Damshaja Shula: A Review

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ABSTRACT

Ayurveda has mentioned the bite of Sarpa(snakes), Keeta(incects), Luta(spider), Vrischika(scorpion), Mooshaka(rat), etc., the Jangama Visha (animate poisons), their characteristic symptoms and its management, in a very special branch of Ayurveda termed as Agada tantra. Ayurveda Acharyas have given special attention to Jangama Visha(animate poisons) and are described in the classics as a special entity. Damsha(bite) is the most common in animal poison. The most common and early symptom of damsha is pain. In the management of all types of jangama visha damsha traditional and regional knowledge are available. Administration of anti- venom and sthavaravisha(plant poison) are used as an antidote for all jangama visha damsha. Ayurveda has explained numerous medicinal plants in the management of jangama visha damsha. Pain management plays a major role in management of animal poisoning. Most of the Ayurveda formulations used in management of bite have multiple actions rather than on single symptom like pain.

Keywords: Pain, Sarpa, Keeta, Looata, damsha, Chikitsa

INTRODUCTION

Damsha (Fang or teeth bite) is the most common among jangamavishaadhishtana (animal poison base). The most common and early symptom of damsha is pain.

Pain due to damsha may be due to tissue injury causing the release of inflammatory mediators like bradykinin, serotonin, prostaglandins, cytokines, potassium, substance P and H+ responsible for pain. Or, chemical contents of the poison or venom may which decrease the threshold of pain in body by contributing to increase in the amount of inflammatory mediators around the site. Ex: serotonin in scorpion venom and serotonin and kinin in wasp/hornets venom.

Pain management plays a major role in management of animal poisoning. Most of the Ayurveda formulations used in management of bites have multiple actions rather than on single symptom like pain. 46 classical texts were reviewed and 375 formulations containing arka were found. 25 formulations were indicated for visha management, mostly as lepa (application). 22 references were found for vatavyadhi, mostly as oil and svedana (sudation). 13 formulations were found to be mentioned for wound management thatis mostly used as kwatha (decoction).

Bites²

All the Jangamavishas (animate poisons) are responsible for damsha(bite). Mainly, the Bhoomasarpadamshtra visha, Marjara(cat), Shwana(dog), Nara(human), Manduka(frog), Keeta(incects) etc. these are the damsha(bite) and nakhavisnas(nail poisoning). Lootavisha (spider) are the lalasravasa(salivation), purisha(stool), damsha(bite), nakha(nail), shukravishas. Makshika(honey bee), Kanabh(wasp), and Jalouka(leech) are the mukhasandamsha vishas.

Snake Bites:

Types of damshtra: According to Vagbhata³ there are five types namely Tundahata, Vyaiida, Vyalipta, Damshta Nipida and Dashtaka.
Acharya Sushruta has mentioned three types as Sarpita, Raditaand Nirvisha/ Sarpanabhishita.

Sarpa Damsha samanya Lakshana

Bites of snake having poison are accompanied with swelling, prickling pain, itching and burning sensation.

**Cobra**

In cobra bite there is manifestation of Vataprapkopa (aggravation of vata), krishnata (blackish discoloration), symptoms start within six to eight minutes, small reddish wheal at the site of bite, radiating and burning pain with tenderness. Pain will be in ascending order with numbness and fast spreading.

In viper bite there is manifestation of Pitta prakopa, pain and oozing with burning sensation, local necrosis and gangrene, serous and serangous blisters, petchalai haemorrhage, abdominal colic.

In rajamanta damsha (krails) there is no swelling or burning sensation, mild pain or pain at all. Headaches, heaviness in the body, abdominal pain, dysartria, dysphasia, chest pain and kaphaprapkopa is present.

In Sea snakes, there is very little or no local symptom and is painless.

**Pain management through Ayurveda:**

Arka Patrasvedana (except in viper bite), and irrigation of the affected part with ghee and rock salt helps in relieving the pain.

**In Cobra bite**

Mahakalyanakaghrita 15 ml, 10ml Madhu, Bilvadi Gulkachhurna is given at the earliest. Jeevaraksha Gulkawith Dugdha. After 3rd vomiting if symptoms persist, patient has to be referred to a higher centre. Nasya with bhringraj aswarasa mixed with Bilwadi to check paralysis, diplopia and slurring speech. Patoladigankwatha with Bilwadiare given and repeated after 12 hrs. Trivritileahis advised to relieve constipation. ArkaPatra (Calotropis gigantea) and ishwari (Aristolachia indica) paste is smeared.

Necrotic ulcers are treated with irrigation of decoction prepared with Kaarasakaramula (strychnos monica), Vata (Ficussergulensis), Ashwatha (Ficusreligiosa), Plaksha Twak (Ficusvirens). Nasal drops prepared with Dronapushpa (Leucasephalates), Tulasi (Ocimum tenuiforum), Marichas nasal drops. Exceeding 4 drops avoided to prevent pulmonary oedema.

**In viper bite**

Patoladigankwatha (patola, katurohini,chananda, madhusrava, guduchi, pata) with bilwadichoorna, Malatiswarasa (Aganosmayhein) with honey relieves hemoptysis, Nimba (Azadirachta indica) leaves for hematemesis, Tarunbhaskaraagulika with coconut milk to check hematuria, pippali and ela in coconut milk to check dysuria and constipation. Shigrupunnaravadi lepa is applied to relieve oedema. Paste of the root of neeli (Indigofera tinctoria) orkaranja (Millettia pinnata) in warm water smeared over site, relieves the symptoms.

**In Krait bite**

Patoladigankwatha with bilwadigulika, root of aparajita (Clitoriaternata) mixed with water, neeli (Indigofera tinctoria), shunti (Zingiber officinale), pippali (Piper longum) and maricha (Piper nigrum) mixed in warm water given orally. For relieving headache the paste of ishwari, vacha and hingure made into paste and smeared over the head.

Yogas

**Jeevaraksha Gutiya**

- Jeevaraksha gutiya12: vanga (tin), parada (mercury), haratala (yellow orpiment), manashila (realgar), hingula (cinnabar), tankana (horas), tuttha (blue vitriole), saphataka (alum), gandhaka (sulphur), hinga (Ferula asafoetida), saindhava (rock salt), kattuchanka, balabaleeja (Mimusopseleni), vacha (Acorus calamus), trikatu, ishawari (Aristolachia indica), sariva (Hemidesmusindicus), arka (Calotropis gigantea).

**Bilvadi Gutiya**

- Bilvadi Gutiya14: Bilwamooola (Aegle marmelos), tulasi pushpa (Ocimum tenuiflorum), karanja fruit (Millettia pinnata), tagara (Tabernamontana Divaricata), devadaru (Cedrus deodara), triphala, trikatu, haridra (Curcuma longa), daru haridra (Berberis aristata).

**Visha Bilvadi Gutiya**

- Visha Bilvadi Gutiya15: Bilwamooola (Aegle marmelos), tulasi pushpa (Ocimum tenuiflorum), karanja fruit (Millettia pinnata), tagara (Tabernamontana Divaricata), devadaru (Cedrus deodara), triphala, trikatu, haridra (Curcuma longa), daru haridra (Berberis aristata), neelini (Indigofera tinctoria) and pata (Lawsonia inermis).

Uses - All the drugs in this yoga are krimivighna and vishaghatra. And their pharmacological actions revealed as antimicrobial, antiviral, anti-inflammatory, analgesic, cardio protective, antiseptic, antifungal, antidiarrheal and anti protozoal.

**Scorpion Sting**

Scorpions are eight legged arthropods, having two poison glands at the end part of tail. The venom contains toxalbumen having hemolytic and neurotoxic effect, Phospholipase, hyaluronidase, acetyl cholinesterase and serotonin. It causes local swelling and severe radiating pain.

**Management through Ayurveda:**

Dasangagulkia with warm water for internal administration is mentioned. Externally, Arkaapatra svedana, Dhoopana with feather of peacock and cock with saindhava (rock salt) and tilakalka put. Lepa of karanja (Millettia pinnata) and hinga (Ferula asafoetida) help to relieve pain.

**For chronic case**

Patoladiganka, Parantyadigana (udumbara, ashwathaa, vata, pathaparanthi, chandana, brahmi, durva, vacha, trikatu, jatamamsi, ashwagandha, etc.), Sigrupunnaravadilepa (sigru, punarnava, chandana, pata, eshwari, etc.)
**Loota Visha (Spider Venom)**

Its poisoning may occur directly or indirectly, various parts of spider capable of causing poisoning - Shvasa, Damstra, Pureesha, Mootra, Shukra, Laala, Nakha, Arthava. Out of these bite is more poisonous. Indirectly poisoning occurs through the clothes containing poison and contact of discharge of lesion of luthavisha.

The venom contains hyaluronidase, ribonuclease, alkaline phosphatase, lipase, sphingomyelinase. Sphingomyelinase is mostly responsible for tissue destruction.

**Management of Spider poison**

Chedana, Dahakarma, Lepana, Sela-dhara (ksheervrikshatvakkwathaw), Raktamoksha

For lepa- Haridra (Curcuma longa), tulasi (Ocimum sanctum), saihdhava (rock salt), madhu (honey), lüngu (Ferula asafoetida) and betel leaf

Formulations - Neelitulsiyadi kwathaw, Padmakaagada, Champakaagada, Lodhraadiagada

**Keeta Damsha**

Fever(Jvara), bodyache(Angamarda), horripilation, disconforts, vomiting, thirst, burning sensation, fainting, rigors, dyspnoea, appearance colored round patches, dadru, karnika, visarpa, kitibha, these are complications produced by their bites.

**Centipede**

Parusha, Krishna, citra, kapila, ptikta, raktak, shveta, agniprabha, these are the eight varieties of shatatpadi, the bite of these causes swelling and pain.

**Wasp**

Visarpa, shayathu, shula, jvara, chardi, these are symptoms are seen in wasp bite.

**Bee Sting**

Makshika are mainly sixtypes, kaantaarka, Krishna, pingala, madhulika, kaashaayi, sthaalaka. The bite of these causes itching, swelling, burning sensation, and pain will be present at the place of bite. When bee stings, it leaves behind the stinger and part of its abdomen. Locally there is pain, itching, redness and slight swelling at the site of sting.

Treatment in Ayurveda includes Svedana, utktartana, raktamochhana, lepana, sela and virechana if need be. The formulation beneficial is Dashangaagada

**Alarka Visha Damsha**

The premonitory stage, there is pain and discomfort at site of bite, headache, anxiety, muscular spasm, hydrophobia-involuntary painful contractions of diaphragm, accessory respiratory, laryngeal muscles in response to swallowing fluids.

**Alarka Visha Chikitsa**

Bite should be burnt by hot Ghrita and covered with warm paste of agada, Purana Ghrita should be made to drink, Kwatha of neelimoola (Indigofera tinctoria) and karanjamoona (Millettia pinnata) administered for 14-21 days. Externally, the paste of the root and bark of ankola (Alangium salvifolium) with rice wash is applied. Wound care with triple wash, sedation for anxiety, respiratory support and hydration.

**Moosika Visha**

Rat bite may cause large and triangular wound with bleeding. Pain will be trivial in rat bite. Pain may be more if the wound is large but there will not be any additional pain due to the wound. Area of wound may swell and suppurate with fever.

**Treatment**

Immediately after rat bite the site should be burnt with soft of an arrow or a mirror. If not there will be either severe pain or formation of circular rings. Burnt area should be scraped and shirisha, rajani, vakra, kumikum and amravalli paste should be applied.

**DISCUSSION**

Different jangamavishas have various adhishtha. However, almost all the animal may cause bites which may be poisonous or non-poisonous. Pain due to damsha may be due to tissue injury causing the release of inflammatory mediators like bradykinin, serotonin, prostaglandins, cytokines, Potassium, substance P and H+ responsible for pain. Or, chemical contents of the poison/venom which may decrease the threshold of pain in body by contributing to increase in the amount of inflammatory mediators around the site.

In snake bite, larger the tissue damage, more severe is the pain. Hence, the classification of damstra as tundahat, vyalidh, vyalipita, damstani, damshika is based on the severity of tissue damage and symptoms.

Most of the chemical constituents of the snake venom play role in tissue destruction rather than directly causing pain. Hence more the venom injected more tissue damage and more pain.

Different types of Sarpa, Keeta, Loota, etc. have different types of dosha predominance, drugs combinations are made accordingly. Drugs which are having the vishaghna karma along with shola prashamana are used in the management of Damshajashika. Most of the drugs have madhurra, katu and kashaya rasa which are generally known as shoolaghna and vishaghna.

Most of the Ayurveda formulations used in management of bites have multiple actions rather than on single symptoms like pain.46 classical texts were reviewed and 375 formulations containing arka were found.25 formulations were indicated for visha management, mostly as lepa.22 references for vatavayadhi, mostly as oil and svedana are said.13 formulations for wound management, mostly used as kwatha are mentioned.

**CONCLUSION**

Pain may be present in both poisonous and non-poisonous bite, however more in the earlier. Tissue damage is the main cause of local pain, venom may cause visceral and abdominal pain also. Various formulations for the management of pain are described both for local application as well as internal administration. Arka is the most commonly used drug in damshaj shola in the form of svedana, taila, kwatha. Dasangaagada can be considered as formulation of choice in damshaj shola.

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