal in the *ap* (water) or *ādarśa* (mirror), it is to be considered an *ariṣṭa* (fatal sign).

As per Ācārya Vṛddha Vāgbhaṭa-

दष्टो येन तु तच्चेष्टारुतं कुर्वन् विनश्यति ।

पश्यंस्तमेव चाकस्मादादर्शसलिलादिषु ॥ AS.Ut. 46.16

The victim imitates the *ceṣṭā* (movements) and voice of the biting animal, envisages them in the *ādarśa* (mirror) and *salila* (water).

Features of jalasantrāsa (hydrophobia)

As per Ācārya Suśruta :

त्रस्यत्यकस्माद्योऽभीक्षणं दृष्ट्वा स्पृष्ट्वाऽपि वा जलम् ॥

जलत्रासं तु विद्यात्तं रिष्टं तदपि कीर्तितम् ।

SS.K. 7.48-49

One who gets horrified abruptly and continually by *darśana* (sight) or *sparśana* (touch) of *jala* (water) should be known as patient of *jalatrāsa* (hydrophobia). This is a sign of *riṣṭa* (imminent death).

As per Ācārya Vṛddha Vāgbhaṭa :

जलदर्शनसंस्पर्शशब्देभ्यो यश्च सन्नसेत् ।
अदृष्टमपि तं जह्याज्जलसन्नासरोगिणम् ॥ AS.Ut. 46.17

The one getting frightened by the *darśana* (sight), *sansparśa* (touch) or *śabda* (sound) of *jala* (water) even though not bitten by the rabid animal is considered as patient of *jalasantrāsa* (hydrophobia) and rejected.

Treatment of *alarka-viṣa* (Rabies)

As per Ācārya Suśruta :

दंशं विस्त्राव्य तैर्दृष्टे सर्पिषा परिदाहितम् ॥
प्रदिह्यादगदैः सर्पिः पुराणं पाययेत् च ।
अर्कक्षीरयुतं ह्यस्य दद्याच्चापि विशोधनम् ॥
श्वेतां पुनर्नवां चास्य दद्याद्धनूरकायुताम् ।
पललं तिलतैलं च रूपिकायाः पयो गुडः ॥
निहन्ति विषमालर्कं मेघवृन्दमिवानिलः । SS.K. 7.50-53

In case of rabid bite, *visrāvāṇa* (draining) of site of *daṁśa* (bite) should be done and followed by *paridāha* (cauterization) using *sarpi* (ghee); *pradeha* (anointing) of *agada* (anti-poisonous recipe) should be done at the site; *purāṇa sarpi* (aged ghee) should be prescribed to the patient; *viśodhana* (purification) should be done using drugs macerated with *arkakṣīra* (latex of *Calotropis*); *śvetā* and *punarnavā* should be mixed with *dhattūra* and given to the patient.

Combination of *palala* (crushed sesame), *tilataila* (sesame oil), *payah* (latex) of *rūpikā* (*Calotropis*) and *guḍa* (jaggery) destroys *alarka viṣa* (toxins of rabies) as *anila* (wind) disperses the *meghavṛnda* (cluster of clouds).

Summary

- *visrāvāṇa* (draining)
- *paridāha* (cauterization) using *sarpi* (ghee)
- *pradeha* (anointing) of *agada*
- *purāṇa sarpi* (aged ghee) for drinking

- *viśodhana* (purification) using drugs macerated with *arkakṣīra* (latex of *Calotropis*)
- *śvetā* + *punarnavā* + *dhattūra*
- *palala* + *tilataila* + *payah* (latex) of *rūpikā* + *guḍa* (jaggery)

Lepas (ointments) for *alarka-viṣa* (Rabies)
As per Ācārya Vṛddha Vāgbhaṭa :

(A) तिलगुग्गुलुदूर्वाणां दाडिमस्य गुडस्य च ।
कल्को मुहुर्मुहुर्लेपः श्वदंशविषजित्परम् ॥

AS.Ut. 46.65

Repeated *lepa* (anointing) of *tila*, *guggulu*, *dūrva*, *dāḍima* and *guḍa* help pacify the *viṣa* (poison) of *śva-daṁśa* (dog bite).

(B) नलमूलं जले पिष्टं पानलेपनयोर्हितम् ।

AS.Ut. 46.66

Mūla (root) of *nala* is macerated with *jala* (water) and can be used for *pāna* (drinking) and *lepana* (anointing).

(C) मातुलुंगच्छदैर्दंशं बध्नीयाहन्तचर्वितैः ॥

AS.Ut. 46.66

Site of bite should be tied with bark of *mātuluṅga* chewed with teeth.

(D) लशुनोषणवैदेही वरा गोपित्तकल्किताः ।
पाननस्याज्जनालेपैः श्वदष्टस्यौषधं परम् ॥

AS.Ut. 46.71

Laśuna, *uṣaṇa*, *vaidehī* and *varā* are macerated with *gopitta* (cow's bile) and is used for *pāna* (drinking), *nasya* (errhines), *añjana* (collyrium) and *ālepa* (external application); this is best for pacifying *viṣa* (poison) of *śva-daṁśa* (dog bite).

Ghṛtas (medicated ghee) for *alarka-viṣa* (Rabies)

As per Ācārya Vṛddha Vāgbhaṭa :

(I) जलवेतसपत्रत्वङ्मूलं क्षुण्णं पचेज्जले ।
स क्वाथः शीतलः पीतः परं श्वविषभेषजम् ॥
तत्सिद्धं च घृतं पाननस्याभ्यञ्जनलेपनम् ।
जलत्रासे समस्ते च विषे तत् गरुडोपमम् ॥

AS.Ut. 46.72-73

- *Siddha ghṛta* (medicated ghee) made from decoction of *patra* (leaves), *tvak* (bark) and *mūla* (roots) of *jalavetasa* is used as *pāna* (drink), *nasya* (errhines), *abhyañjana*

(massage) and *lepāna* (anointing) in all kinds of *jalatrāsa* (hydrophobia); this formulations acts like a *Garuḍa* (vulture) for *viṣa* (poison).

- (II) यवमाषकुलत्थानां पञ्चमूलस्य चाम्भसि ।
क्षीरद्विगुणिते सर्पिः साधयेत् श्लक्ष्णकल्कितैः ॥
अश्वगन्धासहाकुष्ठबृहतीरजनीद्वयैः ।
विदारीनतकट्वंग पयस्यासिन्दुवारकैः ॥
सर्पगन्धानखाभीरुशर्करारक्तचन्दनैः ।
श्वदंष्ट्रोपद्रवान् सर्वान् पानाभ्यगैर्निहन्ति तत् ॥

AS.Ut. 46.74-76

- To the decoction of *yava*, *māṣa*, *kulattha* and *pañcamūla* are added two parts of *kṣīra* (milk) and one part *sarpi* (ghee) and *ślakṣṇa kalka* (fine paste) made of *aśvagandhā*, *sahā*, *kuṣṭha*, *bṛhatī*, *rajanī*, *dāruharidrā*, *vidārī*, *nata*, *kaṭvaṅga*, *payasyā*, *sinduvāraka*, *sarpagandhā*, *nakha*, *abhīru*, *śarkarā* and *raktacandana* are added and processed.
- This medicated ghee is used as *pāna* (drink) and for *abhyāṅga* (massage); this recipe pacifies upadravas (complications) arising from *śva daṁṣṭrā* (bite of dog).

**Formulations quoted by Śrī Bhojarāja
(author of Rājamārtanḍaḥ) for alarka-viṣa
(Rabies)**

- *Dhattūrādi yoga* { *dhattūra svarasa* + *payah* + *sarpi* + *guḍa* }
- *Kākodumbarikā yoga* { root of *kākodumbara* + fruit of *dhattūra* + *taṇḍulodaka* }
- *Asanamūla-dhattūrayoga* { *asana mūlatvak* + *dhattūra phala* + *taṇḍulodaka* }

Oral drugs for alarka-viṣa (Rabies)

Ācārya Suśruta has given a potent formulation; he quotes :

मूलस्य शरपुंखायाः कर्षं धत्तूरकार्थिकम् ॥
तण्डुलोदकमादाय पेषयेत्तण्डुलैः सह ।
उन्मत्तकस्य पत्रैस्तु संवेष्ट्यापूपकं पचेत् ॥
खादेदौषधकाले तमलर्कविषदूषितः ।
करोति श्वविकारांस्तु तस्मिञ्जीर्यति चौषधे ॥
विकाराः शिशिरे याप्या गृहे वारिविवर्जिते ।
ततः शान्तविकारस्तु स्नात्वा चैवापरेऽहनि ॥

शालिषट्कयोर्भक्तं क्षीरेणोष्णेन भोजयेत् ।
दिनत्रये पञ्चमे वा विधिरेषोऽर्धमात्रया ॥
कर्तव्यो भिषजाऽवश्यमलर्कविषनाशनः ।
कुप्येत् स्वयं विषं यस्य न स जीवति मानवः ॥
तस्मात् प्रकोपयेदाशु स्वयं यावत् प्रकुप्यति ।

SS.K. 7.53-59

- Root of *śarapuṅkhā* one *karṣa* (10 gm.) and root of *dhattūra* half *karṣa* (5 gm.) is pounded with *taṇḍulodaka* (rice water) alongwith *taṇḍula* (rice); this is wrapped in a *patra* (leaf) of *unmattaka* (*dhattūra*) and cooked into *apūpa* (kind of sweet cake); this should be consumed by the patient of *alarkaviṣa* (rabies) during the *auśadha kāla* (appropriate schedule of drugs).
- This recipe, during digestion, produces *śva-vikāra* (activities of dog or animal) in the patient; this should be managed by placing him in a *śiśira gṛha* (cool room) from from *vāri* (water).
- When the *vikāras* (complications) abate, patient should be subjected to *snāna* (bathing) on the next day and he be served boiled *śāli* and *ṣaṣṭika* along with *uṣṇa kṣīra* (hot milk).
- This protocol is to be followed on third or fifth day but in *ardhamātrā* (half dosage) so as to nullify *alarkaviṣa* (rabies).

The patient doesn't survive if the *viṣa* (poison) doesn't aggravate on its own, hence it should be excited promptly so that it attain *prakopa* (aggravation) on its own.

**Drugs useful in treatment of alarka-viṣa
(rabies)**

- *dhattūra*
- *jalavetasā*
- *kākodumbara*
- *nala*
- *svarnaḥṣiri*
- *varṣā*

Abhimantrita snāna cikitsā (incantated bathing thera-

py) etc. for *alarka-viṣa* (rabies)

As per *Ācārya Suśruta* :

बीजरत्नौषधीगर्भैः कुम्भैः शीताम्बुपूरितैः ॥

स्नापयेत्तं नदीतीरे समन्त्रैर्वा चतुष्पथे ।

बलिं निवेद्य तत्रापि पिण्याकं पललं दधि ॥

माल्यानि च विचित्राणि मांसं पक्वामकं तथा ।

अलकाधिपते यक्ष सारमेयगणाधिप! ॥

अलर्कजुष्टमेतन्मे निर्विषं कुरु माचिरात् । SS.K. 7.59-62

The patient should be subjected to bathing with *kumbha* (pitcher) containing *bija* (seeds), *ratna* (gems) and *auśadha* (herbs) within and filled with *śītāmbu* (cold water) reciting *mantra* (incantations) at the *nadītīra* (bank of river) or *catuṣpatha* (road crossing).

Bali (oblations) should be offered of *piṇyāka* (sesame oil cake), *palala* (crushed seeds of sesamum) and *dadhi* (curd); *mālās* (garlands) of varied colours and *māmsa* (meat) either *pakva* (cooked) or *āma* (uncooked); these should be offered along with recitation (by the patient) of following *mantra* -

alakādhipate yakṣa sārāmeyagaṇādhīpa! ॥

alarkajuṣṭametanme nirviṣaṁ kuru mācīrāt ॥

i.e. O *Yakṣa*! *Alakādhipati* (King of *Alakā*), Lord of the group of dogs, please make my kith afflicted with *alarka-viṣa* (poison of rabid dog) *nirviṣa* (poison-free) at the earliest.

दद्यात् संशोधनं तीक्ष्णमेवं स्नातस्य देहिनः ॥

अशुद्धस्य सुरूढेऽपि व्रणे कुप्यति तद्विषम् ।

SS.K. 7.62-63

After the *abhimantrita snāna*, patient should be subjected to *fīksna samśodhana* (strong evacuation measures) because if not cleared, the poison flares up even after the *vraṇa* (wound) has healed.

Milwaukee protocol

- experimental course of treatment of rabies infection (in humans)
- chemically induced coma with antiviral drugs

7. Rabies

Definition

- Rabies is a viral disease that causes acute inflammation of the brain in humans and other warm-blooded animals.

Facts

- The word is derived from a Latin word which means 'madness'.
- Causes about 30,000 to 40,000 deaths worldwide per year.
- World Rabies day: 28th September.

Causes

- Lyssa virus

Incubation period

- 4 days - many years

Transmission

- Through the saliva of infected animal

Signs and symptoms

- ◆ flu-like symptoms (initially for few days)
- ◆ anxiety
- ◆ loss of sleep
- ◆ mental confusion
- ◆ agitation
- ◆ altered behavior
- ◆ paranoia
- ◆ hallucinations
- ◆ delirium
- ◆ hydrophobia

Hydrophobia

- It means 'fear of water'.
- It is a set of symptoms that manifest in the later stages of infection in during which patient has -
 - difficulty in swallowing
 - panics when given liquids
 - failure to quench his thirst

Treatment

- Washing of the bite site (with soap and water)
- Human rabies immunoglobulin (HRIG) (5 doses)

8. *Jalaukā daṁśa* (leech bite)

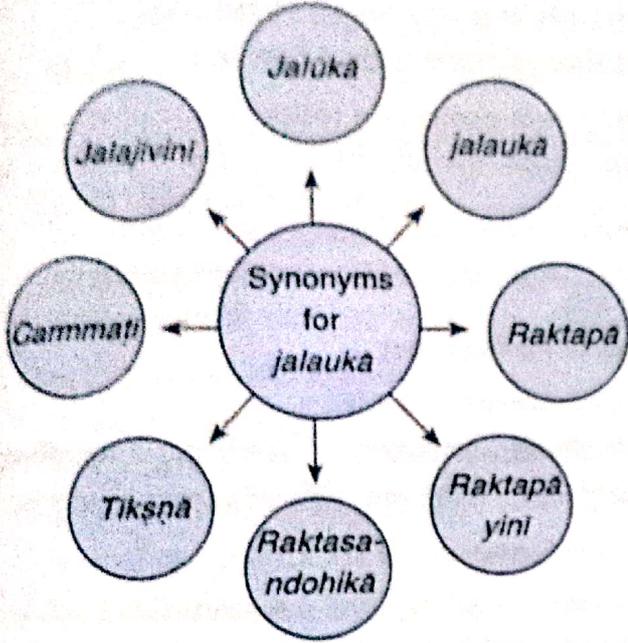
- Latin name - *Hirudo medicinalis*
- English name - Leech

Synonyms of Jalaukā (leech)

Ācārya Narahari Paṇḍita, author of Rājanī-ghaṇṭu, has quoted eight synonyms for jalaukā (leech); these are -

जलूका च जलीका स्याद्रक्तपा रक्तपायिनी ।
रक्तसन्दोहिका तीक्ष्णा चर्मटी जलजीविनी ॥

Rājanīghaṇṭu Sindhātivargah 97



Classification of Jalaukā (leech)

As per Ācārya Suśruta :

ता द्वादश; तासां सविषाः षट् तावत्य एव निर्विषाः ॥ तत्र सविषाः - कृष्णा, कर्बुरा, अलगर्दा, इन्द्रायुधा, सामुद्रिका, गोचन्दना चेति । अथ निर्विषाः - कपिला, पिंगला, शंकुमुखी, मूषिका पुण्डरीकमुखी, सावरिका चेति ।

SS.Sū. 13.10-11

Jalaukā (leech), twelve in number, are classified into following two

- saviṣa (poisonous)
- nirviṣa (non-poisonous)

Table No. 14.7

Saviṣa jalaukā (poisonous leech)	Nirviṣa jalaukā (non-poisonous leech)
1. Kṛṣṇā	Kapilā
2. Karburā	Piṅgalā
3. Alagardā	Śaṅkumukhi
4. Indrayudhā	Mūṣikā
5. Samudrikā	Puṇḍarikamukhi
6. Gocandana	Sāvarikā

Clinical features of bite by saviṣa jalaukā (poisonous leech)

As per Ācārya Suśruta :

ताभिर्दृष्टे पुरुषे रंशे श्वष्वरतिमात्रं कण्डूर्मुखं
ज्वरो दाहश्छर्दिर्मदः सदनमिति लिंगानि भवन्ति ।

SS.Sū. 13.11

Bite of saviṣa jalaukā (poisonous leech) results in -

- profuse śvayathu (swelling)
- kaṇḍū (itching)
- mūrccchā (fainting)
- jvara (fever)
- dāha (burning sensation)
- chardi (vomiting)
- mada (intoxication)
- sadana (weakness).

As per Ācārya Vāgbhaṭa :

ताभिः कण्डूपाकज्वरभ्रमाः ।

AH.Sū. 26.35

If saviṣa jalaukā (poisonous leech) are applied, they cause :

- kaṇḍū (itching)
- pāka (suppuration)
- jvara (fever)
- bhrama (giddiness).

Treatment of bite by saviṣa jalaukā (poisonous leech)

As per Ācārya Caraka :

कीटदष्टक्रियाः सर्वाः समानाः स्युर्जलौकसाम् ॥
वातपित्तहरी चापि क्रिया प्रायः प्रशस्यते ।

CS.Ci. 23.210-211

All the therapeutic measures prescribed for the treatment of kīṭa-daṣṭa (insect-bite) are equally good for the treatment of bite by saviṣa jalaukā (poisonous leech). In such cases, generally, therapeutic measures for the alleviation of vāta and pitta are useful.

As per Ācārya Suśruta :

तत्र महागदः पानालेपननस्यकर्मादिषूपयोज्यः ।

SS.Sū. 13.11

Mahāgada (a potent recipe) is used as pāna (drink), lepana (application), nasya (errhines) etc. in case of bite by saviṣa jalaukā (poisonous leech).

As per Ācārya Vāgbhaṭa :

विषपिनास्त्रनुत्कार्यं तत्र ।

AH.Sū. 26.35

These are treated on the lines of *viṣa* (poisoning), *pitta* and *asra* (blood).

9. Maṇḍūka darśa (frog bite)

Synonyms of *maṇḍūka* (frogs)

Ācārya Narahari Paṇḍita, author of *Rājani-ghaṇṭu*, has quoted following synonyms for *maṇḍūka* (frogs); these are -

मण्डूको ददुरो मण्डो हरिभेकश्च लूलकः ।
शालूरः स च वर्षाभूः प्लवः कदुरवस्तथा ।
समीडन्यश्च मुण्डी च प्लवंगश्च प्लवंगमः ॥

Rājani-ghaṇṭu *Simhādīvargaḥ* 95

1. <i>maṇḍūka</i>	मण्डूक	8. <i>varṣābhū</i>	वर्षाभू
2. <i>dardura</i>	ददुर	9. <i>plava</i>	प्लव
3. <i>maṇḍa</i>	मण्ड	10. <i>kaṭurava</i>	कदुरव
4. <i>hari</i>	हरि	11. <i>samidanya</i>	समीडन्य
5. <i>bheka</i>	भेक	12. <i>muṇḍī</i>	मुण्डी
6. <i>lūlaka</i>	लूलक	13. <i>plavaṅga</i>	प्लवङ्ग
7. <i>śālūra</i>	शालूर	14. <i>plavaṅgama</i>	प्लवङ्गम

Kinds of *maṇḍūka* (frogs)

As per Ācārya Suśruta :

मण्डूकाः - कृष्णाः, सारः, कुहको, हरितो, रक्तो, यववर्णाभो, भृकुटी, कोटिकश्चेत्यष्टौ । SS.K. 8.31

Maṇḍūka (frogs) are of eight kinds :

- ◆ *kṛṣṇa*
- ◆ *sāra*
- ◆ *kuhaka*
- ◆ *harita*
- ◆ *rakta*
- ◆ *yavavarṇābha*
- ◆ *bhṛkuṭī*
- ◆ *koṭika*

Clinical features of bite by *maṇḍūka* (frogs)

As per Ācārya Suśruta :

तैर्दष्टस्य दंशे कण्डूर्भवति पीतफेनागमश्च
वक्त्रात्, भृकुटीकोटिकाभ्यामेतदेव दाहश्छर्दिर्मूर्च्छा
चातिमात्रम् । SS.K. 8.31

Maṇḍūka (frogs) are of eight kinds and their bite causes -

- ◆ *kaṇḍū* (itching at the site of bite)
- ◆ emission of *pītapheṇa* (yellowish froth) from *vaktra* (mouth)

Bhṛkuṭī and *koṭika* cause the same in addition to -

- ◆ excessive *dāha* (burning sensation)
- ◆ *chardi* (vomiting)
- ◆ *mūrcchā* (fainting).

Treatment of bite by *maṇḍūka* (frogs)

As per Ācārya Suśruta :

मेघशृंगी वचा पाठ निचुलो रोहिणी जलम् ।

सर्वमण्डूकदष्टानामगदोज्यं विषापहः ॥ SS.K. 8.50

Agada (anti-poisonous recipe) made of *meṣaśṛṅgī*, *vacā*, *pāṭhā*, *nicula*, *rohiṇī* and *jala* pacifies all kinds of poisons by bite of *maṇḍūka* (frogs).

10. Pipīlikā darśa (bite of ants)

Kinds of *Pipīlikā* (ants)

As per Ācārya Suśruta :

पिपीलिकाः-स्थूलशीर्षा, संवाहिका, ब्राह्मणिका, अंगुलिकाः; कपिलिका, चित्रवर्णोति षट् । SS.K. 8.34

Pipīlikā (ants) are of six kinds :

- ◆ *sthūlaśīrṣā*
- ◆ *saṁvāhikā*
- ◆ *brāhmaṇikā*
- ◆ *aṅgulikā*
- ◆ *kapilikā*
- ◆ *citravarṇā*.

Clinical features of bite by *pipīlikās* (ants)

As per Ācārya Suśruta :

ताभिर्दष्टे दंशे श्वयथुरग्निस्पर्शवद्दाहशोफौ भवतः ॥

SS.K. 8.34

Their bite causes

- ◆ *śvayathu* (swelling)
- ◆ *agnisparśavat dāha* (burning sensation like fiery touch)
- ◆ *śopha* (swelling) at the site.

Treatment of bite by *pipīlikās* (ants)

As per Ācārya Suśruta :

पिपीलिकाभिर्दष्टानां मक्षिकामशकैस्तथा ।

गोमूत्रेण युतो लेपः कृष्णवल्मीकमृत्तिका ॥ SS.K. 8.55

Paste of *kṛṣṇa valmīka mṛttikā* (black anthill earth) and *gomūtra* (cow's urine) is beneficial in case of bite by *pipīlikā* (ants), *makṣikā* (flies) and *maśaka* (mosquitoes).

11. Makṣikā daṁśa (stinging flies)

Kinds of makṣikā (flies)

As per Ācārya Suśruta :

मक्षिकाः— कान्तारिका, कृष्णा, पिंगला, मधूलिका, काषायी, स्थालिकेत्येवं षट्। SS.K. 8.35

Makṣikā (flies) are of six kinds :

- | | |
|-------------|-------------|
| ◆ kāntārikā | ◆ madhūlikā |
| ◆ kṛṣṇā | ◆ kāṣāyī |
| ◆ piṅgalā | ◆ sthālikā |

Clinical features of Makṣikā daṁśa (stinging flies)

As per Ācārya Suśruta :

ताभिर्दष्टस्य कण्डुशोफदाहरुजो भवन्ति, स्थालिका-काषायीभ्यामेतदेव श्यावपिडकोत्पत्तिरुपद्रवाश्च ज्वरादयो भवन्ति, काषायी स्थालिका च प्राणहरे ॥ SS.K. 8.35

Bite of makṣikā (flies) causes :

- kaṇḍū (itching)
- śopha (swelling)
- dāha (burning sensation)
- rujā (pain).

Sthālikā and kāṣāyī, in addition to this, cause eruption of śyāva piḍakā (blackish boils) and upadravas (complications) like jvara (fever) etc. These two - kāṣāyī and sthālikā—are prāṇahara (fatal).

As per Ācārya Caraka -

सद्यःप्रस्त्राविणी श्यावा दाहमूर्च्छाज्वरान्विता ।
पीडका मक्षिकादंशे तासां तु स्थगिकाऽसुहृत् ॥
CS.Ci. 23.158

Bite of makṣikā (flies), being sadyah-prasrāviṇī (resulting in instant exudation), causes

- śyāva piḍikā (black brown blisters)
- dāha (burning sensation)
- mūrccchā (fainting)
- jvara (fever).

The poison of the sthagikā type of fly causes death.

Treatment of bite by makṣikā (flies)

As per Ācārya Suśruta :

पिपीलिकाभिर्दष्टानां मक्षिकामशकैस्तथा ।
गोमूत्रेण युतो लेपः कृष्णवल्मीकमृत्तिका ॥ SS.K. 8.55

Paste of kṛṣṇa valmūka mṛttikā (black anthill earth) and gomūtra (cow's urine) is beneficial in case of bite by pipīlikā (ants), makṣikā (flies) and maśaka (mosquitoes).

12. Maśaka daṁśa (mosquito bite)

Kinds of Maśaka (mosquitoes)

As per Ācārya Suśruta :

मशकाः— सामुद्रः, परिमण्डलो, हस्तिमशकः, कृष्णः, पार्वतीय इति पञ्च । SS.K. 8.36

Maśaka (mosquitoes) are of five kinds -

- | | |
|---------------|--------------|
| ◆ sāmudra | ◆ kṛṣṇa |
| ◆ parimaṇḍala | ◆ pārvatīya. |
| ◆ hastimaśaka | |

Clinical features of maśaka daṁśa (mosquito bite)

As per Ācārya Suśruta :

तैर्दष्टस्य तीव्रा कण्डूदशशोफश्च पार्वतीयस्तु कीटैः
प्राणहरैस्तुल्यलक्षणः ॥ SS.K. 8.36

Their bite causes :

- tīvra kaṇḍū (severe itching)
- daṁśa śopha (swelling at the site of bite).

Pārvatīya mosquito has features similar to those of prāṇahara kīṭa (fatal insects).

Treatment of maśaka daṁśa (mosquito bite)

As per Ācārya Suśruta :

पिपीलिकाभिर्दष्टानां मक्षिकामशकैस्तथा ।
गोमूत्रेण युतो लेपः कृष्णवल्मीकमृत्तिका ॥ SS.K. 8.55

Paste of kṛṣṇa valmūka mṛttikā (black anthill earth) and gomūtra (cow's urine) is beneficial in case of bite by pipīlikā (ants), makṣikā (flies) and maśaka (mosquitoes).

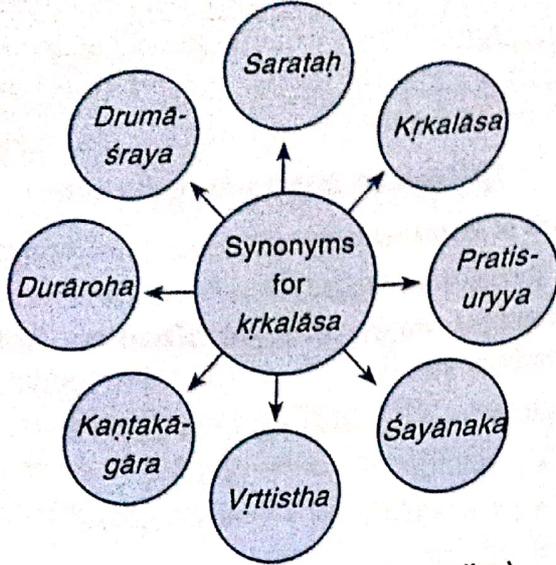
13. Kṛkalāsa daṁśa (chamelion bite)

Synonyms of kṛkalāsa (chamelion)

Ācārya Narahari Paṇḍita, author of Rājanighaṇṭu, has quoted eight synonyms for kṛkalāsa (chamelion); these are -

सरटः कृकलासः स्यात् प्रतिसूर्यः शयानकः ।
वृत्तिस्थः कण्टकागारो दुरारोहदुमाश्रयः ॥

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Clinical features of bite by *kṛkalāsa* (chameleon)

As per *Ācārya Caraka* :

श्यावत्वमथ काष्ण्यं वा नानावर्णत्वमेव वा ।
मोहः पुरीषभेदश्च दष्टे स्यात् कृकलासकैः ॥

CS.Ci. 23.149

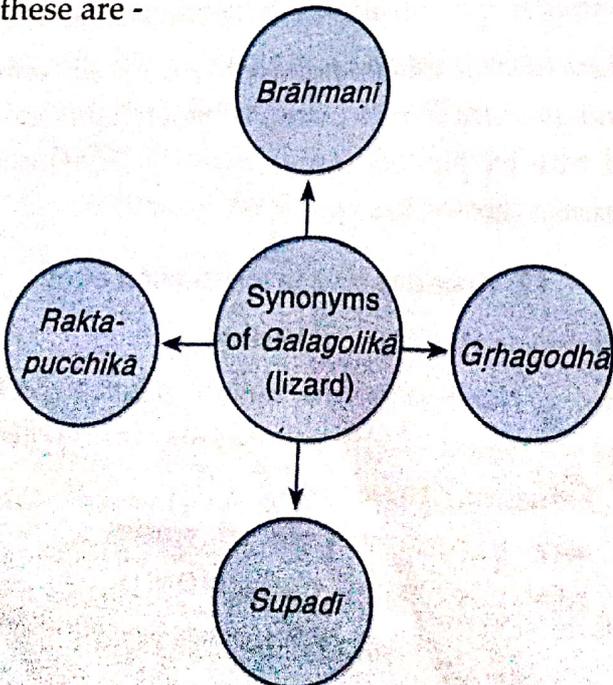
Bite by a *kṛkalāsa* (chameleon) causes

- *śyāva* (brownish black) or *kṛṣṇa* (black) or variegated *varṇa* (colouration) at the site
- *moha* (fainting)
- *purīṣabheda* (diarrhoea).

14. *Gṛhagodhikā* or *Galagolikā* *damśa* (lizard bite)

Synonyms of *Galagolikā* (lizard)

Ācārya Narahari Paṇḍita, author of *Rājanig-haṅṭu*, has quoted four synonyms for *galagolikā* (lizard); these are -



ब्राह्मणी गृहगोधा च सुपदी रक्तपुच्छिकाः ।

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Kinds of *Galagolikā* (lizard)

As per *Ācārya Suśruta* :

गलगोलिका - श्वेता कृष्णा, रक्तराजी, रक्त-
मण्डला, सर्वश्वेता, सर्षपिकेत्येवं षट् । SS.K. 8.29

Galagolikā is of six types :

- ◆ *śvetā*
- ◆ *kṛṣṇā*
- ◆ *raktarājī*
- ◆ *raktamaṇḍalā*
- ◆ *sarvaśvetā*
- ◆ *sarṣapikā*.

Clinical features of bite by *galagolikā* (lizard)

As per *Ācārya Suśruta* :

ताभिर्दष्टे सर्षपिकावर्जं दाहशोफक्लेदा भवन्ति,
सर्षपिकया हृदयपिडाऽतिसारश्च तासु मध्ये सर्षपिका
प्राणहरी ॥

SS.K. 8.29

Due to their bite, except *Sarṣapikā*, *dāha* (burning sensation), *śopha* (swelling) and *kleda* (moisture) appear.

Sarṣapikā causes *hṛdayapīḍā* (cardiac pain) and *atisāra* (diarrhoea) and is *prāṇaharī* (fatal).

As per *Ācārya Caraka* :

दाहतोदस्वेदशोथकरी तु गृहगोधिकी । CS.Ci. 23.156

The poison of *gṛhagodhikā* (house-lizard) causes -

- *dāha* (burning sensation)
- *toda* (pricking pain)
- *sveda* (sweating)
- *śoṭha* (oedema).

Treatment of bite by *galagolikā* (lizard)

As per *Ācārya Suśruta* :

रजन्यागारधूमश्च वक्रं कुष्ठं पलाशजम् ।

गलगोलिकदष्टानामगदो विषनाशनः ॥ SS.K. 8.48

Agada (anti-poisonous recipe) made of *rajanī*, *āgāradhūma*, *vakra*, *kuṣṭha* and *palāśa* is beneficial in treating bite by *galagolikā* (lizard).

As per *Ācārya Caraka* :

कपित्थमक्षिपीडोऽर्कबीजं त्रिकटुकं तथा ।

करञ्जो द्वे हरिद्रे च गृहगोधाविषं जयेत् ॥

CS.Ci. 23.216

Kapittha, *akṣipīḍa*, *arkabīja*, *śunṭhī*, *marica*, *pippalī*, *karañja*, *latākarañja*, *haridrā* and *dāruharidrā* - this recipe is beneficial in pacifying *viṣa* (poison) of *gṛhagodhā* (lizard).

15. Bite of *Ahiṇḍuka*, *Kaṇḍūmaka* and *Śūkavṛnta*

Clinical features of bite by *Ahiṇḍuka*

As per *Ācārya Suśruta* :

अहिण्डुकाभिर्दंष्ट्रे तोददाहकण्डुधयथतो भवन्ति मोहश्च ।

SS.K. 8.33

Bite of *ahiṇḍuka* results in

- *toda* (pricking pain)
- *dāha* (burning sensation)
- *kaṇḍū* (itching)
- *śvayathu* (swelling)
- *moha* (stupor).

Clinical features of bite by *Kaṇḍūmaka*

As per *Ācārya Suśruta* :

कण्डूमकाभिर्दंष्ट्रे पीतांगशच्छतीसारज्वरादिभिर-
भिहन्यते ।

SS.K. 8.33

Bite of *kaṇḍūmaka* causes

- *pītāṅga* (yellowish discolouration of body)
- *chardi* (vomiting)
- *atīsāra* (diarrhoea)
- *jvara* (fever) etc.

Clinical features of bite by *Śūka-vṛnta*

As per *Ācārya Suśruta* :

शूकवृन्ताभिर्दंष्ट्रे कण्डूकोठाः प्रवर्धन्ते शूकं चात्र
लक्ष्यते ॥

SS.K. 8.33

Bite of *śūkavṛnta* causes :

- *kaṇḍū* (itching)
- *koṭha* (allergic eruptions)
- apperance of *śūka* (bristles).

Treatment of bite by *Ahiṇḍuka*, *Kaṇḍūmaka* and *Śūkavṛnta*

Treatment of bite by *Ahiṇḍuka*

As per *Ācārya Suśruta* :

शिरिषं तगरं कुष्ठं शालिपर्णी सहा निशं ।

अहिण्डुकाभिर्दंष्ट्रानामगदो विषनाशनः ॥ SS.K. 8.52

Siriṣa, *tagara*, *kuṣṭha*, *śālīparṇī*, *sahā*, *haridrā* and *dāruharidrā*— these ingredients make an *agada* (anti-poisonous recipe) for treating *ahiṇḍu-kadaṁhā*.

Treatment of bite by *Kaṇḍū-maka*

As per *Ācārya Suśruta* :

कण्डूमकाभिर्दंष्ट्रानां रात्रौ शीताः क्रिया हिताः ।

दिवा ते नैव सिध्यन्ति सूर्यरश्मिबलार्दिताः ॥ SS.K. 8.53

Treatment of bite by *Kaṇḍūmaka* is treated by *śītakriyā* (cold measures) at night times because their venom attains *bala* (strength) from *sūryarāśmi* (sun rays) during day time and hence success is feeble.

Treatment of bite by *Śūkavṛnta*

As per *Ācārya Suśruta* :

वक्रं कुष्ठमपामार्गः शूकवृन्तविषे जगदः ।

भृंगस्यरसपिष्टा वा कृष्णावल्मीकमृत्तिका ॥

SS.K. 8.54

Agada (anti-poisonous recipe) made of *vakra*, *kuṣṭha* and *apāmārga* pacifies venom of *śūkavṛnta*. *Kṛṣṇaavalmīka mṛttikā* (black ant-hill mud) macerated with *bhṛṅga svarasa* (juice of *Eclipta alba*) is applied at the site of bite.

Table No. 14.8

	Clinical features	Treatment
1. <i>Ahiṇḍuka</i>	<ul style="list-style-type: none"> • <i>toda</i> (pricking pain) • <i>dāha</i> (burning sensation) • <i>kaṇḍū</i> (itching) • <i>śvayathu</i> (swelling) • <i>moha</i> (stupor) 	<ul style="list-style-type: none"> • <i>Agada</i> (anti-poisonous recipe) → <i>siriṣa</i> + <i>tagara</i> + <i>kuṣṭha</i> + <i>śālīparṇī</i> + <i>sahā</i> + <i>haridrā</i> + <i>dāruharidrā</i>
2. <i>Kaṇḍūmaka</i>	<ul style="list-style-type: none"> • <i>pītāṅga</i> (yellowish discolouration of body) • <i>chardi</i> (vomiting) • <i>atīsāra</i> (diarrhoea) • <i>jvara</i> (fever) etc. 	<ul style="list-style-type: none"> • <i>śītakriyā</i> (cold measures) at night times
3. <i>Śūkavṛnta</i>	<ul style="list-style-type: none"> • <i>kaṇḍū</i> (itching) • <i>koṭha</i> (allergic eruptions) • apperance of <i>śūka</i> (bristles) 	<ul style="list-style-type: none"> • <i>Agada</i> (anti-poisonous recipe) → <i>vakra</i> + <i>kuṣṭha</i> + <i>apāmārga</i> • Application → <i>Kṛṣṇaavalmīka mṛttikā</i> (black ant-hill mud) macerated with <i>bhṛṅga svarasa</i> (juice of <i>Eclipta alba</i>)



ĀHĀRA VIṢA (POISONOUS FOOD) AND AHĀRA VIṢĀKTATĀ (FOOD POISONING)

LEARNING OBJECTIVES

- Food poisoning
 - Non-bacterial food poisoning
 - Bacterial food poisoning
- Metallic contamination of food articles is not uncommon.
- Chardhana should be done when poisoned food reaches amāśaya
- Virecana should be done when poisoned food reaches pakvasaya
- Poisoned paduka causes
 - Sopha
 - Srava
 - Svapa
 - Padasphota
- Mahasugandhi agada (an anti-poisonous formulation) used for chikitsa of savisa padartha.
- The hrdaya (heart) right from beginning should be protected from ill of visa (poison) by all means.

Introduction

Sage Caraka quotes :

प्राणाः प्राणभृतामन्नं तदयुक्त्या निहन्त्यसून्।

विषं प्राणहरं तच्च युक्तियुक्तं रसायनम् ॥ CS.Ci. 24.60

For all the living beings, *anna* (food) is the sustainer of *prāṇa* (life), but when taken incompatibly, it causes death. Likewise, *viṣa* (poison) which causes death works like *rasāyana* (elixir) when used suitably.

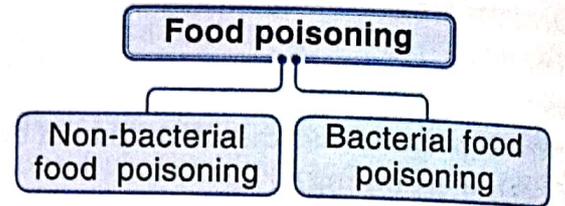
Definition of food poisoning

Food poisoning is a group of symptoms or illnesses caused by ingestion of food articles containing bacterial and non-bacterials products.

Classification of food poisoning

Food poisoning, in modern medical system, can be of two kinds -

- Non-bacterial food poisoning and
- Bacterial food poisoning.



Non-bacterial food poisoning is due to toxins and certain chemicals present in the food articles; whereas bacterial food poisoning is due to contamination with bacteria or their toxins.

Food poisoning, on most occasions, affects large number of individuals. This type of food poisoning has three peculiarities -

- Simultaneous poisoning of many individuals,
- Ingestion of similar food articles by all those affected and
- Presentation of similar signs and symptoms among all those affected.

E.g. using spurious cooking oil during an event or consumption of contaminated alcohol etc.

1. Non-bacterial food poisoning

Three types of poisoning occur under this-

- Irrational consumption of food
- Metallic contamination
- Food allergy

(I) Irrational consumption of food

As per Ācārya Vāgbhaṭa :

यत्किञ्चिदोषमुत्क्लेश्य न हरेत्तत्समासतः ॥

विरुद्धम्।

AH.Sū. 7.45-46

Any article causing doṣa-utkleśa (aggravation of doṣas) but doesn't expel them out of the body is termed as 'viruddha (incompatible)'.
Similar views are expressed by Ācārya Vṛddha Vāgbhaṭa; he quotes -

उक्लेश्य दोषान् हरेद् द्रव्यं यत्तत्समासतः।
विरुद्धं तद्धि धातूनां प्रत्यनीकतया स्थितम्॥

AS.Su. 9.25

As per Ācārya Caraka -

देहधातुप्रत्यनीकभूतानि द्रव्याणि देहधातुभिर्विरोध-
मापद्यन्ते; परस्परगुणविरुद्धानि कानिचित्, कानिचित्
संयोगात्, संस्कारादपराणि देशकालमात्रादि-
भिश्चापराणि, तथा स्वभावादपराणि॥ CS.Su. 26.81

Dravyas (food articles) that are virodhī (contradictory) to deha dhātus (bodily tissues including doṣas) are also opposed to proper growth of these dhātus (bodily tissues including doṣas); some of these dravyas (food articles) act

- due to their reciprocally opposing guṇas (attributes)
- by samyoga (combination)
- by saṁskāra (processing)
- by virtue of deśa (habitat), kāla (season) and mātrā (quantity)
- by svabhāva (integral nature).

(I) Guṇa-viruddha

It has three variants

- Guṇa-viśamatā
- Guṇa-samatā
- Guṇa-viśama samatā

(a) Guṇa-viśamatā

E.g. kulattha and dugdha (milk);

विरुद्धमम्लं पयसा सह सर्वं फलं तथा॥

तद्वत्कुलत्थवरककंगुवल्लमकुष्टकाः। AH.Sū. 7.31-32

(b) Guṇa-samatā

E.g. dugdha (milk) and jackfruit.

(c) Guṇa-viśama samatā

E.g. payah (milk) and matsya (fish);

विशेषात्पयसा मत्स्या मत्स्येष्वपि चिलीचिमः।

AH.Sū. 7.30-31

(II) Samyoga-viruddha:

E.g. payah (milk) and all kinds of amla (sour) fruits;

विरुद्धमम्लं पयसा सह सर्वं फलं तथा॥ AH.Sū. 7.31

नोदकान्तरितान् द्विर्न निशायां न केवलान्॥

न भुक्त्वा न द्विजैश्छित्त्वा सक्तूनद्यान् वा बहून्।

AH.Sū. 7.39-40

Similarly, drinking of water in between consumption of saktu is forbidden.

(III) Saṁskāra-viruddha

E.g. curd made ushna (after heating);

नैवाद्यानिशि नैवोष्णं वसन्तोष्णशरत्सु न॥

AH.Sū. 7.31

(IV) Deśa-viruddha

E.g. consumption of rūkṣa (dry) and tikṣṇa (sharp) articles in maru deśa (desert habitat) or snigdha (unctuous) and śīta (cold) articles in ānūpa deśa (humid habitat).

Jangola.

(V) Kāla-Viruddha

E.g. consumption of saktu in night times or of rūkṣa (dry) and śīta (cold) articles in śīta kāla (cold season) etc.

As per Ācārya Vṛddha Vāgbhaṭa-

अजीर्णोऽपि पूर्वस्याहारस्यापरिणतो रस उत्तरेणोप-
संसृज्यमानः सर्वान् दोषान् प्रकोपयत्याशु। AS.Su. 10.10

Intake of food prior to digestion of previously consumed food causes mixing of rasa (food chyme) of two meals and thus aggravation of doṣas; this results in manifestation of āmadoṣa, visūcikā and other conditions caused by ajīrṇa (indigestion).

अतीतकालं पुनस्तद्वातविष्टब्धं कृच्छ्रद्विपच्यते
कर्शयत्यन्नरुचिं च पुनरुपहन्ति। AS.Su. 10.12

Consuming food after its scheduled time results in aggravation of vāta and thus delayed digestion along with kārśya (lean-ness) and aruci (anorexia).

(VI) Mātrā-Viruddha

Quantity of food depends on the agnibala (digestive strength) and nature of food article consumed. Surpassing these two is termed as 'mātrā-viruddha'.

(VII) Svabhāva-viruddha

E.g. consumption of *guru dravyas* (heavy to digest food articles) such as *kṣīra vikṛti* (milk products) and *iṅṣurikṛti* (sugarcane products) etc.

Examples of *viruddha bhojana*
(incompatible food articles)

As per Ācārya Vāgbhaṭa :

- (I) आनूपमामिषं माषक्षौद्रक्षीरविरुद्धकैः ।
विरुध्यते सह बिसैर्मूलकेन गुडेन वा ॥
विशेषात्पयसा मत्स्या मत्स्येष्वपि चिलीचिमः ।

AH.Sū. 7.30-31

Āmiṣa (meat) of *ānūpa* animals (habituating in marshy regions) is incompatible with *māṣa* (black gram), *kṣaudra* (honey), *kṣīra* (milk), *viruḍhaka* (sprouted grains), *bisa*, *mūlaka* (radish) and *guḍa* (jaggery). Especially *matsya* (fish) is incompatible with *payah* (milk) and among them *cilicima* variety of fish.

- (II) विरुद्धमम्लं पयसा सह सर्वं फलं तथा ॥
तद्वत्कुलत्थवरककंगुवल्लमकुष्टकाः ।

AH.Sū. 7.31-32

All *amla* (sour) substances and *phalas* (both *amla* and *anamla* fruits) are *viruddha* (incompatible) with *payah* (milk). In the same manner, *kulattha* (horse gram), *varaka* (a *vrihi* variety), *kaṅgu* (fox millet), *valla* (a type of pulse) and *makuṣṭaka* are incompatible with milk.

- (III) भक्षयित्वा हरितकं मूलकादि पयस्यजेत् ॥

AH.Sū. 7.32

Payah (milk) should be avoided after consuming *mūlaka* etc. *haritaka śākas* (green leafy vegetables).

- (IV) वाराहं श्राविधा नाद्याद्दध्ना पृषतकुक्कुटौ ।

आममांसानि पित्तेन, माषसूपेन मूलकम् ॥

अविं कुसुम्भशाकेन, बिसैः सह विरुद्धकम् ।

माषसूपगुडक्षीरदध्याज्यैर्लाकुचं फलम् ॥

फलं कदल्यास्तक्रेण दध्ना तालफलेन वा ।

कणोषणाभ्यां मधुना काकमार्चीं गुडेन वा ॥

सिद्धां वा मत्स्यपचने पचने नागरस्य वा ।

सिद्धामन्यत्र वा पात्रे कामात्तामुषितां निशाम् ॥

AH.Sū. 7.33-36

Combining *varāha māṁsa* (meat of boar) with *svāvidha māṁsa* (meat of porcupine), *māṁsa* of

prṣata (spotted deer) and *kukkuṭa* (chicken) with *dadhi* (curd), *āma māṁsa* (uncooked meat) with *pitta* (bile or gall bladder), *māṣa sūpa* (black gram soup) with *mūlaka* (raddish), *avi māṁsa* (meat of sheep) with *kusumbha śāka* (safflower; *Carthamus tinctorius*), *bisa* (lotus stem) with *viruḍhaka* (sprouted grains), *lakuca phala* (fruit of *Artocarpus lakoocha*) with anyone of *māṣasūpa* (black gram soup), *guḍa* (jaggery), *kṣīra* (milk), *dadhi* (curd) and *ājya* (ghee), *kadaliphala* (banana fruit) with *takra* (butter milk), *dadhi* (curd) or *tālaphala* (fruit of *Borassus flabellifer*), *kākamācī* (*Solanum nigrum*) with anyone of *kaṇā* (pepper) & *uṣaṇa* (black pepper), *madhu* (honey) and *guḍa* (jaggery), *kāmāttā* (i.e. *kākamācī*) prepared in a *pātra* (vessel) meant for *matsya pācana* (cooking of fish) or *nāgara* (dry ginger) or prepared in any other *pātra* (vessels) or kept over night — all these are not to be consumed (i.e. these combinations are inapt for ingestion).

- (V) मत्स्यनिस्तलनस्नेहे साधिताः पिप्पलीस्त्यजेत् ।
कांस्ये दशाहमुषितं सर्पिरुष्णं त्वरुष्करे ॥

AH.Sū. 7.37

Pippalī (long pepper) processed in *sneha* (oil) used to fry *matsya* (fish) is forbidden. In the same way, *sarpi* (ghee) stored in *kāṁsya* (bronze) vessel for nearly ten days and *uṣṇa* (hot articles) with *aruṣkara* (i.e. *bhallātaka*) are forbidden.

- (VI) भासो विरुध्यते शूल्यः कम्पिल्लस्तक्रसाधितः ।

AH.Sū. 7.38

Sūlya bhāsa māṁsa (roasted meat of vulture) and *kampillaka* (*Mallotus philippinensis*) processed in *takra* (butter milk) are *viruddha* (incompatible).

- (VII) ऐकध्यं पायससुराकृशराः परिवर्जयेत् ॥

AH.Sū. 7.38

Consumption of *pāyasa* (pudding), *surā* (beer) and *krśarā* (a rice preparation) together should be avoided.

- (VIII) मधुसर्पिर्वसातैलपानीयानि द्विशस्त्रिंशः ।

एकत्र वा समांशानि विरुध्यन्ते परस्परम् ॥

AH.Sū. 7.39

Blending of equal quantities of *madhu* (honey), *sarpi* (ghee), *vasā* (fat), *taila* (oil) and *pāniya* (water) in combination of two, three or all of them together is *viruddha* (incompatible).

(IX) भिन्नांशे अपि मध्वाज्ये दिव्यवार्यनुपानतः ।
मधुपुष्करबीजं च, मधुमैरेयशार्करम् ॥
मन्थानुपानः क्षैरेयो, हरिद्रः कटुतैलवान् ।

AH.Sū. 7.40-41

Combination of *madhu* (honey) and *ājya* (ghee) in *bhinna aṁśa* (unequal part) consumed with *anupāna* of *divya vāri* (rain water), *madhu* (honey) with *puṣkara bīja* (lotus seeds), *madhu* (honey) with *maireya* (*dhānyāsava* or *kharjūrāsava*) and *śarkarā* (i.e. *śarkarāsava* — alcohol made from sugar), *kṣaireya* (i.e. *pāyasa* — gruel made from rice and milk) with *anupāna* of *mantha* (parched paddy powder mixed with water) and *hāridra* (mushroom) with *kaṭutaila* (mustard oil) is *viruddha* (incompatible).

(X) उपोदकाऽतिसाराय तिलकल्केन साधिता ॥

AH.Sū. 7.41

Upodaka (a leafy green vegetable) processed with *tila kalka* (paste of sesame) causes *atisāra* (diarrhoea).

(XI) बलाका वारुणीयुक्ता कुल्माषैश्च विरुध्यते ।
भृष्टा वराहवसया सैव सद्यो निहन्त्यसून् ॥

AH.Sū. 7.42

Māṁsa (meat) of *balākā* (crane bird) with *vāruṇī* (i.e. *prasannā* — clear fluid of wine) and *kulmāṣa* (boiled pulses) is *viruddha* (incompatible). Also *varāha vasā bhṛṣṭa* (roasting in fat of boar) *balākā* (crane) causes immediate death.

(XII) तद्वृत्तिरिपत्राढ्यगोधालावकपिञ्जलाः ।
ऐरण्डेनाग्निना सिद्धास्तत्तैलेन विमूर्च्छिताः ॥

AH.Sū. 7.43

In the same way *māṁsa* (meat) of *tittiri* (black partridge), *patrādhyā* (peacock), *godhā* (iguana lizard), *lāva* (common quail) and *kapiñjala* (grey partridge) cooked over *eraṇḍa agni* (fire of castor plant wood) and fried in *eraṇḍataila* (castor oil) causes immediate death.

(XIII) हारीतमांसं हरिद्रशूलकप्रोतपाचितम् ।
हरिद्रावह्निना सद्यो व्यापादयति जीवितम् ॥

AH.Sū. 7.44

When *hārīta māṁsa* (meat of a bird) is pierced with *hāridraśūlaka* (wood of turmeric) and cooked over *haridrā vahni* (flame of turmeric) causes instant death.

(XIV) भस्मपांशुपरिध्वस्तं तदेव च समाक्षिकम् ।

AH.Sū. 7.45

The same (meat of *hārīta* bird) smudged with *bhasma* (ash) and *pāṁśu* (sand) or taken with *mākṣika* (honey) also causes instant death.

Management of *āma-viṣa* due to consumption of incompatible food articles

■ **Vamana karma:** For this *koṣṇa jala* (warm water) mixed with *saindhava* (rock salt) is ideal; if *doṣas* are *atilina* (deep seated) then following can be used for inducing *vamana* (emesis) -

• *pippalī* and *nāgadantī* along with *lavaṇa* (salt) and *uṣṇa jala* (warm water)

• *kalka* (paste) of *pippalī* and *sarṣapa* mixed in decoction of *madana phala* etc.

■ **Svedana and application of varti:** After *vamana* (emesis), patient should be subjected to *svedana* (sudation) and this follows application of *varti* (suppositories) for evacuation of faeces.

■ **Use of dipana drugs and symptomatic management:** *Dipana* (carminative) drugs should be used and if any symptoms stay, they should be managed appropriately.

(II) Poisoning due to metallic contamination

Metallic contamination of food articles is not uncommon. Cooking or storing in copper, bronze, aluminium and such other metallic vessels is one of the reasons for metallic contamination of food-stuffs. Ready to cook food stuffs, canned food articles, bottles used for storing fruit juices and cold drinks, packaging of chocolates and such methods multiply the incidence of contamination of food articles.

(III) Food allergy

Certain individuals are allergic to certain food articles; they fail to tolerate such articles. Ingestion of these food articles causes immediate allergic reaction that is manifested through

nausea, vomiting, diarrhoea, transient joint swelling, arthralgia, urticaria etc. In some cases laryngo-pharyngeal oedema and asthma like attacks are also experienced by the people. This is 'food allergy'. *Āyurveda* terms this condition as 'asātmyatā (food incompatibility)' and such food articles as 'asātmya (incompatible food articles)'. Examples are eggs, crabs, tomato, raspberry, refined ghee etc.

Diagnosis is based on frequently allergic reactions patient suffers from when he ingests such food articles.

Treatment is *nidāna-parivarjana* (refraining from allergic food articles) and anti-allergic drugs.

2. Bacterial food poisoning

Bacterial food poisoning is categorized into

- Food poisoning due to infection
- Food poisoning due to toxins

(1) Food poisoning due to infection

Causative agents

- Salmonella group of organisms (e.g. *S. enteritidis*, *S. newport*, *S. thompson*, *S. Suipestifier*, *S. thyphimurium* etc.)
- *Shigella* etc.

Signs and symptoms

- ♦ varies person to person
- ♦ Variation is also due to causative agents
- ♦ diarrhoea
- ♦ fever
- ♦ headache
- ♦ nausea
- ♦ vomiting
- ♦ colic
- ♦ shivering
- ♦ malaise etc.

Treatment

- Gastric lavage
- Colonic irrigation (in absence of diarrhoea)
- Bed rest
- Antibiotics
- Fluids
- Symptomatic management

(2) Food poisoning due to toxins

Introduction

- It is due to the presence of enterotoxins formed by *Staphylococcus*, *E. coli* or *Vibrio*.

Incubation period

- One to six hours

Signs and symptoms

- ♦ headache
- ♦ nausea
- ♦ vomiting
- ♦ abdominal pain
- ♦ cramps
- ♦ coma etc.

Treatment

- ♦ Gastric lavage
- ♦ Bed rest
- ♦ Antibiotics
- ♦ Fluids
- ♦ Symptomatic management

Post-mortem appearance

- Congestion of all organs

Medico-legal aspects -

- Usually affecting a group
- Sporadic poisoning

Features of poisoned food articles

(A) As per *Ācārya Suśruta* :

नृपभक्ताद्बलिं न्यस्तं सविषं भक्षयन्ति ये ।
 तत्रैव ते विनश्यन्ति मक्षिकावायसादयः ॥
 हुतभुक् तेन चान्नेन भृशं चटचटायते ।
 मयूरकण्ठप्रतिमो जायते चापि दुःसहः ॥
 भिन्नार्चिस्तीक्ष्णधूमश्च नचिराच्चोपशाम्यति ।
 चकोरस्याक्षिवैराग्यं जायते क्षिप्रमेव तु ॥
 दृष्ट्वाऽन्नं विषसंसृष्टं म्रियन्ते जीवजीवकाः ।
 कोकिलः स्वरवैकृत्यं क्रौञ्चस्तु मदमृच्छति ॥
 हृष्येन्मयूर उद्विग्नः क्रोशतः शुकसारिके ।
 हंसः क्ष्वेडति चात्यर्थं भृंगराजस्तु कूजति ॥
 पृषतो विसृजत्यश्रुं विष्ठां मुञ्चति मर्कटः ।
 सन्निकृष्टांस्ततः कुर्याद्राजस्तान् मृगपक्षिणः ॥
 वेश्मनोऽथ विभूषार्थं रक्षार्थं चात्मनः सदा ।

SS.K. 1.28-34

Makṣikā (flies), *vāyasa* (crows) etc. which eat distributed portion of the *nṛpabhakta* (king's poisoned meal) die instantly.

By such food, fire burns with *caṭacaṭa* (cracking noise), resembles *mayūra kaṅṭha* (peacock's neck), is *duḥsahaḥ* (intolerable), with *bhinna arci* (divided flame) and *tīkṣṇa dhūma* (irritant smoke) and extinguishes quickly.

Sight of poisoned food results in :

- *akṣi vairāgya* (loss of redness of eyes) in *cakora*

- death of *jīvajīvaka*
- *svara vikṛti* (hoarse cooing) of *kokila*
- *mada* (intoxication) of *krauñca*
- *udvega* (hysterical) of otherwise *harṣa* (joyous) *mayūra* (peacock)
- *krośa* (crying) of *śuka* (parrot) and *sārikā*
- *kṣveḍa* (extraneous wandering) of *hamsa* (swan)
- *kūjana* (cooing) of *bhr̥ṅgarāja*
- *aśru* (crying) of *pr̥ṣata*
- *viṣṭhā muñcana* (defaecation) by *markaṭa* (monkey).

Therefore these animals and birds should be kept nearby the kings for *bhūṣaṇa* (adornment) of the castle and also for his *rakṣā* (security).

(B) As per *Ācārya Vāgbhaṭa*

- (I) ओदनो विषवान् सान्द्रो यात्यविस्राव्यतामिव ।
चिरेण पच्यते पक्वो भवेत्पर्युषितोपमः ॥
मयूरकण्ठतुल्योष्मा मोहमूर्च्छाप्रसेककृत् ।
हीयते वर्णगन्धाद्यैः क्लिद्यते चन्द्रिकाचितः ॥

AH.Sū. 7.3-4

- *Odana* (boiled rice) mixed with *viṣa* (poison) becomes so *sāndra* (viscous) that it cannot be strained, cooking takes longer time and cooked one becomes *paryuṣita* (stale) soon.
- Its *uṣmā* (steam) resembles *mayūra-kañṭha* (peacock's neck) and causes *moha* (delirium), *mūrcchā* (fainting) and *praseka* (profuse salivation).
- It is poor in *varṇa* (colour), *gandha* (aroma) etc.; it remains *klinna* (watery) and attains *candrikā* (similar to peacock's feather or oil drop on water) colour.

- (II) व्यञ्जनान्याशु शुष्यन्ति ध्यामक्वाथानि तत्र च ।

हीनाऽतिरिक्ता विकृता छाया दृश्येत नैव वा ॥

फेनोर्ध्वराजीसीमन्ततन्तुबुद्बुदसम्भवः ।

विच्छिन्नविरसा रागाः खाण्डवाः शाकमामिषम् ॥

AH.Sū. 7.5-6

- *Saviṣa vyañjana* (condiments mixed with poison) become *śuṣka* (dry) quickly and the *kvātha* (liquid portion of the *vyañjana*) becomes *dhyāma* (blackish) in colour.
- The *chāyā* (reflection) in the *vyañjana* is *hīna* (poor), *atirikta* (amplified), *vikṛta* (distorted) or there will be no reflection at all.

- They may present with *phena* (froth), *ūrdhvarāji* (strips on the surface), *sīmanta* (centrally creased), *tantu* (threads) and *budbuda* (bubbles).
- *Rāga*, *khāṇḍava*, *śāka* and *āmiṣa* become *vicchinna* (disintegrated) and *virasa* (acquire ill taste).

- (III) नीला राजी रसे, ताम्रा क्षीरे, दधनि दृश्यते ।
श्यावा, कमदें ह्यऽऽपीतासिता तक्के, घृते पानीय-
सन्निभा ॥

मस्तुनि स्यात्कपोताभा, राजी कृष्णा तुषोदके ।

काली मद्याम्भसोः, क्षौद्रे हरितैलेऽरुणोपमा ॥

पाकः फलानामामानां पक्वानां परिकोथनम् ।

द्रव्याणामार्द्रशुष्काणां स्यातां म्लानिविवर्णते ॥

मृदूनां कठिनानां च भवेत्स्पर्शविपर्ययः ।

माल्यस्य स्फुटिताग्रत्वं म्लानिर्गन्धान्तरोद्भवः ॥

ध्याममण्डलता वस्त्रे, शदनं तन्तुपक्ष्मणाम् ।

धातुमौक्तिककाष्ठाशमरत्नादिषु मलाकता ॥

स्नेहस्पर्शप्रभाहानिः, सप्रभत्वं तु मृण्मये ।

AH.Sū. 7.7-12

- *Saviṣa rasa* (i.e. *māmsarasa*) (poisoned meat soup) develops *nīla rāji* (blue streaks) on its surface, *kṣīra* (milk) develops *tāmra rāji* (coppery streaks), *dadhi* (curd) develops *śyāva rāji* (blackish streaks), *takra* (butter milk) develops *apīta-sita* or *pīta-asitarāji* (yellowish white/ yellowish black streaks), *ghṛta* (clarified butter) develops *pānīya sannibha rāji* (water like streaks), *mastu* (whey) develops *kapotābha rāji* (pigeon coloured lines), *tuṣodaka* (rice water) develops *kṛṣṇa rāji* (blackish streaks), *madya* (alcohol) and *ambha* (water) develop *kālī rāji* (blackish streaks), *kṣaudra* (honey) develops *harita rāji* (greenish streaks) and *taila* (oil) develops *aruṇa rāji* (crimson streaks).
- When afflicted with *viṣa*, *āma phala* (unripe fruit) *pāka* (ripens) quickly and *pakva phala* (mature fruit) undergoes *parikothana* (decay). *Ārdra* (fresh) *dravya* (substance) becomes *śuṣka* (dry) and *śuṣka* (dry) *dravya* attains *mlāna varṇa* (discolouration).
- *Mṛdu* (soft) *dravya* becomes *kaṭhina* (hard) and *kaṭhina* (hard) *dravya* becomes *mṛdu* (soft).

- When poisoned, *mālya* (floral garlands) becomes *sphuṭita* (split) at its *agra* (edge), *mlāna* (fade away) and *gandhāntarodbhava* (alteration in its natural fragrance).
- *Vastra* (clothes), when poisoned, shows *dhyāma maṇḍala* (dirty circular patches) and there is *śātana* (falling) of its *tantu* (thread) and *pakṣma* (edges).
- Poisoned *dhātu* (metals), *mauktika* (pearls), *kāṣṭha* (wood), *aśma* (stones), *ratna* (precious stones) etc. become *malākta* (dirty); also their *śneha* (smooth texture) and *prabhā* (lustre) are lost.
- *Mṛṇmaya* vessels (earthen pots) become *prabhāyukta* (lustrous).

Table 15.1 : Effect of poison on various subjects

Subject	Effect of poison
1. <i>Makṣikā</i> (flies), <i>vayasa</i> (crows) etc.	• death
2. Food	• fire burns with <i>caṭacaṭa</i> (cracking noise), resembles <i>mayurakaṇṭha</i> (peacock's neck) • is <i>duḥsahaḥ</i> (intolerable), with <i>bhinna arci</i> (divided flame) and <i>tikṣṇa dhūma</i> (irritant smoke) and extinguishes quickly
3. <i>Cakora</i>	• develops <i>akṣivairāgya</i> (loss of redness of eyes)
4. <i>Jivajivaka</i>	• death
5. <i>Kokila</i>	• <i>svara vikṛti</i> (hoarse cooing)
6. <i>Krauñca</i>	• <i>mada</i> (intoxication)
7. <i>Mayura</i> (peacock)	• <i>udvega</i> (hysteria)
8. <i>Śuka</i> (parrot) and <i>sārikā</i>	• <i>krośa</i> (crying)
9. <i>Haṁsa</i> (swan)	• <i>kṣveḍa</i> (extraneous wandering)
10. <i>Bhr̥ṅgarāja</i>	• <i>kūjana</i> (cooing)
11. <i>Pṛṣata</i>	• <i>aśru</i> (crying)
12. <i>Markaṭa</i> (monkey)	• <i>viṣṭhāmuñcana</i> (defaecation)
13. <i>Odana</i> (boiled rice)	• becomes so <i>sāndra</i> (viscous) that it cannot be strained • cooking takes longer time • cooked food becomes <i>paryuṣita</i> (stale) soon • its <i>uṣmā</i> (steam) resembles <i>mayūrikaṇṭha</i> (peacock's neck) • causes <i>moha</i> (delirium), <i>mūrcchā</i> (fainting) and <i>praseka</i> (profuse salivation) • poor in <i>varṇa</i> (colour), <i>gandha</i> (aroma) etc. • remains <i>kinna</i> (watery) • attains <i>candrikā</i> (similar to peacock's feather or oil drop on water) colour
14. <i>Vyañjana</i> (condiments)	• becomes <i>śuṣka</i> (dry) quickly • <i>kvātha</i> (liquid portion of the <i>vyanjana</i>) becomes <i>dhyāma</i> (blackish) in colour • <i>chaya</i> (reflection) is <i>hina</i> (poor), <i>atirikta</i> (amplified), <i>vikṛta</i> (distorted) or there will be no reflection at all • may present with <i>phena</i> (froth), <i>ūrdhvarāḥi</i> (strips on the surface), <i>simanta</i> (centrally creased), <i>tantu</i> (threads) and <i>budbuda</i> (bubbles)
15. <i>Rāga</i> , <i>khaṇḍava</i> , <i>śaka</i> and <i>āmiṣa</i>	• become <i>vicchinna</i> (disintegrated) and <i>virasa</i> (acquire ill taste)

Subject	Effect of poison
16. <i>Mamsarasa</i> (meat soup)	• develops <i>nīla rāji</i> (blue streaks) on its surface
17. <i>Kṣīra</i> (milk)	• develops <i>tāmra rāji</i> (coppery streaks)
18. <i>Dadhi</i> (curd)	• develops <i>śyāva rāji</i> (blackish streaks)
19. <i>Takra</i> (butter milk)	• develops <i>apīta-sita</i> or <i>pīta-asitarāji</i> (yellowish white/yellowish black streaks)
20. <i>Ghṛta</i> (clarified butter)	• develops <i>pāniya sannibha rāji</i> (water like streaks)
21. <i>Mastu</i> (whey)	• develops <i>kapotābha rāji</i> (pigeon coloured lines)
22. <i>Tuṣodaka</i> (rice water)	• develops <i>kṛṣṇa rāji</i> (blackish streaks)
23. <i>Madya</i> (alcohol) and <i>ambha</i> (water)	• develop <i>kālī rāji</i> (blackish streaks)
24. <i>Kṣaudra</i> (honey)	• develops <i>harita rāji</i> (greenish streaks)
25. <i>Taila</i> (oil)	• develops <i>aruṇa rāji</i> (crimson streaks)
26. <i>Āma phala</i> (unripe fruit)	• <i>pāka</i> (ripens) quickly
27. <i>Pakva phala</i> (mature fruit)	• undergoes <i>parikothana</i> (decay)
28. <i>Ādra</i> (fresh) <i>dravya</i> (substance)	• becomes <i>śuṣka</i> (dry)
29. <i>Śuṣka</i> (dry) <i>dravya</i>	• attains <i>mlāna varṇa</i> (discolouration)
30. <i>Mṛdu</i> (soft) <i>dravya</i>	• becomes <i>kaṭhina</i> (hard)
31. <i>Kaṭhina</i> (hard) <i>dravya</i>	• becomes <i>mṛdu</i> (soft)
32. <i>Mālya</i> (floral garlands)	• becomes <i>sphuṭita</i> (split) at its <i>agra</i> (edge)
	• <i>mlāna</i> (fade away)
	• <i>gandhāntarodbhava</i> (alteration in its natural fragrance)
33. <i>Vastra</i> (clothes)	• shows <i>dhyāma maṇḍala</i> (dirty circular patches)
	• <i>śātana</i> (falling) of its <i>tantu</i> (thread) and <i>pakṣma</i> (edges)
34. <i>Dhātu</i> (metals), <i>mauktika</i> (pearls), <i>kāṣṭha</i> (wood), <i>aśma</i> (stones), <i>ratna</i> (precious stones) etc.	• become <i>malākta</i> (dirty)
	• their <i>sneha</i> (smooth texture) and <i>prabhā</i> (lustre) are lost
35. <i>Mṛmāya</i> vessels (earthen pots)	• become <i>prabhāyukta</i> (lustrous)

Signs and symptoms exhibited by poisonous vapours and its management

As per *Ācārya Suśruta* :

हृत्पीडा भ्रान्तनेत्रत्वं शिरोदुःखं च जायते । तत्र नस्याज्जने कुष्ठं लामज्जं नलदं मधु ॥

कुर्याच्चिरीषरजनीचन्दनैश्च प्रलेपनम् । हृदि चन्दनलेपस्तु तथा सुखमवाप्नुयात् ॥ SS.K. 1.35-36

Signs and symptoms: The vapour of the (poisoned) food served spreading upwards causes -

- *hṛtpīḍā* (cardiac pain or discomfort),

- *bhrānta netratva* (abnormal movements of eyes) and
- *śiroduḥkham* (headache).

Treatment

- In this case, *nasya* (snuff) and *añjana* (collyrium) of *kuṣṭha*, *lāmajjaka*, *nalada* and *madhu* (honey) should be applied.
- *Śirīṣa*, *rajanī* and *candana* should be used as *pralepa* (paste), particularly of *candana*, in the *hṛt* (cardiac) region which gives relief.

Signs and symptoms of contact with poisonous food articles and their management

As per Ācārya Suśruta :

पाणिप्राप्तं पाणिदाहं नखशर्तं करोति च ।

अत्र प्रलेपः श्यामेन्द्रगोपासोमोत्पलानि च ॥ SS.K. 1.37

- If the poisoned food comes in contact of *pāṇi* (hands), it causes *pāṇidāha* (burning sensation in hand) and *nakha śātana* (falling of nails).
- In this case, paste of *śyāmā*, *indra*, *gopī*, *soma*, *guḍūci* and *utpala* is useful.

Signs and symptoms exhibited by poisonous food articles touching the *jihvā* (tongue)

As per Ācārya Suśruta :

स चेत् प्रमादान्मोहाद्वा तदन्नमुपसेवते ।

अष्टीलावत्ततो जिह्वा भवत्यरसवेदिनी ॥

तुद्यते दह्यते चापि श्लेष्मा चास्यात् प्रसिच्यते ।

तत्र बाष्पेरितं कर्म यच्च स्याद्दान्तकाष्ठिकम् ॥

SS.K. 1.38-39

- If, by *pramāda* (sloppiness) and *moha* (unawareness), one takes poisonous food the *jihvā* (tongue) becomes *aṣṭhīlāvat* (stony hard) and *arasavedinī* (loses taste sensation), has *toda* (pricking pain), *dāha* (burning sensation) and *śleṣma praseka* (salivation).
- This should be managed as poisoned by *bāṣpa* (vapours) and *dantakāṣṭha* (tooth-brush).

As per Ācārya Caraka :

मुखगतोऽष्टचिमिचिमा जिह्वा शूना जड विवर्णा च ।

द्विजहर्षहनुस्तम्भास्यदाहस्तालागलविकाराः ॥

CS.Ci. 23.113

Presence of poison in *mukha* (oral cavity) causes -

- *cimicimā* (tingling) sensation in *oṣṭha* (lips)
- *śūnatā* (oedema), *jaḍatā* (numbness) and *vivarṇatā* (discolouration) in *jihvā* (tongue)
- *dvijaharṣa* (hypersensitivity in teeth)
- *hanustambha* (lock jaw)
- *āsyadāha* (burning sensation in oral cavity)
- *lālā* (salivation)
- *galavikāra* (disorders of throat).

Signs and symptoms exhibited by poisonous food localized in *āmāśaya* (stomach)

(I) As per Ācārya Caraka

आमाशयं प्रविष्टे वैवर्ण्यं स्वेदसदनमुत्क्लेदः ।

दृष्टिहृदयोपरोधो बिन्दुशतैश्चीयते चांगम् ॥

CS.Ci. 23.114

Viṣa (poison) reaching or localizing in *āmāśaya* (stomach) exhibits following signs and symptoms:

- *vaivarṇya* (altered complexion)
- *sveda* (sweating)
- *sadana* (laxity of body parts)
- *utkleda* (nausea)
- *dr̥ṣṭyoparodha* (hampered vision)
- *hr̥dayoparodha* (hampered cardiac functions)
- appearance of numerous *bindus* (blisters) over the *aṅga* (body parts).

signs and symptoms exhibited by poisonous food localized in *āmāśaya* (stomach)

As per Acarya caraka

vaivarṇya
sveda
sedana
utkleda
dr̥ṣṭyoparodha
hydayoparodha
Bindus over the anga

As per Acarya susruta

murccha
chardi
atisara
adhmana
daha
vepathu
vikrti in functions of Indriyas

(II) As per *Acārya Suśruta*

मूर्च्छां छर्दिमतीसारमाध्मानं दाहवेपथुः।

इन्द्रियाणां च विकृत्यं कुर्यादामाशयं गतम् ॥ SS.K. 1.40

If the poisoned food reaches *āmāśaya* (stomach), it may cause:

- *mūrccchā* (fainting)
- *chardi* (vomiting)
- *atisāra* (diarrhoea)
- *ādhmāna* (flatulence)
- *dāha* (burning sensation)
- *vepathu* (trembling)
- *vikṛti* (alteration) in functions of *indriyas* (senses).

Treatment of poisonous food localized in *āmāśaya* (stomach)

As per *Ācārya Suśruta* :

त्राशु मदनालाबुबिम्बीकोशातकीफलैः।

छर्दनं दध्युदश्विद्धयामथवा तण्डुलाम्बुना ॥

SS.K. 1.41

When the poisoned food reaches *āmāśaya* (stomach), *chardana* (emesis) should be done using fruits of *madana*, *alābu*, *bimbī* and/or *kośātakī* mixed with *dadhi* (curd), *udaśvid* (butter milk) or *taṇḍulāmbu* (rice water).

Signs and symptoms exhibited by poisonous food localized in *pakvāśaya* (colon)

(I) As per *Acārya Caraka* :

पक्वाशयं तु याते मूर्च्छामदमोहदाहबलनाशाः। तन्द्रा काश्यं च विषे पाण्डुत्वं चोदरस्थे स्यात् ॥ CS.Cl. 23.115

Viṣa (poison) reaching or localizing in *pakvāśaya* (colon) exhibits following signs and symptoms:

- ♦ *mūrccchā* (fainting)
- ♦ *mada* (intoxication)
- ♦ *moha* (stupor)
- ♦ *dāha* (burning sensation)
- ♦ *balanāśa* (loss of strength).

Viṣa (poison) reaching or localizing in *udara* (abdomen) exhibits following signs and symptoms:

- ♦ *tandrā* (lassitude)
- ♦ *kārśya* (leanness)
- ♦ *pāṇḍutva* (pallor).

As per *Ācārya Suśruta* :

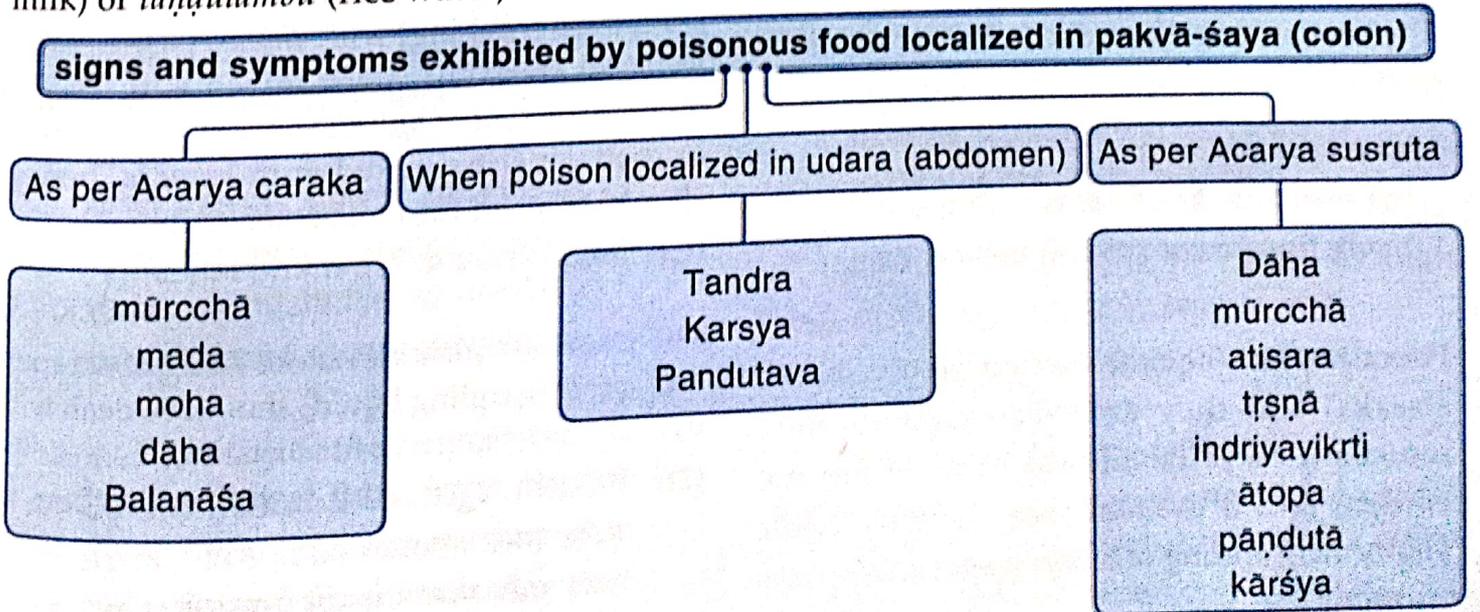
दाहं मूर्च्छामतीसारं तृष्णामिन्द्रियविकृतम्।

आटोपं पाण्डुतां काश्यं कुर्यात् पक्वाशयं गतम् ॥

SS.K. 1.42

Viṣa (poison) reaching or localizing in *pakvāśaya* (colon) exhibits following signs and symptoms:

- *dāha* (burning sensation)
- *mūrccchā* (fainting)
- *atisāra* (diarrhoea)
- *tṛṣṇā* (thirst)
- *indriyavikṛti* (deranged senses)
- *āṭopa* (gurgling sound)



- *pāṇḍitā* (pallor)
- *kārṣya* (emaciation).

Treatment of poisonous food localized in *pakvāśaya* (colon)

As per *Ācārya Suśruta* :

विरेचनं ससर्पिष्कं तत्रोक्तं नीलिनीफलम् ।
दध्ना दूषीविषारिश्च पेयो वा मधुसंयुतः ॥ SS.K. 1.43

- *Viṣa* (poison) reaching or localizing in *pakvāśaya* (colon) should be managed by *virecana* (purgation); for this *phala* (fruit) of *nīlinī* should be taken with *sarpi* (ghee).
- *Dūṣīviṣāri* recipe should be taken with *dadhi* (curd) and *madhu* (honey).

Signs and symptoms of *saviṣa drava-dravya* {poisonous liquid substances}

(I) As per *Ācārya Suśruta* :

द्रवद्रव्येषु सर्वेषु क्षीरमद्योदकादिषु ।
भवन्ति विविधा राज्यः फेनबुदबुदजन्म च ॥
छयाश्चात्र न दृश्यन्ते दृश्यन्ते यदि वा पुनः ।
भवन्ति यमलाश्छिद्रास्तन्व्यो वा विकृतास्तथा ॥

SS.K. 1.44-45

In case of poisoning, all *drava-dravyas* (liquids)-*kṣīra* (milk), *madya* (alcohol), *udaka* (water) etc.-develop *rāji* (streaks), *phena* (froth) and *budbuda* (bubbles), *chāyā* (shadows) in them are not evident and if evident at all they are *yamala* (twins), *chidra* (with holes), *tanu* (tiny) or *vikṛta* (abnor-mal).

(II) As per *Ācārya Caraka*

पाने नीला राजी वैवर्ण्यं स्वां च नेक्षते छयाम् ।
पश्यति विकृतामथवा लवणाक्ते फेनमाला स्यात् ॥

CS.Ci. 23.111

Poisoned *pānas* (liquids) develop *nīla rājis* (bluish streaks) and they are *vivarṇa* (abnormal/unusual); *chāyā* (shadows) in them are not evident and if evident then they are *vikṛta* (abnormal); adding of *lavaṇa* (salt) causes *phena* (frothing).

Signs & symptoms of *saviṣa padār-thas* {poisonous articles} with their managements

As per *Ācārya Suśruta* :

(A) शाकसूपान्मांसानि क्लिन्नानि विरसानि च ।
सद्यः पर्युषितानीव विगन्धानि भवन्ति च ॥

गन्धवर्णरसैर्हीनाः सर्वे भक्ष्याः फलानि च ।
पक्वान्याशु विशीर्यन्ते पाकमामानि यान्ति च ॥

SS.K. 1.46-47

Poisoned *śāka* (vegetables), *sūpa* (soups), *anna* (edibles) and *māṁsa* (meat) become *klinna* (moistened), *virasa* (tasteless), *sadyaḥ paryuṣita* (quickly stale) and *vigandha* (without aroma). Other *bhakṣyas* (edibles), when poisoned, lose their *gandha* (aroma), *varṇa* (colour) and *rasa* (taste); *phala* (fruits), if *pakva* (ripe), get *viśirṇa* (rotten) and if *āma* (unripe) get *pāka* (ripened).

(B) विशीर्यते कूर्चकस्तु दन्तकाष्ठगते विषे ।
जिह्वादन्तौष्ठमांसानां श्वयथुश्रोपजायते ॥

अथास्य घातकीपुष्पपथ्याजम्बूफलास्थिभिः ।
सक्षौद्रैः प्रच्छिन्ने शोफे कर्तव्यं प्रतिसारणम् ॥

अथवाऽङ्गोष्ठमूलानि त्वचः सप्तच्छदस्य वा ।
श्रीरीषमाषका वाऽपि सक्षौद्राः प्रतिसारणम् ॥

SS.K. 1.48-50

If *dantakāṣṭha* (twig for brushing) is afflicted with *viṣa* (poison), then the *kūrcaka* (brushy end) becomes *viśirṇa* (dismantled) and *śvayathu* (oedema) arises in *jihvā* (tongue), *dantamāṁsa* (gums) and *oṣṭha* (lips).

Oedematous site should be subjected to *pratisāraṇa* (rubbing) with *dhātakī puṣpa*, *pathyā*, *phalāsthi* (seed) of *jambu* mixed with *kṣaudra* (honey); or root of *aṅkoṭha* or bark of *saptaparṇa* or seeds of *śirīṣa* mixed with *kṣaudra* (honey) should be used for *pratisāraṇa* (rubbing).

(C) जिह्वानिल्लेखकवलौ दन्तकाष्ठवदादिशेत् ।

SS.K. 1.51

The poisoned *jihvānirlekhaka* (tongue-scraper) and *kavala* (gargling liquid) should be dealt with like *dantakāṣṭha* (twig for brushing).

(D) पिच्छिलो बहुलोऽभ्यंगो विवर्णो वा विषान्वितः ॥

स्फोटजन्मरुजास्रावत्वक्पाकः स्वेदनं ज्वरः ।

दरणं चापि मांसानामभ्यंगे विषसंयुते ॥

तत्र शीताम्बुसिक्तस्य कर्तव्यमनुलेपनम् ।

चन्दनं तगरं कुष्ठमुशीरं वेणुपत्रिका ॥
सोमवल्लयमृता श्वेता पद्मं कालीयकं त्वचम् ।
कपित्थरसमूत्राभ्यां पानमेतच्च युज्यते ॥

SS.K. 1.51-54

Viṣānvita abhyaṅga dravyas (poisoned massage materials) become *picchila* (slimy), *bahala* (thick/viscous), and *vivarṇa* (discoloured); when applied, these cause :

- *sphoṭa-janma* (eruption of boils)
- *rujā* (pain)
- *srāva* (exudation)
- *tvakpāka* (suppuration of skin)
- *svedana* (sweating)
- *jvara* (fever)
- *māṁsa darāṇa* (tearing of muscles).

The patient should be bathed with *śītāmbu* (cold water) and then the *anulepana* (paste) of *candana*, *tagara*, *kuṣṭha*, *uśīra*, *veṇupatrikā*, *somavallī* (*guḍūcī*), *amṛtā* (*amṛtāsaṅga*), *śvetā*, *padma*, *kāliyaka* and *tvak*. The same should also be used as *pāna* (drink) along with juice of *kapittha* and *gomūtra* (cow's urine).

(E) उत्सादने परीषेके कषाये चानुलेपने ।

शय्यावस्त्रतनुत्रेषु ज्ञेयमभ्यंगलक्षणैः ॥ SS.K. 1.55

Poisoning of *utsādana* (anointment), *parīṣeka* (irrigation water), *kaṣāya* (bathing decoction), *anulepana* (after-paste), *śayyā* (bed), *vastra* (cloths) and *tanutra* (armour) should be ascertained by the signs and symptoms as in case of *abhyaṅga* (massage) and also be treated similarly.

(F) केशशातः शिरोदुःखं खेभ्यश्च रुधिरागमः ।

ग्रन्थिजन्मोत्तमांगेषु विषजुष्टेऽवलेखने ॥

प्रलेपो बहुशस्त्र भाविताः कृष्णमृत्तिकाः ।

ऋष्यपित्तघृतश्यामापालिन्दीतण्डुलीयकैः ॥

गोमयस्वरसो वाऽपि हितो वा मालतीरसः ।

रसो मूषिकपर्ण्या वा धूमो वाऽगारसंभवः ॥

SS.K. 1.56-58

Poisoned *avalekhana* (hair comb) results in

- *keśaśāta* (falling of hairs)
- *śiroduḥkham* (headache)
- *rudhirāgamana* (bleeding) from *kha* (passages/ hair roots)

- *granthi* (cystic swellings) over the *uttamāṅga* (scalp).

Its management is application of *pralepa* (paste) made of -

- *kṛṣṇamṛttikā* (black mud) impregnated with *ṛṣyapitta* (bile of deer), *ghṛta*, *śyāmā*, *pālindī* and *tanḍulīyaka*
- *gomaya svarasa* (juice of cow dung)
- juice of *mālatī*
- juice of *mūṣikaparṇī*
- *āgāradhūma* (kitchen soot)

(G) शिरोऽभ्यंगः शिरस्त्राणं स्नानमुष्णीषमेव च ।

स्त्रजश्च विषसंस्पृष्टाः साधयेदवलेखनात् ॥ SS.K. 1.59

Śirobhyaṅga (hair oil), *śirastrāṇa* (helmet), *snāna* (bathing water), *uṣṇīṣa* (turban) and *sraja* (garland), if poisoned, should be managed like *avalekhana* (poisoned combing).

(H) मुखालेपे मुखं श्यावं युक्तमभ्यंगलक्षणैः ।

पद्मिनीकण्टकप्रख्यैः कण्टकैश्चोपचीयते ॥

तत्र क्षौद्रघृतं पानं प्रलेपश्चन्दनं घृतम् ।

पयस्या मधुकं फञ्जी बन्धुजीवः पुनर्नवा ॥

SS.K. 1.60-61

Poisoned *mukhālepa* (face pack) causes *śyāva mukha* (blackish face) and exhibits the features of poisoned *abhyaṅga* (massage); it also gets covered with *kaṇṭaka* (thorny eruptions) like *padminīkaṇṭaka*.

This is treated by -

- drinking of *kṣaudra* (honey) and *ghṛta* (ghee)
- application of *pralepa* (anointment) made of *candana*, *ghṛta*, *payasyā*, *madhuka*, *phañjī*, *bandhujīva* and *punarnavā*.

(I) अस्वास्थ्यं कुञ्जरादीनां लालास्रावोऽक्षिरक्तता ।

स्फिक्पायुमेढ्रमुष्केषु यातुश्च स्फोटसंभवः ॥

तत्राभ्यंगवदेवेष्टा यातृवाहनयोः क्रिया ।

SS.K. 1.62-63

Poisoned *kuñjara* (back of riding animals, especially elephants) etc. results in its

- *asvāsthya* (ill health of the animal)
- *lālāsrāva* (salivation)
- *akṣiraktatā* (redened eyes).

Sphik (buttocks), *pāyu* (ano-rectal region), *medhra* (phallus) and *muṣka* (scrotum) of *yātā* (rider) develops *sphoṭa* (blisters).

Both the *yātrī* (rider) and *vāhana* (animal) should be treated as in case of *abhyāṅga* (massage).

- (J) शोणितागमनं खेभ्यः शिरोरुक्कफसंस्त्रवः ॥
नस्यधूमगते लिंगमिन्द्रियाणां च वैकृतम् ।
तत्र दुग्धैर्गवादीनां सर्पिः सातिविषैः शृतम् ॥
पाने नस्ये च सश्वेतं हितं समदयन्तिकम् ।

SS.K. 1.63-65

Poisoned *nasya* (errhines) and *dhūma* (smokes) cause :

- *śoṇitāgamana* (bleeding) from *kha* (pores)
- *śiroruk* (headache)
- *kaphasamsrava* (profuse discharge of mucus) and
- *indriya vikṛti* (altered senses).

This is treated by *sarpi* (ghee) cooked with *godugdha* (milk of cow) etc. along with *ativiṣā* and added with *śvetā* and *madayantikā*; this is used as *pāna* (drink) and *nasya* (errhines).

- (K) गन्धहानिर्विवर्णत्वं पुष्पाणां म्लानता भवेत् ॥
जिघ्रतश्च शिरोदुःखं वारिपूर्णं च लोचने ।
तत्र बाष्पेरितं कर्म मुखालेपे च यत् स्मृतम् ॥

SS.K. 1.65-66

Poisoned *puṣpa* (flowers) have *gandhahāni* (loss of fragrance), *vivarṇa* (loss of colour) and they are *mlāna* (withered); by smelling them, one suffers from

- *śiroduḥkha* (headache)
- *vāripūrṇa locana* (tearful eyes).

This should be managed with formulations prescribed for poisoned *bāṣpa* (vapour) and *mukhālepa* (face packs).

- (L) कर्णतैलगते श्रोत्रवैगुण्यं शोफवेदने ।
कर्णस्त्रावश्च तत्राशु कर्तव्यं प्रतिपूरणम् ॥
स्वरसो बहुपुत्रायाः सघृतः क्षौद्रसंयुतः ।
सोमवल्करसश्चापि सुशीतो हित इष्यते ॥

SS.K. 1.67-68

If *karṇa taila* (ear-oil) is poisoned, it produces

- *śrotra-vaiguṇya* (altered hearing)
- *śopha* (oedema)
- *vedanā* (pain)
- *karṇasrāva* (discharge from ears).

This is treated by *pratipūrāṇa* (filling of ears) with

- *śīta* (cooled) *svarasa* (juice) of *bahuputrā* (*śatāvarī*) + *somavalka svarasa* + *ghṛta* (ghee) + *kṣaudra* (honey).

- (M) अश्रूपदेहो दाहश्च वेदना दृष्टिविभ्रमः ।
अञ्जने विषसंसृष्टे भवेदान्ध्यमथापि च ॥

तत्र सद्यो घृतं पेयं तर्पणं च समागधम् ।

अञ्जनं मेषशृंगस्य निर्यासो वरुणस्य च ॥

मुष्ककस्याजकर्णस्य फेनो गोपित्तसंयुतः ।

कपित्थमेषशृंगयोश्च पुष्पं भल्लातकस्य वा ॥

एकैकं कारयेत् पुष्पं बन्धूकांकोटयोरपि ।

SS.K. 1.69-72

Poisoned *añjana* (collyrium) causes

- *aśru* (lacrimation)
- *upadeha* (sliminess due to discharge)
- *dāha* (burning sensation)
- *vedanā* (pain)
- *dr̥ṣṭivibhrama* (defective vision)
- *āndhya* (blindness).

Its treatment is :

- *peya* (consumption) and *tarpaṇa* (eye soothing therapy) using *māgadhī* and *ghṛta* (ghee)
- *añjana* (collyrium) made of
 - ◆ juice of *meṣaśṛṅgī*
 - ◆ *niryāsa* (extract) of *varuṇa*
 - ◆ *muṣkaka*
 - ◆ *ajakarṇa*
 - ◆ *phena* (*samudraphena*) mixed with *gopitta* (cow's bile)
 - ◆ *puṣpa* (flowers) of *kapittha*, *meṣaśṛṅgī*, *bhallātaka*, *bandhūka* and *aṅkoṭha*.

- (N) शोफः स्त्रावस्तथा स्वापः पादयोः स्फोटजन्म च ॥

भवन्ति विषजुष्टाभ्यां पादुकाभ्यामसंशयम् ।

उपानत्पादपीठानि पादुकावत् प्रसाधयेत् ॥

SS.K. 1.72-73

Poisoned *pādukā* (wooden foot-wear) causes :

- *śopha* (inflammation)
- *srāva* (discharge)
- *svāpa* (numbness)
- *pādasphoṭa* (blisters over foot)

The cases of poisoned shoes and *pādapīṭha* (foot-rest) should be dealt with like *pādukā* (wooden foot-wear).

(O) भूषणानि हताचीषि न विभान्ति यथा पुरा।

स्वानि स्थानानि हन्युश्च दाहपाकावदारणैः ॥

पादुकाभूषणेषूक्तमभ्यंगविधिमाचरेत्। SS.K. 1.74-75

Poisoned *bhūṣaṇa* (ornaments) lose their *arci* (brilliance) and fail to shine as before; moreover, they cause, in their respective sites

- *dāha* (burning sensation)
- *pāka* (suppuration)
- *avadāraṇa* (tearing/cracking).

The cases of poisoned *pādukā* (wooden foot-wear) and *bhūṣaṇa* (ornaments) should be treated with the recipes as prescribed from *abhyāṅga* (massage).

Treatment of illnesses caused *saviṣa padārtha* {poisonous articles}

As per *Ācārya Suśruta* :

विषोपसर्गो बाष्पादिभूषणान्तो य ईरितः ॥

समीक्ष्योपद्रवांस्तस्य विदधीत चिकित्सितम्।

महासुगन्धिमगदं यं प्रवक्ष्यामि तं भिषक् ॥

पानालेपनस्येषु विदधीताञ्जनेषु च।

विरेचनानि तीक्ष्णानि कुर्यात् प्रच्छर्दनानि च ॥

सिराश्च व्यधयेत् क्षिप्रं प्राप्तं विस्त्रावणं यदि।

मूषिकाऽऽजरुहा वाऽपि हस्ते बद्धा तु भूषते ॥

करोति निर्विषं सर्वमन्नं विषसमायुतम्। SS.K. 1.75-79

- **Management of *upadravas* (complications):** Treatment described for poisoning described from *bāṣpa* (vapour) to *ābhūṣaṇa* (ornaments) should be treated after observing their *upadravas* (complications).
- **Application of *agada*:** 'Mahāsugandhi agada' (an anti-poisonous formulation) may be used for *pāna* (drink), *ālepana* (paste), *nasya* (errhines) and *añjana* (collyrium).

- **Śodhana therapy:** Drastic *virecana* (purgative) and *pracchardana* (emetic) drugs and also *sirāvyaḍha* (venepuncture), if necessary, should be applied.
- **Tieing of herbs:** The herbs, *mūṣikā* or *ajaruhā*, tied in king's hands (wrist) make all the poisoned food as poison-free.

As per *Ācārya Caraka* :

आदौ हृदयं रक्ष्यं तस्यावरणं पिबेद्यथालाभम्।

मधुसर्पिर्मज्जपयोगैरिकमथ गोमयरसं वा ॥

इक्षुं सुपक्वमथवा काकं निष्पीड्य तद्रसं वरणम्।

छागादीनां वाऽसृग्भस्म मृदं वा पिबेदाशु ॥

CS.Ci. 23.46-47

The *hṛdaya* (heart), right from beginning, should be protected from ill of *viṣa* (poison) by all means. *Madhu* (honey), *sarpi* (ghee), *majjā* (bone marrow), *payah* (milk), *gairika* (ochre), *gomayara* (juice of cow-dung), *supakva ikṣurasa* (well boiled sugarcane juice), *rasa* (juice) squeezed out of the *māṁsa* (meat) of *kāka* (crow), *asṛk* (blood) of *chāga* (goat) etc., *bhasma* (ashes) or *mṛda* (mud) diluted in water - these can be prescribed.

Important sections on Food poisoning

• Section 272, I.P.C.	adulteration of food articles (including drinks) intended for sale
• Section 273, I.P.C.	sale of noxious/ toxic food articles
• Section 274, I.P.C.	adulteration of drugs
• Section 275, I.P.C.	sale of adulterate drugs
• Section 276, I.P.C.	sale of drugs as a different drug or preparation



POISONING IN INDIA

LEARNING OBJECTIVES

- Kautilya Arthashastra is worth referring for history of poisoning in Ancient India.
- Opium was popular choice among suicidal cases in 20th century.
- Now-a-days sleeping pills are common in suicidal cases.
- Arsenic and aconite are common for Homicidal cases.
- Arsenic is tasteless, odourless colourless & highly fatal.
- Opium is preferred for homicide against children.
- NDPTS Act 1985 (Narcotic Drugs and psychotropic substances Act)

Introduction to Poisoning in India

History of poisoning is very ancient in India. *Agadatantra* (toxicology) itself is an evidence of senile usage of *viṣa* (poisonous substances) for treatment, suicide, homicide and cattle killing. As seen in preceding chapters of this work, poisonous substances were introduced through food articles, drinks, dental twigs, toothpastes and powders, collyriums/eye-salves, nasal errhines, cosmetic products; cloths were coloured using poisonous substances and thus poisoned; arrows and weapons dipped in poisonous substances; poisoned arrows were common for homicidal poisoning; association or sexual indulgence with *viṣakanyā* (poisoned girl/ women) and other such measures were used for killing opponents. For mass killing water bodies (such as lakes, ponds), cultivable lands, crops, air, habitat were poisoned. *Kauṭilya arthaśāstra* is worth referring for such incidences.

Rise in incidences of poisoning in India

There is sprout in incidences of poisoning - not only in India but world over. The factors responsible are

- easy availability of poisonous compounds
- mis-handling during storage of such compounds
- frail information about these among the general population
- irrational use of such compounds by illiterate/ partially literate and quack practitioners
- poor Government laws and corruption in the system.

Human poisoning

Compounds commonly used for suicide, in Indian subcontinent, are :

- ♦ opium
- ♦ arsenic
- ♦ datura
- ♦ copper
- ♦ Indian oleander
- ♦ Potassium cyanide
- ♦ Hydrocyanic acid
- ♦ Barbiturates
- ♦ Organo-phosphorus compounds
- ♦ Oxalic acid etc.

Effect of habitat and time also plays pivotal role in selection of above mentioned poisons. Twentieth century saw opium as a popular choice among suicidal cases; this is was due to absence of modern compounds. Nearly sixty percent of suicidal cases were due to opium. With government's strict control over cultivation and storage of opium, other compounds gained popularity. Readily available compounds are more common for above mentioned purpose. In Bihar, Uttar Pradesh and Madhya Pradesh following compounds are favourite among

suicide cases - opium, arsenic, datura, potassium cyanide, ethyl alcohol, zinc phosphate etc.; in Bengal pesticides, opium, arsenic, datura, oleander, ethyl alcohol, nitric acid are more common; in Chennai and Andhra oleander, datura, copper, parathione, kerosene and ethyl alcohol are common. Now-a-days, sleeping pills have gained notoriety among suicidal cases. Usage of coal gas is rare.

To settle enmity or to grab property or to fulfil one's selfish ambitions following are used for homicidal purposes :

- ♦ arsenic
- ♦ aconite
- ♦ oleander
- ♦ copper
- ♦ mercury
- ♦ strychnos
- ♦ antimony
- ♦ thalium
- ♦ organo-phosphorus compounds
- ♦ powdered glass
- ♦ sleeping pills etc.

Insulin, pathogens or snakes etc. are rarely used for poisoning or harming others. Commonly used are arsenic and aconite; arsenic is tasteless, odourless, colourless and high fatal; features of its poisoning resemble that of cholera or gastro-enteritis. Aconite's popularity is also because of its low dose fatality and easy mixing with other substances. It is difficult to trace it in dead as it starts degrading rapidly. For homicide against children, opium is preferred. Certain poisons are induced with intention of stupefying, mugging or sexually assaulting a person; for these, datura, cannabis and chloral hydrate are preferred. Chloral hydrate is mixed with alcohol and served; at times, Atropa belladonna, hyoscyamus and arsenic are served through smoking twigs.

Animal poisoning

Enmity or collection of precious horns, skin etc. of animals are the prime factors influencing animal poisoning. Other factors include sickness, psychosis and uselessness (due to aging) of animals; in this case the owner himself poisons the animal.

At times, animals unintentionally consume poisonous plants and thus succumb.

Following are commonly used for animal poisoning -

- ♦ white arsenic
- ♦ aconite
- ♦ seeds of Strychnos nux-vomica
- ♦ yellow oleander etc.

Use of snakes for killing animals, is rare.

Routes of poisoning, in case of animals, differ and are unique; e.g. small needle like arsenic crystals are pricked in the body or snake is made to bite a banana and this is inserted into anus or other body orifices of the animals.

Incidences of animal poisoning provoked Sages to write about *vegās* (impetuosity) of poisons among birds and animals along with their treatment/management.

Highlighting this, *Ācārya Suśruta* quotes :

रक्तावसेकाञ्जनानि नरतुल्यान्यजाविके ॥
 त्रिगुणं महिषे सोष्ट्रे गवाश्चे द्विगुणं तु तत् ।
 चतुर्गुणं तु नागानां केवलं सर्वपक्षिणाम् ॥
 परिषेकान् प्रदेहांश्च सुशीतानवचारयेत् ।
 माषकं त्वञ्जनस्येष्टं द्विगुणं नस्यतो हितम् ।
 पाने चतुर्गुणं पथ्यं वमनेऽष्टगुणं पुनः ॥ SS.K. 5.31-33

Quantity of *raktāvaseka* (blood letting) and *añjana* (collyrium) application in *ajā* (goats) and *āvi* (sheep) is *naratulya* (similar to human beings), three times in *mahiṣa* (buffalos) and *uṣṭra* (camels), double in *go* (cows) and *aśva* (horses), and in *nāga* (elephants) it is four times.

In case of *pakṣis* (birds), only well *suśīta* (cooled) *pariṣeka* (irrigations) and *pradeha* (pastes) should be applied.

The dose for *añjana* (collyrium) should be one *māṣaka* (gm.), that of *nasya* (errhines) its double, for *pāna* (intake) four times and for *vamana* (emesis) eight times.

Storage and maintenance of Poisonous articles

Lapse in storage and maintenance of poisonous or toxic articles is also a punishable offence. This calls for utmost care in storage and maintenance of such articles. These include drugs, antiseptics, disinfectants, insecticides, fungicides, weed killers etc.

Petrols, LPG, kerosene, thinners, cleaning fluids, bleaching agents, bleaching powders, acids and alkalis - these also require caution during storage, transport and maintenance.

All poisonous articles should be placed away from the reach of children, locked in safe places; psychiatric patients are prone to using these for suicidal attempts.

One should refrain from storing poisonous liquids in cold drink, lemonade bottles and if stored appropriate labelling is a must.

Medicines and poisonous drugs should not be stored in common cabinet. Remnant, non-useful and near expiry drugs should not be stored for long and promptly discarded.

Care must also be taken while discarding such drugs.

Consuming of medicines should always in bright light and not otherwise.

Laws relating to poison and poisoning

Narcotic Drugs And Psychotropic Substances Act 1985 (NDPTS)

- It is an Act of the Parliament of India; it prohibits a person to produce, manufacture, cultivate, possess, sell, purchase, transport, store, and/or consume any narcotic drug or psychotropic substance.
- The NDPTS Bill, 1985 was introduced in the Lok Sabha on 23 August 1985.
- It was passed by both the Houses of Parliament (i.e. Lok Sabha and Rajya Sabha), received acquiescence from then President Giani Zail Singh on 16 September 1985.
- It came into force on 14 November 1985.
- The Act has since been amended three times - in 1988, 2001 and 2014.
- Under one of the provisions of the act, the Narcotics Control Bureau was set up with effect from March 1986.
- Chapters in the Act
 - ◆ Chapter I: Preliminary
 - ◆ Chapter II: Authorities And Officers

- Chapter II A: National Fund For Control of Drug Abuse
- ◆ Chapter III: Prohibition, Control And Regulation
- ◆ Chapter IV: Offences And Penalties
- ◆ Chapter V: Procedures
 - Chapter V A: Forfeiture of Property Derived From, or Used In, Illicit Traffic

■ Punishments under the Act

- ◆ Anyone contravening the NDPS Act will face punishment based on the quantity of the banned substance.
 - for small quantity - rigorous imprisonment for a term which may extend to 1 year, or with a fine which may extend to ₹10,000 or both;
 - quantity lesser than commercial quantity but greater than a small quantity - rigorous imprisonment for a term which may extend to 10 years and with fine which may extend to ₹1 lakh;
 - quantity involving commercial quantity - rigorous imprisonment for a term which shall not be less than 10 years but which may extend to 20 years and also a fine which shall not be less than ₹1 lakh but which may extend to ₹2 lakh.

The Poisons Act 1919

- It is an Act to consolidate and amend the law regulating the importation, possession and sale of poisons.

Drugs and Cosmetics Act 1940

- It is an Act of the Parliament of India which regulates the import, manufacture and distribution of drugs in India.
- The key objective of the Act is to ensure that the drugs and cosmetics sold in India are safe, effective and conform to state quality standards.
- The related Drugs and Cosmetics Rules, 1945 comprises provisions for classification of drugs under given schedules and there

are guidelines for the storing, sale, display and prescription of each drug.

- The act defines 'drug' and it includes a wide variety of substance, diagnostic and medical devices.
- The act defines 'cosmetic' as any product that is meant to be applied to the human body for the purpose of beautifying or cleansing; the definition, however, excludes soaps.
- In 1964, the act was amended to include Ayurveda and Unani drugs.
- The Section 16 of the Act defines the standards of quality for drugs.
- The Section 17 defines 'misbranding'.
- The Act requires that ingredients of the drugs should be printed on the label.
- The Section 22 defines the powers of the drug inspectors.

Drugs and Magic Remedies

(objectionable advertisements) Act 1954

- It is an Act of the Parliament of India that controls advertising of drugs in India.
- It prohibits advertisements of drugs and remedies that claim to have magical properties, and makes doing so a cognizable offence.
- Date of commencement of Act - 1 April 1955
- The act defines 'magic remedy' as any talisman, mantra, amulet or any other object, which is claimed to have miraculous powers to treat, diagnose, prevent or alleviate a disease in humans or animal. It also includes such devices that are claimed to have power to influence structure or function of an organ in humans or animals.
- The law prohibits advertising of drugs and remedies for -
 - inducing miscarriage or preventing conception in women
 - improving or maintaining the capacity for sexual pleasure
 - correction of menstrual disorders
 - treating, diagnosing or preventing any disease or ailment mentioned in an included schedule. (See Table No 16.1)

Community poisoning in ancient India and its management

Community poisoning in ancient India was rampant; the purpose was to destroy the enemies or rivals in large number. This is similar to use of toxic chemicals, gases etc. for mass killing in present era.

Kauṭilya Arthaśāstra quotes references of community poisoning; through this various disease conditions (such as leprosy, tuberculosis, cholera, psychosis etc.) were inflicted in the army of enemies; water bodies, agri-fields, food articles, atmosphere were come targets.

We also find remedies, for such gruesome acts, in classic literatures. *haribale*

As per *Ācārya Suśruta* :

राजोऽरिदेशे रिपवस्तुणाम्बुमार्गान्नधूमश्चसनान् विषेण ।
संदूषयन्त्येभिरतिप्रदुष्टान् विज्ञाय लिंगैरभिज्ञोघ-
येत्तान् ॥ SS.K. 3.6

As *Rājñā* (king) marches in *arideśa* (enemy's territory), the latter poisons the *tṛṇa* (grass), *ambu* (water), *mārga* (roads), *anna* (foods), *dhūma* (smoke) and *śvasana* (air). Hence, ascertaining them as extremely *praduṣṭa* (polluted) by the *liṅga*s (features) one should adopt *śodhana* (purification) measures.

Signs of *duṣṭa jala* (polluted water) and its management

As per *Ācārya Suśruta* :

दुष्टं जलं पिच्छिलमुग्रगन्धि फेनान्वितं राजिभिरावृतं च ।
मण्डूकमत्स्यं प्रियते विहंगा मत्ताश्च सानूपचरा धमन्ति ॥
मज्जन्ति ये चात्र नराश्च नागास्ते छर्दिमोहज्वरदाहशोफान् ।
अ (ग) च्छन्ति तेषामपहत्य दोषान् दुष्टं जलं शोधयितुं
यतेत् ॥ SS.K. 3.7-8

Signs of *duṣṭa jala* (polluted water) are :

- it is *picchila* (slimy), *ugragandhī* (sharp odour), with *phena* (froth) and *rāji* (streaks)
- *maṇḍūka* (frogs) and *matsya* (fish) succumb to death
- *ānūpacara vihaṅga*s (coastal birds) move around *matta* (intoxicated)
- *nara* (humans), *aśva* (horses) and *nāga* (elephants) bathing in such water suffer from

Sections in IPC

Table No 16.1

1. Sec. 272 IPC	Adulteration of food or drink intended for sale	Imprisonment of either description for a term which may extend to six months and/ or with fine which may extend to one thousand rupees
2. Sec. 273 IPC	Sale of noxious food or drinks	Imprisonment of either description for a term which may extend to six months and/ or with fine which may extend to one thousand rupees
3. Sec. 274 IPC	Adulteration of drugs so as lessen the efficacy or change the operation of such drug	Imprisonment of either description for a term which may extend to six months and/ or with fine which may extend to one thousand rupees
4. Sec. 275 IPC	Sale of adulterated drugs	Imprisonment of either description for a term which may extend to six months and/or with fine which may extend to one thousand rupees
5. Sec. 276 IPC	Sale of a drug as a different drug or preparation	Imprisonment of either description for a term which may extend to six months and/or with fine which may extend to one thousand rupees
6. Sec. 277 IPC	Fouling water of public spring or reservoir	Imprisonment of either description for a term which may extend to three months and/ or with fine which may extend to five hundred rupees
7. Sec. 278 IPC	Voluntarily making atmosphere noxious to health	Fine extending to five hundred rupees
8. Sec. 284 IPC	Negligent conduct with respect to poisonous substance	Imprisonment of either description for a term which may extend to six months and/ or with fine which may extend to one thousand rupees
9. Sec. 328 IPC	Causing hurt by means of poison or any stupefying, intoxicating or unwhole-some drug or any other thing with the intent to commit an offence	Imprisonment of either description for a term which may extend to ten years and/ or with fine

- ◆ *chardi* (vomiting)
- ◆ *moha* (stupor)
- ◆ *jvara* (fever)
- ◆ *dāha* (burning sensation)
- ◆ *śopha* (oedema/ inflammation).

Management of diseases caused by *duṣṭa jala* (polluted water)

As per *Ācārya Suśruta* :

धवाश्चकर्णासनपारिभद्रान् सपाटलान् सिद्धकमोक्षकौ
च। दग्ध्वा सराजदुमसोमवल्कां स्तद्भस्म शीतं
वितरेत् सरःसु॥ भस्माञ्जलिं चापि घटे निधाय
विशोधयेदीप्सितमेवमम्भः।

SS.K. 3.9-10

- *Dhava, aśvakarna, asana, pāribhadra, pātālā, siddhaka, mokṣaka, rājadrūm (āragvadha), somavalka* and (*kaṭphala*) - all these should be burnt and the *bhasma* (ash) when becomes *śīta* (cool) should be smeared in the lake (sour of water).

- This *bhasma* (ash) can be put in *ghaṭa* (water pitcher) in quantity of one *añjalito* purify the water.

Signs of polluted fodder etc. and their management

As per *Ācārya Suśruta* :

तृणेषु भक्तेषु च दूषितेषु सीदन्ति मूर्च्छन्ति वमन्ति चान्ये।
विद्भेदमूर्च्छन्त्यथवा म्रियन्ते तेषां चिकित्सां
प्रणयेद्यथोक्ताम्॥ विषापहैर्वाऽप्यगदैर्विलिप्य वाद्यानि
चित्राण्यपि वादयेत्। तारः सुतारः ससुरेन्द्रगोपः सर्वैश्च
तुल्यः कुरुविन्दभागः॥ पित्तेन युक्तः कपिलान्वयेन
वाद्यप्रलेपो विहितः प्रशस्तः। वाद्यस्य शब्देन हि यान्ति
नाशं विषाणि घोराण्यपि यानि सन्ति॥ SS.K. 3.13-15

Poisoned *tṛṇa* (grass) and *bhakta* (food articles) cause :

- *sīdan* (malaise)
- *mūrccchā* (fainting)

- *vamana* (vomiting)
- *vidbheda* (diarrhoea).

They should be subjected to *cikitsā* (treatment) as previously quoted.

- *Vādya* (musical instruments) pasted with *viśāpaha agada* (anti-poisonous recipes) should be played.
- *Tāra* (silver), *sutāra* (mercury), *surendra* (gold), *gopa* and *kuruvinda* equal to all the four taken together is macerated with *kapilā pitta* (bile of brown crow). This paste is applied over the *vādya* (musical instrument) and played. By the *śabda* (sound/ melody) of the *vādya* (musical instrument) even severe *viśa* (poisons) are destroyed.

Features of *pradūṣita bhūmi* (polluted land) and its management

As per *Ācārya Suśruta* :

क्षितिप्रदेशं विषदूषितं तु शिलातलं तीर्थमथेरिणं वा ॥
स्पर्शन्ति गात्रेण तु येन येन गोवाजिनागोष्ट्रखरा नरा वा ।
तच्छूनतां यात्यथ दह्यते च विशीर्यते रोमनखं तथैव ॥
तत्राप्यनन्तां सह सर्वगन्धैः पिष्ट्वा सुराभिर्विनियोज्य
मार्गम् । सिञ्चेत् पयोभिः सुमृदन्वितैस्तं विडंगपाठ-
कटभीजलैर्वा ॥

SS.K. 3.10-12

Features of *pradūṣita bhūmi* (polluted land)

- When *go* (cows), *āji* (horses), *nāga* (elephants), *uṣṭra* (camels), *khara* (asses) and *nara* (humans) come in contact with poisoned *ksitipradeśa* (land), *śilātala* (stony platforms), *tīrtha* (river banks) or *īriṇam* (deserts) they suffer from
 - ♦ *śūnatā* (swelling)
 - ♦ *dāha* (burning sensation)
 - ♦ falling of *roma* (body hairs) and *nakha* (nails).

Treatment of *pradūṣita bhūmi* (polluted land)

- *Anantā* mixed with all *gandha* (aroma-tic) plants is macerated with *surā* (alcohol) and this should be sprinkled at *mārga* (passages/ roads) etc.
- Similarly, *siñcana* (irrigation) should be done with *payah* (milk) mixed with *sumrd*

(good/ non-poisonous mud) or with decoction of *viḍaṅga*, *pāṭhā* and *katabhī*.

Features of *pradūṣita vāyumaṇḍala* (polluted atmosphere) and its management

As per *Ācārya Suśruta* :

धूमेऽनिले वा विषसंप्रयुक्ते खगाः श्रमार्ताः प्रपतन्ति
भूमौ । कासप्रतिश्यायशिरोरुजश्च भवन्ति तीव्रा
नयनामयाश्च ॥ लाक्षाहरिद्रातिविषाभयाब्दहरेणुकैलादल-
वक्रकुष्ठम् । प्रियंगुकां चाप्यनले निधाय धूमानिलौ
चापि विशोधयेत् ॥

SS.K. 3.16-17

Features

- If *dhūma* (smoke) and *anila* (air) is afflicted with *viśa* (poison), *khaga* (birds) suffer from *śrama* (exhaustion) and fall on the *bhūmi* (ground).
- It also causes
 - ♦ *kāsa* (cough)
 - ♦ *pratiśyāya* (sinusitis)
 - ♦ *śirorujā* (headache)
 - ♦ severe *nayanāmaya* (eye disorders).

Treatment

- *Lākṣā*, *haridrā*, *ativiśā*, *abhayā*, *abda*, *hareṇuka*, *elā*, *dala*, *vakra*, *kuṣṭha* and *priyaṅgu* are burnt to cause fumigation; this pacifies both *dhūma* (smoke) and *anila* (air).

Environmental toxicology

Environmental toxicology is defined as the science that deals with deleterious effect of pollutants on environment & wild life which includes the air, soil and water.

Classification of Environmental Poisons

- Air Pollutants - Co, So₂, No₂, O₃
- Solvents - Carbon tetrachloride, chloroform benzene.
- Insecticides - DDT, BMC, Parathion, Pyrethrum etc.
- Herbicides - (2, 4-D), TCDD, paraquat etc.
- Environmental pollutants - Polychlorinated-Biphenyls (PcBs)

Chemical warfare

- Chemical warfare is defined as warfare that involves using of toxic properties of chemical substances as weapons/ammunitions.
- Use of toxins such as ricine, botulinum toxin etc. fall under this category.
- Nearly seventy different chemicals are marked as weapons for chemical warfare.
- Ethyl bromoacetate and chloroacetone were used as chemical weapons during the First World War.
- Chemical warfare was revolutionized by discovery of the nerve agents such as tabun and sarin.



Nuclear warfare

- Nuclear warfare is a military battle or political stratagem in which nuclear weapons are used to cause damage on the enemy.
- This kind of warfare can produce destruction in much shorter time-interval and can have long lasting effect.
- On August 06, 1945 a uranium gun-type device was detonated over the Hiroshima (Japan) and three days later, on August 09, 1945, a plutonium implosion-type device was detonated over Nagasaki (Japan); the former wascode named 'Little boy' and the later as 'Fat man'.
- These two bombings killed nearly one lakh and twenty five thousand individuals.

Appendix

(Certain Important Agadas - from the Classics)

S.No.	Name of the formulation	Effect of formulation	AS.Ut.	CS.Ci.	SS.K.
1.	Ajita agada	Sarva-viṣa nāśaka	40.76		5.63-65
2.	Ajeya ghr̥ta	Sarva-viṣa nāśaka	40.73		
3.	Amṛta ghr̥ta	Sarva-viṣa nāśaka	40.99	23.242-249	
4.	Amṛta sarpi	Sarpa- viṣa nāśaka			6.12-13
5.	Aṣabha agada	Complications of Sarpa- viṣa	42.62	23.95	5.68-73
6.	Auśanas agada	Sarva-viṣa nāśaka	40.49		6.8-11
7.	Kalyāṇaka sarpi	Sarpa- viṣa nāśaka			
8.	Kakaṇḍādi yoga	Sarpa- viṣa nāśaka		23.53	
9.	Kṣāragada	Sarva-viṣa nāśaka	41.38	23.101-104	6.1-3
10.	Gandhahastī agada	Sarva-viṣa & śoṭha nāśaka		23.70-76	
11.	Candanādi yoga	Sarva-viṣa & śoṭha nāśaka		23.191-193	
12.	Tarkṣya agada	Sarpa- viṣa nāśaka	40.58		5.65-68
13.	Daśaṅga agada	Viṣopadrava	40.49		
14.	Dūṣiviṣāri agada	Dūṣiviṣa	40.107		2.50-51
15.	Nāgadantyādi ghr̥ta	Garaviṣa, kiṭaetc.		23.241	
16.	Pañcaśiṛiṣa agada	Sarva-viṣa nāśaka		23.218	
17.	Prājāpatya agada	Sarva-viṣa nāśaka	40.62		
18.	Balasūrya agada	Sarva-viṣa nāśaka	40.57		
19.	Brāhma agada	Sarva-viṣa nāśaka	40.61		
20.	Mahā agada	Sarpa-viṣa nāśaka	42.61		5.61-63
21.	Mahāgandhahastī agada	Sarva-viṣa nāśaka		12.77-94	
22.	Mahāsugandhi agada	Sarpa-viṣa nāśaka	47.40	6.14-27	
23.	Māmsyādi yoga	Sarva-viṣa & śoṭha nāśaka		23.190	
24.	Māheśvara agada	Sarva-viṣa nāśaka	40.78		
25.	Mṛtasāñjivana agada	Sarva-viṣa nāśaka	40.58	23.54-60	
26.	Yāpanākhyā agada	Sarva-viṣa nāśaka	40.56		
27.	Vaṁśatvagādi agada	lūtāviṣaetc.			5.78-80
28.	Śiva agada	Sarva-viṣa nāśaka	40.49		

S.No.	Name of the formulation	Effect of formulation	AS.Ut.	CS.Ci.	SS.K.
29.	<i>Sañjivana agada</i>	<i>Sarva-viṣa nāśaka</i>	40.55		
30.	<i>Sugandhākhyā agada</i>	<i>Sarva-viṣa nāśaka</i>	47.22		5.73-75
31.	<i>Surasādi agada</i>	<i>Sarpa-viṣa nāśaka</i>		23.52	
32.	<i>Sūryodaya agada</i>	<i>Sarva-viṣa nāśaka</i>	40.48		
33.	<i>Hirṅvādi yoga</i>	<i>Viṣopadrava</i>		23.96	

(1) *Ajita agada*

Reference: SS.K. 5.63-65

Sūtra

विडंगपाठात्रिफलाजमोदाहिङ्गूनि वक्रं त्रिकदूनि चैव ॥
 सर्वश्च वर्गो लवणः सुसूक्ष्मः सचित्रकः क्षौद्रयुतो निधेयः ॥
 शृगे गवां शृगमयेन चैव प्रच्छदितः पक्षमुपेक्षितश्च ॥

SS.K. 5.63-64

Contents

- ◆ *viḍaṅga*
- ◆ *pāṭhā*
- ◆ *triphālā*
- ◆ *ajamodā*
- ◆ *hiṅgu*
- ◆ *vakra (tagara)*
- ◆ *citraka*
- ◆ *trikaṭu*
- ◆ *lavāṇa varga*

- All the ingredients, in equal quantity, should be mixed with *kṣaudra* (honey) and stored in a *śṛṅga* (horn) and covered with similar material for a fortnight.

Phalaśruti

एषोऽगदः स्थावरजंगमानां जेता विषाणामजितो हि नाम्ना ॥ SS.K. 5.65

- This *agada* (anti-poisonous formulation) pacifies both *sthāvara* (immobile) and *jaṅgama* (mobile) *viṣas* (poisons); this is known as '*ajita agada*'.

(2) *Ajeya ghrta*

Reference - AS.Ut. 40.73

Sūtra :

मधुकं तगरं कुष्ठं भद्रदारु हरेणवः ।
 मज्जिष्ठैलैलवालूनि नागपुष्पोत्पलं प्लवम् ॥
 विडंगं चन्दनं पत्रं प्रियंगुध्यामकं बला ।
 अंशुमत्यौ हरिद्रे द्वे बृहत्यौ सारिवाह्वयम् ॥
 एषां कल्कैर्घृतं सिद्धमजेयं नाम विश्रुतम् ॥
 विषाणि हन्ति सर्वाणि शीघ्रमेव प्रयोजितम् ॥

AS.Ut. 40.73

Contents

- ◆ *madhuka*
- ◆ *tagara*
- ◆ *kuṣṭha*
- ◆ *bhadrādāru*
- ◆ *hareṇu*
- ◆ *mañjiṣṭhā*
- ◆ *elā*
- ◆ *elavāluka*
- ◆ *nāgapuṣpa*
- ◆ *utpala*
- ◆ *plava*
- ◆ *viḍaṅga*
- ◆ *candana*
- ◆ *patra*
- ◆ *priyaṅgu*
- ◆ *dhyāmaka*
- ◆ *balā*
- ◆ *aṅśumatī dvaya (śālīparṇī and pṛśni-parṇī)*
- ◆ *haridrā dvaya (haridrā and dāruharidrā)*
- ◆ *bṛhatī dvaya (bṛhatī and kaṇṭakārī)*
- ◆ *sārivā dvaya*

- All these are made into a *kalka* (paste) and cooked with *ghṛta* (ghee).

- This medicated ghee is termed '*ajeya ghrtam*'

Phalaśruti :

विषाणि हन्ति सर्वाणि शीघ्रमेव प्रयोजितम् ॥

AS.Ut. 40.73

- This ghee pacifies all the *viṣas* (poisons) quickly.

(3) *Amṛta ghrta*

Reference - CS.Ci. 23.242-249

Sūtra

शिरीषत्वक् त्रिकदुकं त्रिफलां चन्दनोत्पले ॥
 द्वे बले सारिवास्फोतासुरभीनिम्बपाटलाः ।
 बन्धुजीवाढकीमूर्वावासासुरसवत्सकान् ॥
 पाठांकोलाश्वगन्धार्कमूलयष्ट्याह्वपद्मकान् ।
 विशालां बृहतीं लाक्षां कोविदारं शतावरीम् ॥
 कटभीदन्यपामार्गान् पृश्निपर्णीं रसाञ्जनम् ।
 श्वेतभण्डाश्वखुरकौ कुष्ठदारुप्रियंगुकान् ॥
 विदारीं मधुकात् सारं करञ्जस्य फलत्वचौ ।
 रजन्यौ लोध्रमक्षांशं पिष्ट्वा साध्यं घृताढकम् ॥

तुल्याम्बुच्छगगोमूत्रत्र्याढके तद्विषापहम् ।
 अपस्मारक्षयोन्मादभूतग्रहरोदरम् ॥
 पाण्डुरोगक्रिमीगुल्मप्लीहोरुस्तम्भकामलाः ।
 हनुस्कन्धग्रहादींश्च पानाभ्यञ्जननावनैः ॥
 हन्यात् संजीवयेच्चापि विषोद्बन्धमृतान्नरान् ।
 नान्देममृतं सर्वविषाणां स्याद्भूतोत्तमम् ॥

CS.Ci. 23.242-249

Contents

- | | |
|---------------|------------------------|
| ◆ śirīṣa tvak | ◆ arkamūla |
| ◆ trikaṭu | ◆ yaṣṭimadhu |
| ◆ triphalā | ◆ viśālā |
| ◆ candana | ◆ bṛhatī |
| ◆ utpala | ◆ lākṣā |
| ◆ balā | ◆ śatāvārī |
| ◆ atibalā | ◆ padmaka |
| ◆ sārivā | ◆ kaṭabhī |
| ◆ āsphotā | ◆ antī |
| ◆ surabhī | ◆ apāmārga |
| ◆ nimba | ◆ pṛśniparnī |
| ◆ pāṭalā | ◆ rasāñjana |
| ◆ koviadāra | ◆ śvetabhāṅṭā |
| ◆ ādhakī | ◆ aśvakhuraka |
| ◆ mūrvā | ◆ kuṣṭha |
| ◆ lodhra | ◆ devadāru |
| ◆ vāsā | ◆ priyaṅgu |
| ◆ surasa | ◆ vidārī |
| ◆ vatsaka | ◆ madhukasāra |
| ◆ pāṭhā | ◆ karañja phala & tvak |
| ◆ aṅkola | ◆ rajanī |
| ◆ aśvagandhā | ◆ dārvi |

■ All the above mentioned drugs in 1 karṣa quantity, 1 ādhaka goghṛta (cow's ghee), 1 ādhakajala (water) and 3 ādhaka gomūtra (cow's urine) or ajāmūtra (goat's urine) should be processed in snehapāka-vidhi and preserved in appropriate container.

Phalaśruti

- This agada pacifies apasmāra (epilepsy), kṣaya (wasting), unmāda (psychosis), bhūtagraha (demonic seizures), garaviṣa (artificial poisoning), udararoga (ascites), pāṅduroga (anaemia), krimī (worm infestations), gulma (phantom tumour), plīhāroga (splenomegaly), urustambha (spasticity of thigh), kāmālā (hepatitis),

hanugraha (lock jaw), skandhagraha (frozen shoulder) etc.

- This can used for ābhyantara pāna (internal consumption), abhyañjana (massage) and nāvana (errhines).

(4) Amṛta sarpi

Reference -SS.K. 6.12-13

Sūtra :

अपामार्गस्य बीजानि शिरीषस्य च माषकान् ।

श्वेते द्वे काकमार्ची च गवां मूत्रेण पेययेत् ॥

सर्पिरितैस्तु संसिद्धं विषसंशमनं परम् ।

अमृतं नाम विख्यातमपि संजीवयेन्मृतम् ॥ SS.K. 6.12-13

Contents

- | | |
|----------------------------|-------------------------|
| ◆ bīja (seeds) of apāmārga | ◆ mahāśvetā |
| ◆ bīja (seeds) of śirīṣa | ◆ kākamācī |
| ◆ māṣa | ◆ gomūtra (cow's urine) |
| ◆ śvetā | ◆ sarpi (ghee) |

All the ingredients macerated with gomūtra (cow's urine) are processed with sarpi (ghee); this is known as 'Amṛta sarpi'.

Phalaśruti

- It is parama viṣa sanśamana (best in pacifying poisons).

(5) Āṣabha agada

Reference -CS.Ci. 23.95

Sūtra :

ऋषभकजीवकभार्गीमधुकोत्पलधान्यकेशराजाज्यः ।
 ससितगिरिकोलमध्याः पेयाः श्वासज्वरादिहराः ॥

CS.Ci. 23.95

Contents

- | | |
|-------------|------------------------------|
| ◆ reṣabhaka | ◆ keśara |
| ◆ jīvaka | ◆ ajājī |
| ◆ bhārgī | ◆ sitagiri (śveta aparājitā) |
| ◆ madhuka | ◆ pulp of kola |
| ◆ utpala | |
| ◆ dhānya | |

All the ingredients are collected and served as a drink. This is known as 'Āṣabha agada'.

Phalaśruti

- It pacifies śvāsa (dyspnoea), jvara (fever) etc. caused by poisoning.

(6) *Auśanas agada*

Reference

- AS.Ut. 40.49

Sūtra :

सुरालापावकीसोमाभोगवत्यमृतानतम् ।
आढकीकिणिहीसोमराजी चौशनसोऽगदः ॥

AS.Ut. 40.88

Contents

- | | |
|--------------------|------------------|
| ◆ <i>surālā</i> | ◆ <i>nata</i> |
| ◆ <i>pāvakī</i> | ◆ <i>ādhakī</i> |
| ◆ <i>soma</i> | ◆ <i>kiṇihī</i> |
| ◆ <i>bhogavatī</i> | ◆ <i>somrājī</i> |
| ◆ <i>amṛtā</i> | |

All the ingredients are collected and preserved.
This is 'Auśanas agada'.

(7) *Kalyāṇaka sarpi*

Reference

- SS.K. 6.8-11

Sūtra :

विडंगत्रिफलादन्तीभद्रदारुहरेणवः ।
तालीशपत्रमज्जिष्ठाकेशरोत्पलपद्मकम् ॥
दाडिमं मालतीपुष्पं रजन्यौ सारिवे स्थिरे ।
प्रियंगुस्तगरं कुष्ठं बृहत्यौ चैलवालुकम् ॥
सचन्दनगवाक्षीभिरेतैः सिद्धं विषापहम् ।
सर्पिः कल्याणकं ह्येतद्ग्रहापस्मारनाशनम् ॥
पाण्ड्वामयगरश्चासमन्दाग्निज्वरकासनुत् ।
शोषिणामल्पशुक्राणां वन्ध्यानां च प्रशस्यते ॥

SS.K. 6.8-11

Contents

- | | |
|----------------------|-----------------------|
| ◆ <i>viḍaṅga</i> | ◆ <i>padmaka</i> |
| ◆ <i>triphalā</i> | ◆ <i>dāḍima</i> |
| ◆ <i>dantī</i> | ◆ <i>mālatīpuṣpa</i> |
| ◆ <i>bhadradāru</i> | ◆ <i>haridrā</i> |
| ◆ <i>hareṇu</i> | ◆ <i>dāruharidrā</i> |
| ◆ <i>tālīśapatra</i> | ◆ <i>kṛṣṇa sārivā</i> |
| ◆ <i>mañjiṣṭhā</i> | ◆ <i>śveta sārivā</i> |
| ◆ <i>keśara</i> | ◆ <i>śālaparnī</i> |
| ◆ <i>utpala</i> | ◆ <i>prṣniparnī</i> |

All the ingredients are collected and processed
as per *snehapāka kalpanā*; this is '*Kalyāṇaka sarpi*'.

Phalaśruti

'*Kalyāṇaka sarpi* pacifies :

- | | |
|--|----------------------------------|
| • <i>viṣa</i> (poisoning) | • <i>śvāsa</i> (dyspnoea/asthma) |
| • <i>graha</i> (demonic seizures) | • <i>mandāgni</i> (dyspepsia) |
| • <i>apasmāra</i> (epilepsy) | • <i>jvara</i> (fever) |
| • <i>pāṇḍuroga</i> (pallor causing diseases/ anaemia) | • <i>kāsa</i> (cough) |
| • <i>garaviṣa</i> (slow acting/ polluting poison and swallowing poisons) | |

This is apt in case of *śoṣa* (wasting), *alpaśukra* (azoospermia) and *vandhyā* (female infertility).

(8) *Kākāṇḍādi yoga*

Reference

- CS.Ci. 23.53

Sūtra :

काकाण्डसुरसगवाक्षीपुनर्नवावायसीशिरीषफलैः ।
उद्बन्धविषजलमृते लेपौपधिनस्यपानानि ॥ CS.Ci. 23.53

Contents

- | | |
|------------------|-----------------------|
| ◆ <i>kākāṇḍa</i> | ◆ <i>punarnavā</i> |
| ◆ <i>surasa</i> | ◆ <i>vāyasī</i> |
| ◆ <i>gavākṣī</i> | ◆ <i>śirīṣa phala</i> |

All these are pounded and made into a *lepa* (paste) and administered as an *aupadhi* (applying the paste over incision made on the scalp); it is also used for *nasya* (errhines) and *pāna* (drinking)

Phalaśruti

- It is beneficial in patient appearing dead because of *udbandha* (hanging/ strangulation) or *jalamṛta* (drowning).

(9) *Kṣāragada*

Reference

- CS.Ci. 23.101-104

Sūtra :

तरुणपलाशक्षारं स्तुतं पचेच्चूर्णितैः सह समांशैः ।
लोहितमृद्गजनीद्वयशुक्लसुरसमञ्जरीमधुकैः ॥
लाक्षासैन्धवमांसीहरेणुहिङ्गुद्विसारिवाकुष्ठैः ।
सव्योषैर्बाह्लीकैर्दर्वीविलेपनं घट्टयेद्यावत् ॥
सर्वविषशोथगुल्मत्वग्दोषाशोभगन्दरप्लीहः ।
शोथापस्मारक्रिमिभूतस्वरभेदपाण्डुगदान् ॥

मज्जाग्नित्वं कारं योन्याद् नाशयेयुश्च पुंसाम् ।
गुटिकाशय्याशुक्ताः कोलसमाप्ताः समुपयुक्ताः ॥

CS.Ci. 23.101-104

Contents

- ♦ *kṣāra* (alkali) made from *taruṇa* (tender) *palāśa*
- ♦ *lohitaṃṛt* (*gairika*)
- ♦ *rajanī*
- ♦ *dāruharidrā*
- ♦ *mañjarī* (inflorescence) of *śukla surasā*
- ♦ *madhuka*
- ♦ *lākṣā* (lac)
- ♦ *saindhava* (rock salt)
- ♦ *māmsī*
- ♦ *hareṇu*
- ♦ *hiṅgu*
- ♦ *śveta sārivā*
- ♦ *kṛṣṇa sārivā*
- ♦ *kuṣṭha*
- ♦ *vyoṣa*
- ♦ *bāhlīka*

Kṣāra (alkali) made from *taruṇa* (tender) *palāśa* is added with equal quantities of *lohitaṃṛt* (*gairika*) etc.; this formulae is stirred while being cooked till the paste begins to stick to the spoon. The pills of the size of *kola* are made and dried in shade.

Phalaśruti

The recipe known as '*Kṣāragada*' is useful in pacifying (See Table No. 1)

(10) Gandhahastī agada

Reference

- CS.Ci. 23.70-76

Sūtra :

श्वेता वचाऽश्वगन्धा हिंत्वमृता कुष्ठमैन्धवे लशुनम् ।
सर्पपकपिथमध्यं दुग्दुककरञ्जबीजानि ॥
व्योषं शिरीषपुष्पं द्विरजन्वी वंशलोचनं च समम् ।
पिष्ट्वाऽजस्य मूत्रेण गोश्वपित्तेन सप्ताहम् ॥
व्यत्यासभावितोऽयं निहन्ति शिरसि स्थितं विषं क्षिप्रम् ।
सर्वज्वरभूतग्रहविमूचिकाजीर्णमूर्च्छ्रतीः ॥
उन्मादापस्मारी काचपटलनीलिकाशिरोदोषान् ।
शुष्काक्षिपाकपिल्लार्युं दामकण्डूतमोदोषान् ॥
क्षयदीर्बल्यमदात्ययपाण्डुगदांश्चाञ्जनात्तथा मोहान् ।
लेपाद्विषदिग्धक्षतलीढदष्टपीतविषघाती ॥
अशःस्वानद्धेषु च गुदलेपो योनिलेपनं स्त्रीणाम् ।
मूढे गर्भे दुष्टे ललाटलेपः प्रतिश्याये ॥
वृद्धी किटिमे कुष्ठे श्वित्रविचर्चिकादिषु लेपः ।
गज इव तरून् विषगदान्निहन्त्यगदगन्धहस्त्येषः ॥

CS.Ci. 23.70-76

Contents

- | | |
|-----------------------------------|---|
| ♦ <i>śvetā</i> (<i>kaṭabhī</i>) | <i>kapittha</i> |
| ♦ <i>vacā</i> | ♦ <i>ṭuṅṭuka</i> |
| ♦ <i>aśvagandhā</i> | ♦ <i>bīja</i> (seeds) of <i>karañja</i> |
| ♦ <i>hiṅgu</i> | ♦ <i>vyoṣa</i> |
| ♦ <i>amṛtā</i> | ♦ <i>puṣpa</i> (flowers) of <i>śirīṣa</i> |
| ♦ <i>kuṣṭha</i> | ♦ <i>rajanī</i> |
| ♦ <i>saindhava</i> | ♦ <i>dāruharidrā</i> |
| ♦ <i>laśuna</i> | ♦ <i>vaṃśalocana</i> |
| ♦ <i>sarṣapa</i> | |
| ♦ <i>madhya</i> (pulp) of | |

All these taken in equal quantity should be triturated with *ajā mūtra* (goat's urine), *go pitta* (cow's bile) and *aśva pitta* (horse's bile) alternatively for seven days.

Table No. 1

• <i>śoṭha</i> (oedema) caused by <i>sarvaviṣa</i> (all kinds of poisoning)	• <i>plihāroga</i> (splenomegaly)	• <i>svarabheda</i> (hoarseness of voice)
• <i>gulma</i> (phantom tumour)	• <i>śoṭha</i> (oedema)	• <i>pānduroga</i> (anaemia)
• <i>tvagdoṣa</i> (skin ailments)	• <i>apasmāra</i> (epilepsy)	• <i>mandāgnitva</i> (dyspepsia)
• <i>arśoroga</i> (haemorrhoids)	• <i>krimi</i> (intestinal worms)	• <i>kāsa</i> (cough)
• <i>bhagandāra</i> (fistula-in-ano)	• <i>bhūta</i> (demonic afflictions)	• <i>unmāda</i> (psychosis)

Phalaśruti

Its application as an *añjana* (collyrium) instantaneously pacifies *viṣa* (poison) of *śiraḥ* (head region).

This (collyrium) pacifies :

• <i>jvara</i> (fever)	• other diseases of eyes -
• <i>bhūtagraha</i> (demonic seizures)	• <i>śuṣkākṣipāka</i>
• <i>visūcikā</i> (choleric diarrhoea)	• <i>pilla</i>
• <i>ajīṛṇa</i> (indigestion)	• <i>arbuda</i>
• <i>mūrcchā</i> (fainting)	• <i>arma</i>
• <i>unmāda</i> (psychosis)	• <i>kaṇḍū</i>
• <i>apasmāra</i> (epilepsy)	• <i>tamodoṣa</i>
• disorders of eyes -	• <i>kṣaya</i> (wasting)
• <i>kāca</i>	• <i>daurbalya</i> (frailness)
• <i>paṭala</i>	• <i>madātyaya</i> (alcoholism)
• <i>nīlikā</i>	• <i>pāṇḍugada</i> (anaemia)
• <i>śirodoṣa</i> (disorders of head)	• <i>moha</i> (stupor)

- *Lepa* (external application) of this formulae pacifies *viṣadigdha kṣata* (ulcers due to poisons), oral poisoning and sting also.
- In case of inflamed *arśaḥ* (piles), *gudalepa* (application over anus) of this formulae is done; *yonilepana* (application over vagina) is done in *strī* (women) suffering from *mūḍha-garbha* (obstructed labour); in *duṣṭa pratiśyāya* (infected sinusitis), *lalāṭalepa* (application over forehead) is done.
- This formulae (on application) pacifies *vṛddhi* (hydrocoele), *kiṭima kuṣṭha* (psoriasis), *śvitra* (leucoderma), *vicarcikā* (eczema) etc.
- As a *gaja* (elephant) destroys a *taru* (tree) so is this *Gandhahastī agada* in destroying *viṣagada* (diseases due to poison).

(11) Candanādi yoga**Reference**

- CS.Ci. 23.191-192

Sūtra

चन्दनं तगरं कुष्ठं हरिद्रे द्वे त्वगेव च ॥
मनःशिला तमालश्च रसः कैशर एव च ॥
शार्दूलस्य नखश्चैव सुपिष्टं तण्डुलाम्बुना ॥
हन्ति सर्वविषाण्येव वज्रिवज्रमिवासुरान् ॥

CS.Ci. 23.191-192

Contents

- ♦ *candana*
- ♦ *tagara*
- ♦ *kuṣṭha*
- ♦ *haridrā*
- ♦ *dāruharidrā*
- ♦ *tvak*
- ♦ *manaḥśilā*
- ♦ *tamāla*
- ♦ juice of *keśara*
- ♦ *śārdūla nakha*
- or *vyāghranakha*

All the ingredients are triturated with *tanḍu-lāmbu* (rice water) and made into a paste.

Phalaśruti

This recipe destroys *viṣa* (poison) as *Vajri* (Lord Indra) using *vajra* (thunderbolt) destroys the *asura* (demons).

(12) Tārksya agada**Reference**

- SS.K. 5.65-68

Sūtra :

प्रपौण्डरीकं सुरदारु मुस्ता कालानुसार्या कटुरोहिणी च ॥
स्थौण्यकध्यामकगुगुलुनि पुन्नागतालीश सुवर्चिकाश्च ॥
कुटन्तैलासितसिन्धुवाराः शैलेयकुष्ठे तगरं प्रियंगुः ॥
रोधं जलं काञ्चनगैरिकं च समागधं चन्दनसैन्धवं च ॥
सूक्ष्माणिचूर्णानिसमानिकृत्वाशृंगेनिदध्यान्मधुसंयुतानि ॥
एषोऽगदस्ताक्षर्य इति प्रदिष्टो विषं निहन्यादपि तक्षकस्य ॥

SS.K. 5.65-68

Contents

- ♦ *prapaunḍa-rīka*
- ♦ *suradāru*
- ♦ *mustā*
- ♦ *kālānusāryā*
- ♦ *kaṭurohiṇī*
- ♦ *sthauneyaka*
- ♦ *dhyāmaka*
- ♦ *guggulu*
- ♦ *punnāga*
- ♦ *tālīśa*
- ♦ *suvarcikā*
- ♦ *kuṭannaṭa*
- ♦ *elā*
- ♦ *sita sinduvāra*
- ♦ *śaileya*
- ♦ *kuṣṭha*
- ♦ *tagara*
- ♦ *priyaṅgu*
- ♦ *rodhra*
- ♦ *jala*
- ♦ *kāñcana-gairika*
- ♦ *māgadhi*
- ♦ *raktacan-dana*
- ♦ *saindhava*

- All the drugs are mixed together and macerated with *madhu* (honey) and filled in a *śṛṅga* (hollow horn of cow) and preserved.

Phalaśruti

- This is '*Tārksya agada*' and it can pacify *viṣa* (venom) of *takṣaka* like venomous snakes.

(13) *Dāśāṅga agada*

Reference

- AS.Ut. 40.49

Sūtra

मांसीत्वक्पत्रसुरसमनोह्य शीतकुंकुमम् ।
निशा व्याघ्रनखं शुण्ठी दशांगोऽयं विषापहः ॥
ऊषातगण्डपिटकादिग्धविद्धविषापहः । AS.Ut. 40.49

Contents

- | | |
|-----------|----------------|
| ♦ māmsī | ♦ śīta |
| ♦ tvak | ♦ kunkuma |
| ♦ patr | ♦ niśā |
| ♦ surasā | ♦ vyāghranakha |
| ♦ manohrā | ♦ śuṅṭhī |

Equal quantity of all these ten ingredients makes 'Dāśāṅga agada'.

Phalaśruti

- Its local application destroys all kinds of *viṣa* (poisons), *utpāta* (bad omens), *ganḍa* (enlarged glands), *piṭakā* (eruptions) etc.

(14) *Dūṣiṣāri agada*

Reference

- SS.K. 2.50-52

Sūtra

दूषीविषार्तं सुखिन्नमूर्ध्वं चाधश्च शोधितम् ।
पाययेतागदं नित्यमिमं दूषीविषापहम् ॥
पिप्पल्यो ध्यामकं मांसी शावरः परिपेलवम् ।
सुवर्चिका ससूक्ष्मैला तोयं कनकगैरिकम् ॥
क्षौद्रयुक्तोऽगदो ह्येष दूषीविषमपोहति ।
नाम्ना दूषीविषारिस्तु न चान्यत्रापि वार्यते ॥
SS.K. 2.50-52

Contents

- | | |
|----------------------|-----------------|
| ♦ pippali | ♦ suvarcikā |
| ♦ dhyāmaka (kattṛṇa) | ♦ sūkṣmailā |
| ♦ māmsī | ♦ toyam |
| ♦ śābara | ♦ kanakagairika |
| ♦ paripelava | |

All the ingredients are mixed with *kṣaudra* (honey).

Phalaśruti

- This recipe pacifies *dūṣiṣa* (latent poison) and is known as 'Dūṣiṣāri agada'.

(15) *Nāgadantyaḍi ghrta*

Reference

- CS.Ci. 23.241-242

Sūtra :

नागदन्तीत्रिवृहन्तीदूषन्तीस्नुक्पयःफलैः ।
साधितं माहिषं सर्पिः सगोमूत्राढकं हितम् ॥
सर्पकीटविषातानां गरतानां च शान्तये ।

CS.Ci. 23.241-242

Contents

- | | |
|-------------|---------------|
| ♦ nāgadantī | ♦ dravantī |
| ♦ trivṛt | ♦ snuk payah |
| ♦ dantī | ♦ madanaphala |

Māhiṣa sarpi (buffalo ghee) is cooked with these six above mentioned drugs along with one *āḍhaka* of *gomūtra* (cow's urine).

Phalaśruti

- This is useful in *viṣa* (poisoning) caused by *sarpa* (snakes), *kīṭa* (insects) etc. and also in *garaviṣa* (artificial poisoning).

(16) *Pañcaśirīṣa agada*

Reference

- CS.Ci. 23.218

Sūtra

शिरीषफलमूलत्वक्पुष्पपत्रैः समैर्धृतैः ।
श्रेष्ठः पञ्चशिरीषोऽयं विषाणां प्रवरो वधे ॥

CS.Ci. 23.218

Contents

- *Phala* (fruits) of *śirīṣa*
- *Mūla* (roots) of *śirīṣa*
- *Tvak* (bark) of *śirīṣa*
- *Puṣpa* (flowers) of *śirīṣa*
- *Patra* (leaves) of *śirīṣa*

All these five (in equal quantities) are taken along with *ghṛta* (ghee).

This is known as *Pañcaśirīṣa agada* and this is best in pacifying all kinds of *viṣa* (poisons).

(17) *Bālasūrya agada*

Reference

- AS.Ut. 40.57

Sūtra

मनोह्रा रोचना चण्डा त्वगेलासितसर्षपैः ।
 स्पृक्काहिङ्गुलकाश्मीरकान्ताभिः कल्कतोऽगदः ।
 विषघ्नो बालसूर्योऽयं श्रीरक्षाविजयर्द्धिदः ॥

AS.Ut. 40.57

Contents

- | | |
|------------------|------------------|
| ◆ <i>manohvā</i> | ◆ <i>sarṣapa</i> |
| ◆ <i>rocanā</i> | ◆ <i>spṛkkā</i> |
| ◆ <i>caṇḍā</i> | ◆ <i>hiṅgula</i> |
| ◆ <i>tvak</i> | ◆ <i>kāśmīra</i> |
| ◆ <i>elā</i> | ◆ <i>kāntā</i> |
| ◆ <i>sitā</i> | |

All the ingredients are made into a paste and this is known as 'Bālasūrya agada'.

Phalaśruti

- ◆ This formulae destroys *viṣa* (poisons) and bequeaths with *śrī* (wealth), *rakṣā* (immunity), *vijaya* (success) and *vṛddhi* (prosperity).

(18) Mahā agada**Reference**

- ◆ SS.K. 5.61-63

Sūtra

त्रिवृद्विशल्ये मधुकं हरिद्रे रक्ता नरेन्द्रो लवणश्च वर्गः ॥
 कटुत्रिकं चैव सुचूर्णितानि शृंगे निदध्यान्मधुसंयुतानि ।
 एषोऽगदो हन्ति विषं प्रयुक्तः पानाञ्जनाभ्यञ्जन-
 नस्ययोगैः ॥ अवार्यवीर्यो विषवेगहन्ता महागदो नाम
 महाप्रभावः ।

SS.K. 5.61-63

Contents

- | | |
|----------------------------|-----------------------|
| ◆ <i>trivṛt</i> | ◆ <i>narendra</i> |
| ◆ <i>viśalyā</i> | (<i>āragvadha</i>) |
| ◆ <i>madhuka</i> | ◆ <i>lavāṇa varga</i> |
| ◆ <i>haridrā</i> | (group of salts) |
| ◆ <i>dāruharidrā</i> | ◆ <i>kaṭutrika</i> |
| ◆ <i>raktā (mañjiṣṭhā)</i> | |

All these should be powdered finely and mixed with *madhu* (honey) and preserved in *aśṛṅga* (horn).

Phalaśruti

- ◆ This *agada* pacifies all kinds of *viṣa* (poisons) when taken as *pāna* (drink), *añjana* (collyrium) and *nasya* (errhines).

- ◆ This *Mahā-agada* is *avārya vīrya* (alluring potency) and destroys *viṣavega* (impetuosity of poisons); this formulae is *maha-prabhāva* (endowed with excellent effect).

(19) Mahāgandhahasti agada**Reference**

- ◆ CS.Ci. 23.77-94

Sūtra

पत्रागुरुमुस्तैला निर्यासाः पञ्च चन्दनं स्पृक्का ।
 त्वङ्गुलदोत्पलबालकहरेणुकोशीरवन्यनखाः ॥
 सुरदारुकनककुङ्कुमध्यामककुष्ठप्रियंगवस्तगरम् ।
 पञ्चाङ्गानि शिरीषाद्वयोषालमनःशिलाजाज्यः ॥
 श्वेतकटभीकरञ्जौ रक्षोघ्नी सिन्धुवारिका रजनी ।
 सुरसाञ्जनगैरिकमञ्जिष्ठानिम्बनिर्यासाः ॥
 वंशत्वगश्चगन्धाहिङ्गुदधित्थाम्लवेतसं लाक्षा ।
 मधुमधुकसोमराजीवचारुहारोचनातगरम् ॥
 अगदोऽयं वैश्रवणायाख्यातस्त्र्यम्बकेण षष्ट्यङ्गः ।
 अप्रतिहतप्रभावः ख्यातो महागन्धहस्तीति ॥
 पित्तेन गवां पेष्यो गुटिकाः कार्यास्तु पुष्ययोगेन ।

CS.Ci. 23.77-82

Contents

- | | |
|---------------------|--------------------------|
| ◆ <i>patra</i> | ◆ <i>elā</i> |
| ◆ <i>aguru</i> | ◆ <i>pañca niryāsa</i> |
| ◆ <i>mustā</i> | ◆ <i>candana</i> |
| | ◆ <i>rāla</i> |
| | ◆ <i>guggulu</i> |
| | ◆ <i>ahiphena</i> |
| | ◆ <i>śilārasa</i> |
| | ◆ <i>lobāna</i> |
| ◆ <i>spṛkkā</i> | ◆ <i>tagara</i> |
| ◆ <i>tvak</i> | ◆ <i>phala (fruits)</i> |
| ◆ <i>nalada</i> | of <i>śirīṣa</i> |
| ◆ <i>utpala</i> | ◆ <i>mūla (roots)</i> |
| ◆ <i>bālaka</i> | of <i>śirīṣa</i> |
| ◆ <i>hareṇukā</i> | ◆ <i>vak (bark) of</i> |
| ◆ <i>uśīra</i> | <i>śirīṣa</i> |
| ◆ <i>vanyanakha</i> | ◆ <i>puṣpa (flowers)</i> |
| ◆ <i>suradāru</i> | of <i>śirīṣa</i> |
| ◆ <i>kanaka</i> | ◆ <i>patra (leaves)</i> |
| ◆ <i>kuṅkuma</i> | of <i>śirīṣa</i> |
| ◆ <i>dhyāmaka</i> | ◆ <i>śuṅṭhī</i> |
| ◆ <i>kuṣṭha</i> | ◆ <i>pippalī</i> |
| ◆ <i>priyaṅgu</i> | ◆ <i>marica</i> |

- ◆ haritāla
- ◆ manahśilā
- ◆ ajājī
- ◆ śvetā
- ◆ kaṭabhī
- ◆ karañja
- ◆ latākarañja
- ◆ rakṣoghñī
- ◆ sindhuvārikā
- ◆ rajanī
- ◆ surasā
- ◆ añjana
- ◆ gairika
- ◆ mañjiṣṭhā
- ◆ niryāsa (resin) of nimba
- ◆ vanīśa tvak
- ◆ aśvagandhā
- ◆ hiṅgu
- ◆ dadhittha
- ◆ amlavetasa
- ◆ lākṣā
- ◆ madhu
- ◆ madhuka
- ◆ somarājī
- ◆ vacā
- ◆ ruhā
- ◆ rocanā-tagara

This recipe, containing sixty ingredients, having *apratihata prabhāva* (infallible effect) was taught to *Vaiśravaṇa* by Lord *Tryambaka*.

During *puṣya nakṣatra*, these ingredients should be triturated with *gopitta* (cow's bile) and made into a *guṭikā* (pill).

Phalaśruti

पानाञ्जनप्रलेपैः प्रसाधयेत् सर्वकर्माणि ॥
 पिल्लं कण्डूं तिमिरं रात्र्यान्ध्यं काचमर्बुदं पटलम् ।
 हन्ति सततप्रयोगाद्भित्तमितपथ्याशिनां पुंसाम् ॥
 विषमज्वरानजीर्णान्दुः कण्डूं विसूचिकां पामाम् ।
 विषमूषिकलूतानां सर्वेषां पन्नगानां च ।
 आशु विषं नाशयति समूलजमथ कन्दजं सर्वम् ॥
 एतेन लिप्तगात्रः सर्पान् गृह्णाति भक्षयेच्च विषम् ।
 कालपरीतोऽपि नरो जीवति नित्यं निरातंकः ॥
 आनद्धे गुदलेपो योनौ लेपश्च मूढगर्भाणाम् ।
 मूर्च्छार्तिषु च ललाटे प्रलेपनमाहुः प्रधानतमम् ॥
 भेरीमृदंगपटहाञ्जत्राण्यमुना तथा ध्वजपताकाः ।
 लिप्त्वाऽहिविषनिरस्त्यै प्रध्वनयेद्दर्शयेन्मतिमान् ॥
 यत्र च सन्निहितोऽयं न तत्र बालग्रहा न रक्षांसि ।
 न च कार्मणवेताला वहन्ति नाथर्वणा मन्त्राः ॥
 सर्वग्रहा न तत्र प्रभवन्ति न चाग्निशस्त्रनृपचौराः ।
 लक्ष्मीश्च तत्र भजते यत्र महागन्धहस्त्यस्ति ॥
 पिष्यमाण इमं चात्र सिद्धं मन्त्रमुदीरयेत् ।
 'मम माता जया नाम जयो नामेति मे पिता ॥
 सोऽहं जयजयापुत्रो विजयोऽथ जयामि च ।
 नमः पुरुषसिंहाय विष्णवे विश्वकर्मणे ॥
 सनातनाय कृष्णाय भवाय विभवाय च ।
 तेजो वृषाकपेः साक्षात्तेजो ब्रह्मेन्द्रयोर्यमे ॥

यथाऽहं नाभिजानामि वासुदेवपराजयम् ।
 मातुश्च पाणिग्रहणं समुद्रस्य च शोषणम् ॥
 अनेन सत्यवाक्येन सिध्यतामगदो ह्ययम् ।
 हिलिमिलिसंस्पृष्टे रक्ष सर्वभेषजोत्तमे स्वाहा' ॥

CS.Ci. 23.82-94

This recipe can be used for-

- *pāna* (drinking)
- *añjana* (collyrium)
- *pralepa* (anointment).

When consumed regularly along with apt diet, it pacifies -

- ophthalmic disorders such as
 - ◆ *pilla*
 - ◆ *kaṇḍū*
 - ◆ *timira*
 - ◆ *rātryandha*
 - ◆ *kāca*
 - ◆ *arbuda*
 - ◆ *paṭala*

It pacifies

• <i>viṣama jvara</i> (malarial fever)	• <i>viśucikā</i> (choleric diarrhoea)
• <i>ajirṇa</i> (indigestion)	• <i>pāmā</i> (scabies)
• <i>dadru</i> (eczema)	• <i>viṣa</i> (toxins) of <i>mūṣika</i> (rats), <i>lūtā</i> (spiders) and <i>pannaga</i> (snakes)
• <i>kaṇḍū</i> (itching)	• <i>viṣa</i> (toxins) of <i>mūla</i> (roots) and <i>kanda</i> (tubers)

A person smeared with paste of this recipe can catch a (poisonous) *sarpa* without any fear and can swallow its *viṣa* (venom); this recipe helps patient staring at eminent death regain life and live a span of life free from any *ātanka* (ailment).

In *ānaddha* (constipation/ intestinal obstruction) its *gudalepa* (anal anointing) is advised; in *mūḍhagarbha* (obstructed labour) its anointing is done in *yoni* (vaginal) region; and in *mūrccā* (fainting), it is applied over the *lalāṭa* (forehead).

For pacifying poisoning, it is applied over the instruments such as *bherī*, *mṛdamga* and *paṭaha* and played; it is also applied over *chatra* (umbrella), *dhvajapatākā* (flags) and exhibited.

Its mere presence does away with -

- ◆ *bālagraha*
- ◆ *rakṣas*
- ◆ *kārmaṇa*
- ◆ *vetāla*
- ◆ *ātharvaṇa mantra*

The person with this recipe cannot be harmfully affected by any of the *grahas* (planets), *agni* (fire), *śastra* (weapons), *nṛpa* (with malevolent intentions) and *caura* (thieves).

Place of storing *Mahāgandhahastī agada* grows into abode of Goddess *Lakṣmī* (Goddess of wealth).

Following *mantra* (incantation) is recited while triturating the recipe:

*mama mātā jayā nāma jayo nāmeti me pitā//
so'ham jayajayāputro vijayo'tha jayāmi ca/
namah puruṣasimhāya viṣṇave viśvakar-maṇe//
sanātanāya kṛṣṇāya bhavāya vibhavāya ca/
tejo vṛṣākapeḥ sāksāttejo brahmendra-yoryame//
yathā'ham nābhijānāmi vāsudevaparājayam/
mātuśca pāṇigrahaṇām samudrasya ca śoṣaṇam//
anena satyavākyena sidhyatāmagado hyayam/
hilimilisaṁsprṣṭe rakṣa sarvabheṣajottame svāhā//*

(20) *Mahāsugandhi agada*

Reference

- SS.K. 6.14-27

Sūtra :

चन्दनागुरुणी कुष्ठं तगरं तिलपर्णिकम् ।
प्रपौण्डरीकं नलदं सरलं देवदारु च ॥
भद्रश्रियं यवफलां भार्गी नीलीं सुगन्धिकाम् ।
कालेयकं पद्मकं च मधुकं नागरं जटाम् ॥
पुन्नागैलैलवालूनि गैरिकं ध्यामकं बलाम् ।
तोयं सर्जरसं मांसीं शतपुष्पां हरेणुकाम् ॥
तालीशपत्रं क्षुद्रैलां प्रियंगुं सकुटन्टम् ।
शिलापुष्पं सशैलेयं पत्रं कालानुसारिवाम् ॥
कटुत्रिकं शीतशिवं काश्मर्यं कटुरोहिणीम् ।
सोमराजीमतिविषां पृथ्विकामिन्द्रवारुणीम् ॥
उशीरं वरुणं मुस्तं कुस्तुम्बुरु नखं तथा ।
श्वेते हरिद्रे स्थौणेयं लाक्षां च लवणानि च ॥
कुमुदोत्पलपद्मानि पुष्पं चापि तथाऽर्कजम् ।
चम्पकाशोकसुमनस्तिवकप्रसवानि च ॥
पाटलीशाल्मलीशैलुशिरीषाणां तथैव च ।
कुसुमं तृणमूल्याश्च सुरभीसिन्धुवारजम् ॥
धवाश्वकर्णपार्थानां पुष्पाणि तिनिशस्य च ।
गुग्गुलुं कुंकुमं बिम्बीं सर्पाक्षीं गन्धनाकुलीम् ॥
एतत् संभृत्य संभारं सूक्ष्मचूर्णानि कारयेत् ।
गोपित्तमधुसर्पिर्भिर्युक्तं शृंगे निधापयेत् ॥ SS.K. 6.14-23

Contents

- ◆ *candana*
- ◆ *aguru*
- ◆ *kuṣṭha*
- ◆ *tagara*
- ◆ *tilaparnī*
- ◆ *prapaunḍarika*
- ◆ *nalada*
- ◆ *sarala*
- ◆ *devadāru*
- ◆ *bhadraśriya*
- ◆ *yavaphalā*
- ◆ *bhārgī*
- ◆ *nīlī*
- ◆ *sugandhikā*
- ◆ *kāleyaka*
- ◆ *padmaka*
- ◆ *madhuka*
- ◆ *nāgara*
- ◆ *jaṭāmānsī*
- ◆ *punnāga*
- ◆ *elā*
- ◆ *elavāluka*
- ◆ *gairika* (ochre)
- ◆ *dhyāmaka*
- ◆ *balā*
- ◆ *toya*
- ◆ *sarjarasa*
- ◆ *māmsī*
- ◆ *śatapuspā*
- ◆ *hareṇukā*
- ◆ *tālīśapatra*
- ◆ *kṣudrailā*
- ◆ *priyaṅgu*
- ◆ *kuṭannaṭa*
- ◆ *śilā* (*manahśilā*)
- ◆ *puspa* (*puspakāsīsa*)
- ◆ *śaileya*
- ◆ *patra*
- ◆ *kālānusārivā*
- ◆ *kaṭutrika* (*trikaṭu*)
- ◆ *śītaśiva*
- ◆ *kāśmarya*
- ◆ *kaṭurohiṇī*
- ◆ *somarājī*
- ◆ *ativiśā*
- ◆ *prthvikā*
- ◆ *indravāruṇī*
- ◆ *uśira*
- ◆ *varuṇa*
- ◆ *musta*
- ◆ *kustumburu*
- ◆ *nakha*
- ◆ *śvetā*
- ◆ *haridrā*
- ◆ *dāruharidrā*
- ◆ *sthaṇṇeya*
- ◆ *lākṣā* (lac)
- ◆ five kinds of *lavaṇa*
- ◆ *kumuda*
- ◆ *utpala*
- ◆ *padma*
- ◆ *arkapuspa*
- ◆ *campaka puspa*
- ◆ *sumana* (flower of *aśoka*)
- ◆ *prasava* (flower and fruit) of *tilvaka*
- ◆ *pāṭalī*
- ◆ *śālmālī*
- ◆ *śelu*
- ◆ *śirīṣa*
- ◆ *dhava*
- ◆ *puspa* (flower) of *aśvakarṇa*
- ◆ *puspa* (flower) of *pārtha*
- ◆ *puspa* (flower) of *tiniśa*
- ◆ *guggulu*
- ◆ *kuṅkuma*
- ◆ *bimbī*
- ◆ *sarpākṣī*
- ◆ *gandhanākulī*

- These ingredients are collected and powdered finely and mixed with *madhu* (honey), *sarpi* (ghee) and *gopitta* (cow's bile); these are stored in a *gośṛṅga* (cow's horn).

भग्नस्कन्धं विवृताक्षं मृत्योर्दष्टान्तरं गतम् ।
 अनेनागदमुख्येन मनुष्यं पुनराहरेत् ॥
 एषोऽग्निकल्पं दुर्वारं क्रुद्धस्यामिततेजसः ।
 विषं नागपतेर्हन्यात् प्रसभं वासुकेरपि ॥
 महासुगन्धिनामाऽयं पञ्चाशीत्यंगसंयुतः ।
 राजाऽगदानां सर्वेषां राज्ञो हस्ते भवेत् सदा ॥
 स्नातानुलिप्तस्तु नृपो भवेत् सर्वजनप्रियः ।
 भ्राजिष्णुतां च लभते शत्रुमध्यगतोऽपि सन् ॥

SS.K. 6.24-27

- This *agada* (anti-poisonous recipe) brings back person having *bhagnas-kandha* (drooping shoulders) and *vivrṭtākṣa* (fixed eyes) from *daṁṣṭrā* (bite/jaws) of *mṛtyu* (death).
- This can avert forcefully the *agnikalpam* (fire like) and *durvāram* (difficult to abate) poison of even raged, most powerful *vāsuki*, the *nāgapati* (king of serpents).
- This named *Mahāsugandhi* is *rājā* (king) of all *agadas* (anti-poisonous recipes) and *snāna* (bathing) with this *nṛpa* (king) becomes *sarvajanapriya* (likened by all) and acquires *bhrājiṣṇutā* (brilliance) even being in the midst of *śatrus* (enemies/foes).

(21) *Māmsyādi yoga*

Reference

- CS.Ci. 23.190-191

Sūtra

मांसीकुंकुमपत्रत्वग्रजनीनतचन्दनैः ।
 मनःशिलाव्याघ्रनखसुरसैरम्बुपेषितैः ॥
 पाननस्याञ्जनालेपाः सर्वशोथविषापहाः ।

CS.Ci. 23.190-191

Contents

- | | |
|------------------|-----------------------|
| ◆ <i>māmsī</i> | ◆ <i>nata</i> |
| ◆ <i>kuṅkuma</i> | ◆ <i>candana</i> |
| ◆ <i>patra</i> | ◆ <i>manaḥśilā</i> |
| ◆ <i>tvak</i> | ◆ <i>vyāghranakha</i> |
| ◆ <i>rajanī</i> | ◆ <i>surasā</i> |

All the ingredients are made into a paste by triturating with *ambu* (water).

This recipe is used for

- *pāna* (drinking)
- *nasya* (errhines)
- *añjana* (collyrium)
- *lepa* (anointment)

Phalaśruti

- This *Māmsyādi yoga* can pacify all kinds of *śoṭha* (oedema) and *viṣa* (poisons).

(22) *Mṛtasañjivana agada*

Reference

- CS.Ci. 23.54-60

Sūtra

स्पृक्काप्लवस्थौणोयकांक्षीशैलेयरोचनातगरम् ।
 ध्यामककुंकुममांसीसुरसाग्रैलालकुष्ठघ्नम् ॥
 बृहती शिरीषपुष्पं श्रीवेष्टकपद्मचारटिविशालाः ।
 सुरदारुपद्मकेशरसावरकमनःशिलाकौन्त्यः ॥
 जात्यर्कपुष्परसरजनीद्वयहिङ्गुपिप्पलीलाक्षाः ।
 जलमुद्गपणिचन्दनमधुकमदनसिन्धुवाराश्च ॥
 शम्पाकलोध्रमयूरकगन्धफलानाकुलीविडंगाश्च ।
 पुष्ये संहृत्य समं पिष्ट्वा गुटिका विधेयाः स्युः ॥

CS.Ci. 23.54-67

Contents

- | | |
|--|--|
| ◆ <i>sprkkā</i> | ◆ <i>padmakeśara</i> |
| ◆ <i>plava</i> | ◆ <i>sāvaraka</i> (kind of lodhra) |
| ◆ <i>sthañeyaka</i> | ◆ <i>manaḥśilā</i> |
| ◆ <i>kāmkṣī</i> | ◆ <i>kauntī</i> (<i>reṇukā</i>) |
| ◆ <i>śaileya</i> | ◆ <i>rasa</i> (juice) of <i>puṣpa</i> (flowers) of <i>jātī</i> and <i>arka</i> |
| ◆ <i>rocanā</i> | ◆ <i>rajanī</i> |
| ◆ <i>tagara</i> | ◆ <i>dāruharidrā</i> |
| ◆ <i>dhyāmaka</i> | ◆ <i>hiṅgu</i> |
| ◆ <i>kuṅkuma</i> | ◆ <i>pippalī</i> |
| ◆ <i>māmsī</i> | ◆ <i>lākṣā</i> (lac) |
| ◆ <i>agra</i> (inflorescence) of <i>surasā</i> | ◆ <i>jala</i> |
| ◆ <i>elā</i> | ◆ <i>mudgaparnī</i> |
| ◆ <i>āla</i> (<i>haritāla</i>) | ◆ <i>candana</i> |
| ◆ <i>kuṣṭhaghna</i> (<i>khadira</i>) | ◆ <i>madhuka</i> |
| ◆ <i>bṛhatī</i> | ◆ <i>madana</i> |
| ◆ <i>śirīṣapuṣpa</i> | ◆ <i>sindhuvāra</i> |
| ◆ <i>śrīveṣṭaka</i> | ◆ <i>śampāka</i> |
| ◆ <i>padmacāraṭi</i> | ◆ <i>lodhra</i> |
| ◆ <i>viśālā</i> | |
| ◆ <i>suradāru</i> | |

- ◆ *mayūraka* (priyaṅgu)
- ◆ *(apāmārga)* ◆ *nākulī* (rāsnā)
- ◆ *gandhaphalā* ◆ *viḍaṅga*

All the ingredients are collected in *puṣya nakṣatra* and powdered and triturated, made into a paste, and pills are made out of this paste.

Phalaśruti

सर्वविषघ्नो जयकृदद्विषमृतसंजीवनो ज्वरनिहन्ता ।
घ्रेयविलेपनधारणधूमग्रहणैर्गृहस्थश्च ॥
भूतविषजन्तवलक्ष्मीकार्मणमन्त्राग्न्यशन्यरीन् हन्यात् ।
दुःस्वप्नस्त्रीदोषानकालमरणाम्बुचौरभयम् ॥
धनधान्यकार्यसिद्धिः श्रीपुष्ट्यायुर्विवर्धनो धन्यः ।
मृतसंजीवन एष प्रागमृताद्ब्रह्मणा विहितः ॥

CS.Ci. 23.58-60

This recipe cures all kinds of *viṣas* (poisons), is *jayakṛt* (assures success) and helps *sanjīvana* (revival) of *viṣamṛt* (apparently dead due to poisoning) and pacifies *jvara* (fever).

It is used as :

- *ghreya* (snuff/ inhalation)
- *vilepa* (external anointing)
- *dhāraṇa* (amulet/ holding)
- *dhūmagrahaṇa* (smoked/ fumigation)
- *grhastha* (placing in the house).

By these, it abates the effect of

- *bhūta* (evil spirits)
- *viṣa* (poison)
- *jantu* (germs)
- *alakṣmī* (inauspiciousness)
- *kārmaṇa* (black magics)
- *mantra* (harmful incantations)
- *agni* (fire)
- *aśani* (thunder bolts)
- *arī* (enemies/ foes).

It counteracts *duḥsvapna* (ill effects of nightmares), *strīdoṣa* (gynaecological pathologies), *akāla-maraṇa* (untimely death), *ambu-bhaya* (hydrophobia) and *caura-bhaya* (fear of theft).

It endows a person with :

- *dhana* (wealth)
- *dhānya* (groceries)
- *kāryasiddhi* (professional success)

- *śrī* (auspiciousness)
- *puṣṭi* (nourishment)
- *āyu* (lifespan)

This recipe is known as *Mṛtasanjīvana* and Lord *Brahmā* has propounded this prior to *amṛta* (elixir).

(23) *Vaiśatvagādi agada*

Reference

- SS.K. 5.78-80

Sūtra

वंशत्वगार्दाऽऽमलकं कपित्थं कटुत्रिकं हैमवती सकुष्ठा ॥
करञ्जबीजं तगरं शिरीषपुष्पं च गोपित्तयुतं निहन्ति ।
विषाणि लूतोन्दुरपन्नगानां कैटं च लेपाञ्जन नस्यपानैः ॥
पुरीषमूत्रानिलगर्भसंगानिहन्ति वर्त्यञ्जननाभिलेपैः ।
काचार्मकोथान् पटलांश्च घोरान् पुष्पं च हन्त्यञ्जन-
नस्ययोगैः ॥

SS.K. 5.78-80

Contents

- ◆ *ārdra tvak* (fresh bark) of *vaiśa*
- ◆ *haimavati*
- ◆ *āmālaka*
- ◆ *kuṣṭha*
- ◆ *kapittha*
- ◆ *kara-jabīja*
- ◆ *kaṭutrika*
- ◆ *tagara*
- ◆ *śirīṣapuṣpa*

All these are mixed together with *gopitta* (cow's bile).

Phalaśruti

- This recipe pacifies *viṣa* (poison) of *lūtā* (spider), *undura* (rat), *pannaga* (snakes) and *kīṭa* (insects).

It is used as

- *lepa* (anointment)
- *añjana* (collyrium)
- *nasya* (errhines)
- *pāna* (drinks)

By applying as *varti* (suppository), *añjana* (collyrium) and *nābhilepa* (paste near navel region), it pacifies *saṅga* (obstruction) to passage of *purīṣa* (faeces), *mūtra* (urine), *anila* (flatus) and *garbha* (foetus).

It destroys *kāca* (cataract), *arma* (pterygium), *kotha* (sloughening), severe diseases afflicting the *paṭala* and *puṣpa* (corneal opacity) by applying as *añjana* (collyrium) and *nasya* (errhines).

Reference

- AS.Ut. 40.49

Sūtra

गजपिप्पलिकासीसक्षारयष्टीमयूरकम् ।
रक्ता नतं वचा दन्ती शिवः शिवकृतोऽगदः ॥

AS.Ut. 40.49

Contents

- | | |
|----------------------|----------------|
| ◆ <i>gajapippalī</i> | ◆ <i>raktā</i> |
| ◆ <i>kāsīsa</i> | ◆ <i>nata</i> |
| ◆ <i>kṣāra</i> | ◆ <i>vacā</i> |
| ◆ <i>yaṣṭī</i> | ◆ <i>dantī</i> |
| ◆ <i>mayūra</i> | |

All the ingredients are collected and powdered; this is known as 'Śiva agada'.

(25) Sañjivana agada

Reference

- SS.K. 5.73-75

Sūtra

लाक्षा हरेणुर्नलदं प्रियंगुः शिग्रुद्वयं यष्टिकपृथ्विकाश्च ॥
चूर्णीकृतोऽयं रजनीविमिश्रो सर्पिर्मधुभ्यां सहितो निधेयः ।
शृंगे गवां पूर्ववदापिधानस्ततः प्रयोज्योऽञ्जननस्यपानैः ॥
संजीवनो नाम गतासुकल्पानेषोऽगदो जीवयतीह मत्यान् ।

SS.K. 5.73-75

Contents

- | | |
|-------------------|----------------------|
| ◆ <i>lākṣā</i> | ◆ <i>śigru dvaya</i> |
| ◆ <i>hareṇu</i> | ◆ <i>yaṣṭimadhu</i> |
| ◆ <i>nalada</i> | ◆ <i>prthvīkā</i> |
| ◆ <i>priyaṅgu</i> | ◆ <i>rajanī</i> |

All the ingredients are powdered and mixed with *sarpi* (ghee) and *madhu* (honey) and preserved in a *gośṛṅga* (cow's horn).

This recipe is used for :

- *añjana* (collyrium)
- *nasya* (errhines)
- *pāna* (drink).

Phalaśruti

This 'Sañjivana agada' revives consciousness in moribund person.

(26) Sugandhākhyā agada

Reference

- AS.Ut. 47.59-64

Sūtra

श्रीवेष्टकमनोह्वालं ससर्जरसवालकम् ।
कर्पाशं नागपुष्पस्य प्रकुञ्चं त्रुटिं विंशकम् ॥
हरेणवः चतुःषष्टिः कुटन्नटचतुष्टयम् ।
शताह्वां षोडशैतानि पुष्ये सम्भृत्य पेषयेत् ॥
आश्लेषासु गवां मध्ये शस्त्रमन्त्राभिरक्षितम् ।
कुमार्यां स्नातया तत्र मन्त्रोऽयं विष्णुनिर्मितः ।
माता मे विजया नाम जयो नाम पिता मम ।
अजय्यस्य च पुत्रोऽसौ जये च विजयामि च ॥
सुगन्धाख्योऽयमगदो AS.Ut. 47.59-63

Contents

- *śrīveṣṭaka* - one *karṣa*
- *manohvā* - one *karṣa*
- *āla* (*haratāla*)- one *karṣa*
- *sarjarasa* - one *karṣa*
- *vālaka* - one *karṣa*
- *nāgapuṣpa* - one *praku-ca*
- *truṭi* - twenty *pala*
- *hareṇu* - sixty four *pala*
- *kuṭannaṭa* - four *pala*
- *śatāhvā* - sixteen *pala*

All these are collected, in prescribed quantity, during *puṣya nakṣatra* and macerated into a paste during *āśleṣā nakṣatra*; maceration is carried out by a *snāta kumārī* (bathed virgin) sitting amidst cows and protected by *śastra* (weapons) and *mantra* (incantations); she must be chanting the following -

*mātā me vijayā nāma jayo nāma pitā mama/
ajayyasya ca putro'sau jaye ca vijayāmi ca//*

Phalaśruti

नित्यं देहविलेपनात् ।
अभंगकरणो युद्धे विवादे च जयावहः ॥
अनेन लेपिताश्छत्रदुन्दुभिध्वजतोरणाः ।
दृष्टस्पृष्टश्रुता घ्नन्ति विषं स्थावरजंगमम् ।
भूतबालग्रहोन्मादान् गेहस्थोऽपि निवारयेत् ॥

AS.Ut. 47.63-64

This is 'Sugandhākhyā agada' and by its daily *dehavilepana* (anointing of whole body) one attains *abhaṅgakarāṇa* (unbiased success) in *yuddha* (war) and *vivāda* (disputes) and it makes *jayāvahaḥ* (victorious); smearing of this over *chatra* (umbrella), *dundubhi* (kettledrum), *dhvaja*

(flag) and *torāṇa* (festoons) and by their *darśana* (sight), *sparśana* (touch) and *śravaṇa* (sound) all kinds of *sthāvara* (inanimate) and *jaṅgama* (animate) *viṣas* (poisons) are eradicated/pacified. It shirks all kinds of *bhūta* (evil spirits) and *bālagrahas* (evil spirits targeting children) and even drives them out of abode; it pacifies *unmāda* (psychosis).

(27) Surasādi agada

Reference

- CS.Ci. 23.52

Sūtra

गोपित्तयुतेर्गुटिकाः सुरसाग्रन्थिद्विरजनीमधुककुष्ठैः ।
शस्ताऽमृतेन तुल्या शिरीषपुष्पाकाकाण्डकरसैर्वा ॥

CS.Ci. 23.52

Contents

- ♦ *surasā*
- ♦ *granthi*
- ♦ *haridrā*
- ♦ *āruharidrā*
- ♦ *madhuka*
- ♦ *kuṣṭha*

These ingredients are mixed with *gopitta* (cow's bile) and made into a pill. This is useful like an *amṛta* (elixir) for moribund person.

Alternatively, this pill may be prepared by mixing *surasā* and other drugs with juices of *śirīṣapuṣpa* and *kākāṇḍaka*.

(28) Sūryodaya agada

Reference

- AS.Ut. 40.48

Sūtra

श्रीवेष्टकं हरिद्रे द्वे कोविदारं मनशिशलाम् ।
पिप्पलीं पाटलीं पद्मां श्वेताञ्च गिरिकर्णिकाम् ॥
मञ्जिष्ठां बृहतीं वक्रं यष्टीं मरिचकेसरम् ।
फलनीं किण्ठीं चेति गवां पित्तेन भावयेत् ।
सूर्योदयो हन्ति विषं तमः सूर्योदयो यथा ॥ AS.Ut. 40.48

Contents

- ♦ *śrīveṣṭaka*
- ♦ *haridrā*
- ♦ *dāruharidrā*
- ♦ *koviadāra*
- ♦ *manaḥśilā*
- ♦ *pippalī*
- ♦ *pāṭalī*
- ♦ *padmā*
- ♦ *śvetā*
- ♦ *girikarṇikā*
- ♦ *mañjiṣṭhā*
- ♦ *brhatī*

- ♦ *vakra*
- ♦ *yaṣṭimadhu*
- ♦ *marica*
- ♦ *keśara*

♦ *nāgakeśara*

♦ *phalinī*

♦ *kiṇihū* (*apāmārga*)

These drugs are macerated with *gopitta* (cow's bile) and used.

This is *Sūryodaya agada*.

Phalaśruti

- As rising of *Sūrya* wades off the *tamaḥ* (darkness) so does this formulation for *viṣa* (poison).

(29) Hiṅgvādi yoga & Kapitthādi yoga

Reference

- CS.Ci. 23.96

Sūtra

हिङ्गु च कृष्णायुक्तं कपित्थरसयुक्तमग्न्यलवणं च ।
समधुसितौ पातव्यौ ज्वरहिककाश्वासकासघ्नौ ॥

CS.Ci. 23.96

Intake of *hiṅgu* and *kṛṣṇā* or *kapittha svarasa* and *saindhava* along with *madhu* (honey) and *sitā* (sugar) cure *jvara* (fever), *hikkā* (hiccough), *śvāsa* (dyspnoea) and *kāsa* (cough).

Important formulation mentioned in *Bhaiṣajyaratnāvalī*

(1) Kūlikādi vaṭī

Sūtra :

कूलिकः सप्तपर्णश्च कुष्ठं तोलकसम्मितम् ।

माषमानं तथा दारु मर्दयेदर्कवारिणा ॥

सर्षपाभां वटीं कृत्वा योजयेत्पयसा सह । B.R. 72.49-50

Contents

- ♦ *kūlika*
- ♦ *saptaparṇa*
- ♦ *kuṣṭha*
- ♦ *somalaviṣa* (arsenic oxide)

All the four ingredients are powdered and macerated with *arkadugdha* (latex of *Calotropis*); *sarṣapābha vaṭī* (mustard sized pills) are made and dried in shade and preserved in glass jars.

Dosage

- 1 tab

Anupāna

- *payah* (milk)

अपि तक्षकदष्टञ्च मृतकल्पं हतस्वरम् ॥
पुनः सञ्जीवयेदाशु सर्वक्ष्वेडनाशिनी ।
कूलिकादिर्वटी हन्ति ज्वरांश्च विषमांस्तथा ।

This recipe abates *daṣṭa* (bite) of *takṣaka* due to which the person has become *hatasvara* (speechless); it is quick *sañjīvana* (life reviving); this also pacifies *viṣamajvara* (malarial fever).
B.R. 72.50-51

(2) *Bhīmarudra rasa* - 1

Sūtra :

सूतराजस्य तोलैकं गन्धकस्य तथैव च ।
अभ्रात् कर्षं ततो देयं तोलैकं कान्तलौहकम् ॥
परोक्तेनौषधेनैव भावयेच्च पृथक् पृथक् ।
विशालाबृहतीब्राह्मी सौगन्धिकमुदाडिमैः ॥
मर्कट्याश्चात्मगुप्तायाः स्वरसेन पृथक् पृथक् ।
एकरक्तिकमानेन वटिकां कारयेद् भिषक् ॥
वटीमेकां भक्षयित्वा पिबेच्छ्रीतजलन्ततः ।
भीमरुद्रो रसो नाम चासाध्यमपि साधयेत् ।
कुक्कुरस्य शृगालस्य विषं हन्ति सुदुस्तरम् ॥

B.R. 72.52-55

Contents

- *sūtarāja* (*śuddha pārada*)
- *śuddha gandhaka*
- *abhraka bhasma*
- *kāntalauha bhasma*

Bhāvanā dravya

- *viśālā svarasa*
- *br̥hatī svarasa*
- *brāhmī svarasa*
- *saugandhika svarasa*
- *dāḍīma svarasa*
- *markaṭī svarasa*
- *ātmaguptā svarasa*

First four ingredients are powdered together and followed by *bhāvanā* (trituration) of each of seven *svarasas* (juices); this is then rolled into pills.

Anupāna

- *śītala jala* (cold water)

Phalaśruti

This recipe can pacify *kukkura viṣa* (rabies) and *śṛgāla viṣa*.

(3) *Bhīmarudra rasa* - 2

Sūtra :

मनःशिलालमरिचौर्दारुणा दरदेन च ।
अपामार्गस्य हेम्नश्च हयमारशिरीषयोः ॥
मूलै रुद्राक्षतोयेन विष्णुक्रान्ताऽप्युना ततः ।
शतथा भावितैः कुर्याद् वटिका मुद्गसम्पिताः ॥

B.R. 72.56-57

Contents

- *manaḥśilā*
- *āla* (*haratāla*)
- *marica*
- *śuddha saṅkhiyā*
- *śuddha hiṅgula*
- *apāmārga mūla cūrṇa*
- *hemna* (*dhattūramūla*) *cūrṇa*
- *hayamāra mūla cūrṇa*
- *śirīṣa mūlatvak cūrṇa*

Bhāvanā dravya

- *toya* (*kaṣāya*) of *rudrākṣa*
- *viṣṇukrāntā kaṣāya*

All the ingredients (i.e. *manaḥśilā* till *śirīṣa*) are powdered and triturated with *toya* (*kaṣāya*) of *rudrākṣa* fifty times and also *viṣṇukrāntā kaṣāya* fifty times; then *mudga* (green gram) sized *vaṭikās* are made and preserved.

Phalaśruti

व्यालदष्टं पीतविषं निरिन्द्रियमचेतनम् ।

पुनः सञ्जीवयेदेष भीमरुद्राभिधान्द्रो रसः ॥ B.R. 72.58

This formulae is useful in *vyāladaṣṭa*, *pītaṣa*, and when due to poison patient is *nirindriya* (without senses) and *acetana* (unconscious); this formulae is *sañjīvana* (reviving) for the patient.

(4) *Viṣavajrapāta rasa*

Sūtra :

निशां सटंगञ्च सजातिकोषं तुत्थं समांशं कुरु देवदाल्याः ।
रसेन पिष्ट्वा विषवज्रपातो रसो भवेत् सर्वविषापहन्ता ॥
निष्कोऽस्य सञ्जीवयति प्रयुक्तो नृमूत्रयोगेन च
कालदष्टम् । जटाविषेणाकुलितं तथाऽन्यैर्विषैर्नरं चाशु
तथाऽऽतुरं च ॥

B.R. 72.59-60

Contents

- ◆ *niśā*
- ◆ *haridrā*
- ◆ *jātikōṣa*
- ◆ *śuddha ṭaṅgaṇa*
- ◆ *tuttha*

Bhāvanā dravya

- devadālī svarasa

All the ingredients are powdered and triturated with *devadālī svarasa* for one day; then pills are made and preserved in glass jars.

Anupāna

- *nṛmūtra* (human urine)

Phalaśruti

It revives health in person afflicted with *kālarūpī sarpadaṣṭa* (fatal snake bite), *mūla viṣa* (root poisons) and *kanda viṣa* (tuber poisons).

(5) Taṇḍuliya Ghr̥ta**Sūtra :**

तण्डुलीयकमूलेन गृहधूमेन चौकतः ।
क्षीरेण च घृतं सिद्धं समस्तविषरोगनुत् ॥ B.R. 72.61

Contents

- *taṇḍuliya svarasa*
- *goghṛta* (cow's ghee)
- *godugdha* (cow's milk)

Kalka dravya

- *taṇḍuliyaka mūla*
- *gṛhadhūma*

All the ingredients are collected and processed as per *snehapāka vidhi* and preserved.

Phalaśruti

This medicated *ghṛta* pacifies all kinds of *viṣaroga* (diseases/complications occurring due to poisons).

(6) Mr̥tyupāścchedī ghr̥ta**Sūtra :**

अभयां रोचनां कुष्ठमर्कपत्रं तथोत्पलम् ।
नलवेतसमूलानि गरलं सुरसां तथा ॥
सकलिंगा समञ्जिष्ठामनन्ताञ्च शतावरीम् ।
शृंगाटकं समंगाञ्च पद्मकेशरमित्यपि ॥
कल्कीकृत्य पचेत्सर्पिः पयो दद्याच्चतुर्गुणम् ।
सम्यक् पक्वेऽवतीर्णे च शीते मधु विनिक्षिपेत् ॥
सर्पिस्तुल्यं भिषक् क्षौद्रं कृतरक्षं निधापयेत् ॥

B.R. 72.62-65

Contents

- *Kalka dravya*

- ♦ *abhayā*
- ♦ *rocanā*
- ♦ *kuṣṭha*
- ♦ *arkapatra*
- ♦ *utpala*
- ♦ *nala*
- ♦ *mañjiṣṭhā*
- ♦ *anantā*
- ♦ *śatāvarī*
- ♦ *śṛṅgāṭaka*
- ♦ *samaṅgā*
- ♦ *padmakeśara*
- ♦ *vetasamūla*
- ♦ *garala (vatsanābha)*
- ♦ *surasā (tulasī)*
- ♦ *kaliṅga (indrayava)*
- *goghṛta* (cow's ghee)
- *godugdha* (cow's milk)
- *madhu* (honey)
- *jala* (water)

All the contents should be processed in accordance with *snehapāka vidhi* and stored in a safe jar.

Phalaśruti

विषाणि हन्ति दुर्गाणि गरदोषकृतानि च ॥
स्पर्शाद्भन्ति विषं सर्वं गरैरुपहतां त्वचम् ।
योगजं तमकं कण्डूं मांससादं विसंज्ञताम् ॥
नाशयत्यञ्जनाभ्यंगपानबस्तिषु योजितम् ।
सर्पकीटाखुलूतादिदष्टानां विषहृत्परम् ॥ B.R. 72.65-67

- This medicated *ghṛta* is used for *añjana* (collyrium), *pāna* (internal medicine), *basti* (enema) and *abhyaṅga* (massage).
- This pacifies poison of *viṣākta* (poisoned) and also *garaviṣa* (slow acting/polluting poison); its *sparśa* (touch/holding) is enough to treat *tvacā* (skin) distressed by *viṣa-saṁsarga* (contact poison); *tamaka śvāsa* (asthma), *kaṇḍū* (itching), *māṁsasāda* (muscular laxity), *viṣaṅjñatā* (stupor) caused by *yogaja viṣa* (compound poisoning) are pacified by this formulation; it also pacifies *daṣṭa* (bite) by *sarpa* (snake), *kīṭa* (insects), *ākhu* (rat), *lūtā* (spider) etc.

(7) Śikhari ghr̥ta**Sūtra :**

शिखरिस्वरसेनैव कल्कान् दत्त्वा च दाडिमम् ।
कुष्ठमेलाद्वयं शृंगडीं शिरीषममृतं वचाम् ॥
परशू पारिभद्रञ्च चन्दनं तगरं मुराम् ।
पचेत्सर्पिस्त्वसलिलं मन्दमन्देन वह्निना ॥
घृतमेतत् ॥

B.R. 72.68-70

Contents

- *Goghṛta* (cow's ghee)

- Apāmārga svarasa
- Kalka dravya -
- ◆ dāḍima
- ◆ kuṣṭha
- ◆ sūkṣmailā
- ◆ bṛhadailā

- ◆ śrīṅgī
- ◆ śīrīṣa
- ◆ amṛtā
- ◆ vacā

- ◆ paraśū
- ◆ pāribhadra
- ◆ candana
- ◆ tagara
- ◆ murā

All the contents, collected, should be processed according to sneha-kalpanā (processing of fat) and stored appropriately.

Viśagha gāṇa's of Aṣṭāṅga Hṛdayam

S.No.	Gāṇa	Sūtra	Drugs
1.	Añjanādi gāṇa	अञ्जनं फलिनी मांसी पद्मोत्पलरसाञ्जनम्। सैलामधुकनागाहं विषान्तर्दाहपित्तनुत् ॥ AH.Sū. 15.14	1. añjana 2. phalinī 3. māmsī 4. padma 5. utpala 6. rasāñjana 7. elā 8. madhuka 9. nāgāhva
2.	Paṭolādi gāṇa	पटोलकदुरोहिणीचन्दनं मधुस्रवगुडूचीपाठान्वितम्। निहन्ति कफपित्तकुष्ठज्वरान् विषं वमिमरोचकं कामलाम् ॥ AH.Sū. 15.15	1. paṭola 2. kaṭurohiṇī 3. candana 4. madhusrava 5. guḍūci 6. pāṭhā
3.	Āragvadhādi gāṇa	आरग्वधेन्द्रयवपाटलिकाकतिकानिम्बामृतामधुरसास्रुववृक्षपाठः। भूनिम्बसैर्यकपटोलकरञ्जयुग्मसप्तच्छदाग्निमुषवीफलबाणघोण्टः ॥ आरग्वधादिर्जयति छर्दिकुष्ठविषज्वरान्। कफं कण्डूं प्रमेहं च दुष्टव्रणविशोधनः ॥ AH.Sū. 15.17-18	
4.	Rodhrādi gāṇa	रोधशाबरकरोधपलाशा जिङ्गिणीसरलकट्फलयुक्ताः। कुत्सिताम्बकदलीगतशोकाः सैलवालुपरिपेलवमोचाः ॥ एष रोधादिको नाम मेदःकफहरो गणः। योनिदोषहरः स्तम्भी वण्यो विषनाशनः ॥ AH.Sū. 15.26-27	
5.	Arkādi gāṇa	अर्कालर्कौ नागदन्ती विशल्या भार्गी रास्ना वृश्चिकाली प्रकीर्या। प्रत्यक्पुष्पी पीततैलोदकीर्या श्वेतायुग्मं तापसानां च वृक्षः ॥ अयमर्कादिको वर्गः कफमेदोविषापहः। कृमिकुष्ठप्रशमनो विशेषाद्व्रणशोधनः ॥ AH.Sū. 15.28-29	
6.	Elādi gāṇa	एलायुग्मतुरुष्ककुष्ठफलनीमांसीजलध्यामकं स्पृक्काचोरकचोचपत्रतगरस्थौण्यजातीरसाः। शुक्तिर्व्याघ्रनखोऽमराहमगुरुः श्रीवासकः कुंकुमं चण्डागुगुलुदेवधूपखपुराः पुन्नागनागाहयम् ॥ एलादिको वातकफौ विषं च विनियच्छति। वर्णप्रसादनः कण्डूपिटिकाकोठनाशनः ॥ AH.Sū. 15.43-44	
7.	Śyāmādi gāṇa	श्यामादन्तीद्रवन्तीक्रमुककुटरणाशंखिनीचर्मसाहास्वर्णक्षीरीगवाक्षी- शिखरिरजनकाच्छिन्नरोहाकरञ्जाः। बस्तान्त्री व्याधिघातो बहलबहुरसस्तीक्ष्णवृक्षात् फलानि श्यामाद्यो हन्ति गुल्मं विषमरुचिकफौ हृद्गुजं मूत्रकृच्छ्रम् ॥ AH.Sū. 15.45	

Phalaśruti

घृतमेतन्निहन्त्याशु निखिलान् विषजान् गदान् ।
सन्निपातज्वरं घोरं ज्वरांश्च विषमांस्तथा ॥ B.R. 72.70

- This medicated *ghṛta*s equipped to pacify all the *viṣas* (poisons) and disorders associated with *viṣa* (poison), *sannipātaja jvara*, *ghora* (complicated) *jvara* and *viṣama jvara*.

(8) *Śrīṣādyarīṣa**Sūtra :*

पचेत्तुलाऽर्द्धं द्विद्रोणे शिरीषस्य जले सुधीः ।
पादशेषे कषायेऽस्मिन् क्षिपेद् गुडतुलाद्वयम् ॥
कृष्णाप्रियंगुकुष्ठैलानीलिनीनागकेशरम् ।
रजन्यौ पलमानेन दद्यादत्र च नागरम् ॥
मासादूर्ध्वं जातरसं यथामात्रं प्रयोजयेत् ।
शिरीषारिष्टमित्येतद् विषव्याधिविनाशनम् ॥

BR. 72.71-73

**Contents**

- *Mūlatvak* (root cover) of *śirīṣa*
- Water
- *Guḍa* (jaggery)
- *Prakṣepa dravyas :*
 - ◆ *kṛṣṇā* ◆ *nāgakeśara*
 - ◆ *priyaṅgu* ◆ *rajanī*
 - ◆ *kuṣṭha* ◆ *dārvī*
 - ◆ *elā* ◆ *nāgara*
 - ◆ *nīlinī*

All, above mentioned, drugs collected and should be processed with *sandhāna vidhi* (fermentation process) and preserved.

Phalaśruti

- This formulation is potent in eliminating *viṣa* (poison) and *viṣajanya vyādhis* (diseases occurring due to poisoning).

Appendix - 2

Exam oriented charts

S. No.	Dravya	Latin name	English name	Family	Synonym	Rasa etc.	Classification	Signs and symptoms	Treatment
1.	Vat-samābha	Aconitum ferox	Aconite/ Monk's hood	Ranunculaceae	<ul style="list-style-type: none"> Viṣa Amṛta 	<p>Rasa:</p> <ul style="list-style-type: none"> madhura <p>Guṇa:</p> <ul style="list-style-type: none"> laghu rūkṣa fiṣṣṇa vyavāyī vikāsi <p>Vīrya:</p> <ol style="list-style-type: none"> uṣṇa <p>Vipāka:</p> <ol style="list-style-type: none"> madhura 	<ol style="list-style-type: none"> kr̥ṣṇābha kapiśa pāṇḍu (best) 	<ul style="list-style-type: none"> grīvāstambha (neck rigidity) pīta vir-mūtra-netratā (yellowness in faeces, urine and eyes) 	<ul style="list-style-type: none"> Suddha taikana + ghṛta (cow's ghee) Induction of vomana (emesis) by consuming large quantity of ajāduḡdha (goat's milk) Haridrā svarasa + taṇḍulīya svarasa Sarpāksi svarasa + suddha taikana + ghṛta (cow's ghee)
2.	Kucalā	Strychnos nux-vomica	Nux vomica/ Poison nut tree/ Nux vomica tree	Loganiaceae	<ul style="list-style-type: none"> Kucelaka Kucala Kucilā Viṣatunda Tindu 	<p>Rasa:</p> <ul style="list-style-type: none"> Tikta Kaṭu <p>Guṇa:</p> <ul style="list-style-type: none"> Rūkṣa, laghu, fiṣṣṇa <p>Vīrya:</p> <ul style="list-style-type: none"> Uṣṇa <p>Vipāka:</p> <ul style="list-style-type: none"> Kaṭu 	<ul style="list-style-type: none"> bitter taste in mouth feeling of uneasiness restlessness difficulty in swallowing convulsions increased rigidity of muscles ophisthotonus emprosthotonus muscular twitching etc. 	<ul style="list-style-type: none"> Isolation Anaesthetic agents Gastric lavage Sedatives Anti-convulsants Anti-dotes Supportive measures 	
3.	Ahiphena	Papaver-somniferum	Opium/ Poppy seeds	Papaveraceae	<ul style="list-style-type: none"> Aphena Niphena Ahiphenaka Aphūka Phaniphena Nāgaphena Aphina 	<p>Rasa:</p> <ul style="list-style-type: none"> Tikta and kaṣāya <p>Guṇa:</p> <ul style="list-style-type: none"> laghu, Rūkṣa, sūkṣma, vyavāyī, vikāsi <p>Vīrya:</p> <ul style="list-style-type: none"> Uṣṇa <p>Vipāka:</p> <ul style="list-style-type: none"> Kaṭu <p>Prabhāva:</p> <ul style="list-style-type: none"> Mādaka 	<ol style="list-style-type: none"> śveta pila kr̥ṣṇa citra 	<ul style="list-style-type: none"> mūrdha gurūtā (heaviness of head region) bhrama (giddiness) ādhmāna (abdominal distension) śvāsakṛccchratā (dyspnoea) kr̥ṣṇatā (blackishness) oṣṭha (lips), mukha (mouth) and netra (eyes) ati svadapnavṛtti (profuse sweating) angusāthilya (laxity of body) 	<ul style="list-style-type: none"> Fresh milk of cow and its ghee for consumption Bṛhatī svarasa (1 pala) with go-dugdha (cow's milk) daily Jaharamoharā piṣṭi, candrodāya rasa, kastūrī etc.

S. No.	Dravya	Latin name	English name	Family	Synonym	Rasa etc.	Classification	Signs and symptoms	Treatment
4.	Jayapāla or Recaka	Croton tiglium	Purging croton	Euphor- biaceae	<ul style="list-style-type: none"> • dravantibija • jayapāla • jepāla • dantibija • tintidīphala 			<ul style="list-style-type: none"> • <i>sītā</i> (coldness) of <i>hasta</i> (hands) and <i>pāda</i> (feet) • <i>vānti</i> (vomiting) • <i>bhrānti</i> (giddiness) • <i>recana</i> (diarrhoea) • <i>śūla</i> (colic) • <i>ālopa</i> (abdominal distension) • <i>bhīṣam sveda</i> (profuse sweating) • <i>daurbalya</i> (weakness or fatigueness) 	<ul style="list-style-type: none"> • Consumption of <i>dhānyaka</i>, <i>sītā</i> (sugar) and <i>dadhī</i> (curd) or warm water for drinking • Small quantity (equal to 2 or 3 grains of rice) of opium followed by ghee mixed milk to stop the diarrhoea
5.	Dhattūra	Daturametel	Datura/ Thorn apple	Solana- ceae	<ul style="list-style-type: none"> • dhūttūrā • kitava • unmatta • kanaka • kaṇṭakaphala 	<p>Rasa:</p> <ul style="list-style-type: none"> • <i>tikta</i> & <i>kaṭu</i> <p>Guṇa:</p> <ul style="list-style-type: none"> • <i>laghu</i>, <i>rūkṣa</i>, <i>vyāvāyi</i> and <i>vikāsi</i> <p>Virya:</p> <ul style="list-style-type: none"> • <i>uṣṇa</i> <p>Vipāka:</p> <ul style="list-style-type: none"> • <i>Kaṭu</i> <p>Prabhāva:</p> <ul style="list-style-type: none"> • <i>māda</i> 	<ul style="list-style-type: none"> • <i>Datura alba</i> (white flowered) • <i>Datura niger</i> (blackish/brinjal-coloured flowers) 	<ul style="list-style-type: none"> • <i>atitrṣṇā</i> (non-satiating thirst) • <i>bhrama</i> (giddiness) • <i>svedaprapṛṭti</i> (profuse sweating) • <i>pralāpa</i> (delirium) • <i>mūrcchā</i> (fainting) • <i>atikṛcchra śvāsa</i> (labour breathing) • <i>moha</i> (stupor) • <i>ākṣepaka</i> (convulsions) 	<ul style="list-style-type: none"> • Juice of <i>vṛntāka phala</i> (in dose of 1 <i>pala</i>) for consumption • <i>Go-dugdha</i> (cow's milk) along with <i>ghṛta</i> (ghee) and <i>śarkarā</i> (sugar)
6.	Bhaṅgā	Cannabis indica	Indian Hemp	Canna- binaceae	<ul style="list-style-type: none"> • <i>būfi</i> • <i>śiddhi</i> • <i>bhaṅgā</i> • <i>bhaṅgi</i> • <i>mātulāni</i> • <i>mādinī</i> 	<p>Rasa:</p> <ul style="list-style-type: none"> • <i>tikta</i> <p>Guṇa:</p> <ul style="list-style-type: none"> • <i>laghu</i> and <i>fiṣṇa</i> <p>Virya:</p> <ul style="list-style-type: none"> • <i>uṣṇa</i> <p>Vipāka:</p> <ul style="list-style-type: none"> • <i>Kaṭu</i> <p>Prabhāva:</p> <ul style="list-style-type: none"> • <i>māda</i> 	<ul style="list-style-type: none"> • <i>timira</i> (ophthalmic disorder) • <i>manovibhrama</i> (mental confusion) • <i>apasṛṭti</i> (transient loss of memory) • <i>pralāpa</i> (delirium) • <i>vānti</i> (vomiting) • <i>kaṇṭhaśuṣkāṭā</i> (dryness of throat) 	<ul style="list-style-type: none"> • <i>Sīraśnāna</i> (head bath) with <i>atīśītala vāri</i> (extremely cold water) • <i>Go-dugdha</i> (cow's milk) with <i>sītā</i> (sugar) for consumption 	

S. No.	Devanāgarī	Latin name	English name	Family	Synonym	Rasa etc.	Classification	Signs and symptoms	Treatment
7.	Guñjā	Abrus precatorius	Indian liquorice	Leguminosae	<ul style="list-style-type: none"> • raktā • raktikā • tāmrīkā • kṣṇacūrnīkā • uccatā • śītapākā • bhil-labhūṣaṇīkā 	<p>Rasa:</p> <ul style="list-style-type: none"> • tikta • &kaṣāya <p>Guṇa:</p> <ul style="list-style-type: none"> • laghu and rūkṣa <p>Vīrya:</p> <ul style="list-style-type: none"> • uṣṇa <p>Vipākā:</p> <ul style="list-style-type: none"> • Kaṭu 	<ol style="list-style-type: none"> 1. śveta 2. rakta 3. kṣṇa 	<ul style="list-style-type: none"> • <i>daurbalya</i> (weakness) • <i>raktasrāva</i> (bleeding) • <i>tandrā</i> (fatigue) • <i>moha</i> (stupor) • <i>gātra vranā</i> (ulcerations) 	<ul style="list-style-type: none"> • <i>Meghanāda svarasa</i> along with <i>śarkarā</i> (sugar) consumed and followed by gulping of <i>dugdha</i> (milk)
8.	Bhal-lātaka	Semecarpus anacardium	Marking nut	Anacardiaceae	<ul style="list-style-type: none"> • <i>aruṣṭara</i> • <i>agnika</i> • <i>vīravikṣa</i> • <i>śophakṛt</i> 	<p>Rasa:</p> <ul style="list-style-type: none"> • kaṭu, tikta and kaṣāya <p>Guṇa:</p> <ul style="list-style-type: none"> • laghu, snigdhā and tikṣṇa <p>Vīrya:</p> <ul style="list-style-type: none"> • uṣṇa <p>Vipākā:</p> <ul style="list-style-type: none"> • madhura 	<ul style="list-style-type: none"> • <i>koṣṭha tāpa</i> (burning sensation in abdomen) • <i>vranā</i> (formation of ulcers) • <i>sphoṭa</i> (blister formation) over <i>tvacā</i> (skin) 	<ul style="list-style-type: none"> • <i>Meghanāda svarasa</i> and <i>naranīta</i> (butter) • <i>Devadāru</i> + <i>mustā</i> (butter) • <i>Nārikela tailam</i> (coconut oil) 	
9.	Arka	Calotropis-procera	Gigantic Swallow wort/Madar	Asclepiadiaceae	<ul style="list-style-type: none"> • <i>gaṇarūpa</i> • <i>mandāra</i> • <i>sadāpuṣpa</i> • <i>alarka</i> • <i>pratāpasa</i> 	<p>Rasa:</p> <ul style="list-style-type: none"> • kaṭu & tikta <p>Guṇa:</p> <ul style="list-style-type: none"> • rūkṣa, laghu, tikṣṇa <p>Vīrya:</p> <ul style="list-style-type: none"> • uṣṇa <p>Vipākā:</p> <ul style="list-style-type: none"> • Kaṭu 	<ul style="list-style-type: none"> • <i>Arka</i> • <i>Rājārka</i> • <i>Śuklārka</i> • <i>Śvetam-andāraka</i> 	<ul style="list-style-type: none"> • On application: localized redness, vesication etc. • On ingestion: burning pain in throat and stomach, salivation, stomatitis, vomiting, diarrhoea, dilated pupils, tetanic convulsions etc. 	<ul style="list-style-type: none"> • <i>Palāśa</i> is an antidote for <i>arka-viṣa</i> • For ulceration - washing with decoction of <i>palāśa</i> and sprinkling of powdered leaves of <i>palāśa</i> • Decoction of <i>palāśa</i> is given for oral consumption
10.	Snuhī	Euphorbia antiqorum	Common milk hedge	Euphorbiaceae	<ul style="list-style-type: none"> • <i>sehuñḍa</i> • <i>snuhī</i> • <i>thāra</i> • <i>guḍā</i> 	<p>Rasa:</p> <ul style="list-style-type: none"> • kaṭu <p>Guṇa:</p> <ul style="list-style-type: none"> • laghu, tikṣṇa 	<ul style="list-style-type: none"> • <i>kukṣi-tāpa</i> (warmth in abdomen) • <i>vireka</i> (diarrhoea) • <i>vumana</i> (vomiting) 	<ul style="list-style-type: none"> • <i>Naranīta</i> (butter) with <i>miṣṛī</i> (sugar candy) • Uncooked milk of buffalo along with <i>miṣṛī</i> (sugar candy) 	

S. No.	Dravya	Latin name	English name	Family	Synonym	Rasa etc.	Classification	Signs and symptoms	Treatment
11.	Lāngulī	Glortosa superba	Malabar Glory Lily	Liliaceae	<ul style="list-style-type: none"> lāngulī viśalāṅgalī agnīśikhā svartīapūṣpā 	Vīrya: <ul style="list-style-type: none"> uṣṇa Vipāka: <ul style="list-style-type: none"> kaṭu Rasa: <ul style="list-style-type: none"> kaṭu and tikta Guṇa: <ul style="list-style-type: none"> laghu, tikṣṇa Vīrya: <ul style="list-style-type: none"> uṣṇa Vipāka: <ul style="list-style-type: none"> kaṭu Prabhāva: <ul style="list-style-type: none"> garbha-pātana 		<ul style="list-style-type: none"> burning and numbness in the mouth and throat nausea vomiting purging ataxia spasm convulsions profuse sweating etc. 	<ul style="list-style-type: none"> Cold water along with <i>miṣṛī</i> (sugar candy) Treatment of shock Maintenance of blood pressure Symptomatic treatment
12.	Karavīra	Śoeta karavīra - Nerium indicum Pīta karavīra - Cerebra thevetia/ Thevetia nerrifolia	Indian oleander	Apocynaceae	<ul style="list-style-type: none"> hayāri hayamāra āśoamāra āśoāntaka 	Rasa: <ul style="list-style-type: none"> kaṭu and tikta Guṇa: <ul style="list-style-type: none"> Rūkṣa, laghu, tikṣṇa Vīrya: <ul style="list-style-type: none"> uṣṇa Vipāka: <ul style="list-style-type: none"> kaṭu Varga: <ul style="list-style-type: none"> 1. kaṭu 2. mūla viṣa 	1. <i>śoeta</i> (white flowered) 2. <i>pīta</i> (yellow flowered) 3. <i>rakta</i> (reddish flowered)	<ul style="list-style-type: none"> <i>koṣṭha tāpa</i> (warmth in abdomen) <i>dāruṇa śūla</i> (severe colic) <i>vānti</i> (vomiting) <i>vireka</i> (diarrhoea) <i>ākṣepa</i> (convulsions) 	<ul style="list-style-type: none"> Stomach wash (using Tannic acid) Symptomatic management Morphine for sedation Sodium lactate



Agadtantra, Vyavahārāyurveda evum vidhivaidyaka (Toxicology, forensic Medicine and Medical Jurisprudence)

<ul style="list-style-type: none"> • Theory One Paper — 100 Marks • Theory — 200 hrs 	<ul style="list-style-type: none"> • Practical/Viva voce — 50 Marks • Practical — 100 hrs
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Part- A

- Derivation, definition of Visha and Agadtantra. Scope of Agadtantra. Visha Utpatti, Visha Prabhava, Visha Pranaharana Kriya, Visha Guna, Visha Gati, Visha Vega, Visha Sankata, Shanka Visha.
 - Definition of toxicology, Definition of poison, suicidal and homicidal poisons,
 - Classification of poisons, their action and route of administration, absorption, excretion, metabolism, diagnosis and general principles of treatment, duties of a medical practitioner in case of suspected poisoning.
 - Origin and Classification of Visha:-Its sources, Difference between Visha, Madya and Oja guna, Visha Upadrava and Visha Mukta Lakshana.
 - Tests for detection of Visha, and Modern Toxicological Techniques of detection of poisons, Visha Data Lakshana, Visha Peeta Lakshana, Signs and symptoms of Visha afflicted organs and personal effects. (Poisoning with Anjana, Lepa paduka, Abharana etc.
 - Introduction to Environmental Toxicology-Samuhika Vishaprayoga- effect of chemical and nuclear warfare.
 - Vishopakrama described by Charak, General principles of Management of poisoning.
 - Manifestation of poisoning due to poisons of plant origin their fatal Dose, fatal period, management of poisoning, post mortem appearance and its medico legal importance.
 - Visha and Upavisha- Arka, Snuhi, Langali, Karaveera, Gunja, Ahiphena, Dhattura,
- ❖❖❖
- Bhallataka, Vatsanabha, Kupeelu, Jayapala, Bhang & Tobacco, Parthenium hysteriphorus, Chitraka, Eranda, Digitalis and Cerebra Odallam.
 - Garavisha, Dooshivisha, Viruddhahara. Food adulteration and poisoning—classification, diagnosis, management and contemporary significance.
 - Jangama Visha — Detailed study of Sarpa, Keeta, Loota, Vrischika, Mooshika, Alarka— Visha; Lakshana, Bheda, Chikitsa and their Sadhyasa-dhyata (contemporary and classical views).
 - Introduction to poisoning due to Acids, Alkalis, metals, Non-metals, Asphyxiants and others, their Fatal Dose, Fatal period, Manifestation, management, medico legal importance and postmortem appearance of poisoning due to:
 - ♦ Acid and Alkalis— Sulphuric acid, Hydrochloric acid, Nitric acid, Hydrocyanic acid, Oxalic acid, Carbolic acid, Formic acid, alkalis in general.
 - ♦ Asphyxiants — Carbon monoxide, Carbon dioxide, Hydrogen sulphide
 - ♦ Nonmetallic poisons — Phosphorous, Iodine
 - ♦ Metallic poisoning — Arsenic, Mercury, Lead, Copper, Zinc, Tin.
 - ♦ Others - Petroleum — Kerosene Organophosphorus compounds - Aluminum-phosphate, Organo Chlorinated Compounds, House-hold poisons.
 - Madya and Madatyaya. Alcohol poisoning (Ethanol and Methanol).
 - Introduction to Narcotic drugs and Psychotropic substances Act 1985.

50 Marks