

## A REVIEW OF AGADA YOGA IN THE MANAGEMENT OF ALARKA VISHA

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Article Received on 02/06/2022

Article Revised on 23/06/2022

Article Accepted on 13/07/2022

## ABSTRACT

*Alarka Visha* is a disease of *sangyavha srotas* in ayurveda. *Alarka visha* is correlated with Rabies according to modern science. According to WHO, there are about 10 million cases of rabies reported every year. Annually there are about 55,000 human deaths worldwide due to rabies. India has been reported as having the highest rabies cases in the world. Rabies is also an acute, highly fatal viral disease of the central nervous system caused by Lyssavirus type-1. According to *Sushruta*, when *vata* gets aggravated in the body of the dog, fox, jackal, bear, tiger etc. combines with aggravated mulates in the channels of their sense organs resulting in loss of sensation. Deprived animal runs with dropped tail, lowered jaw and shoulder, oozing excessive saliva from mouth and biting tendency. Animals most likely to transmit rabies include bats, coyotes, foxes, raccoons and most importantly stray dogs. It is spread when an infected animal bites or scratches a human. Saliva from an infected animal can also transmit Rabies if the saliva comes into contact with the eyes, mouth, or nose. Symptoms of rabies are fever, headache, excess salivation, muscle spasms, paralysis and mental confusion. Ayurvedic management of *Alarka Visha* is described by *Acharya Sushruta*. It includes pouring hot ghee on bite site, drinking of old ghee for Purgation, *Agada pultis*, Propitiatory bath, *Sanshodhana* therapy, *Dhatu-Sharpunkha yoga*, *Piplyadi yoga*, *Jatamanshi yoga* and *Tagar, Kapith, Khadiradi* various *agada yoga*.

**KEYWORDS:** Ayurveda, *Aalarka Visha*, *Jalsantrasa*, Dog Bite, Rabies, Hydrophobia.

## INTRODUCTION

*Agad tantra* is the science concerned with the study of poison, its action, identification, and therapy. *Agad tantra* is one of the branches of *Ashtanga Ayurveda* that deals with substances like *Sthavara*, *Jangam*, and artificial poisons.

In Ayurveda, a dog bite is known as an *Alarka Visa*. The production of *Alarka Visha* is mostly found by the bite of a dog, shringal etc. *Alarka visha* as a result of a delay in the wound, poison management, and wound improper hygiene care. Animal responsible for *Alarka Visha* i.e Dogs, Jackals, Foxes, Wolves, Bears, Tigers, Mule, Horses, and Panthers these animals are considered as Rabies (*Alarka Visha*) vectors in *Sushrut Samhita*, *Ashtang Samgraha* & *Astang Hridaya*.<sup>[1-2]</sup> In general, not all dog bites are to *Alarka Visha*. After biting the *Sangyavah Srotas* (Central Nervous System) will be affected due to vitiation of *Doshas* (body constitution). Generally, there is the predominance of *Vata* but all the *dosa* are vitiated in the cases of (rabid) dog bite.<sup>[3]</sup>

According to modern view dog bite disease becomes rabies or hydrophobia. Rabies is an acute, highly fatal

viral disease. Its central nervous system is caused by Lyssavirus type 1. *Alarka Visha* is produced by the bite of dogs who are suffering from this rabies virus. Rabies is a viral disease of animals which is usually transmitted to man or any animals after the bite of a rabid dog having infective saliva.

The virus from the injured site reaches the brain through the cognate sources and causes inflammation, produces loss of sensation, causing the animal to run about a lot, hanging its tail, lower jaw, and shoulder, emitting more saliva, becoming deaf and blind, and biting everyone. During the **rainy season**, the poison's effect (hydrophobia) rises, making the patient restless and incurable. It is an infectious disease characteristic of encephalitis with spasms of different muscles paralysis, fear of water, etc. caused by a neurotropic filtrable a virus (rhabdovirus) transmitted commonly by the bite or lick of an infected dog.<sup>[4]</sup>

Rabies is a virulent and fatal viral disease in developed as well as developing countries including India. The highest numbers of cases are reported in Africa and Asia, particularly the Indian sub-continent. Considering the

years of human life lost, rabies ranks seventh among all infectious diseases prevalent in the world.<sup>[5]</sup>

**Rabies is two types:** 1. **Furious rabies:** painful spasms of the pharynx and larynx during which the patient chocks, gapes, and may show characteristic fear of water. Episodes are precipitated by sight and around water. There may be nervousness and aggressive behavior

2. **Paralytic rabies-** Occurs after vampire bite with paralysis of involved limbs, ascending palsy to involve muscles of respiration and deglutition.<sup>[6]</sup> The current WHO exposure categories (Categories I, II, and III) need revision, with a special Category IV for severe exposures.

To aid clinicians, we suggest modification of the basic WHO recommendations, as shown in Table

#### Revised WHO rabies exposure categories.

**Category I:** Touching or feeding animals, animal licks on intact skin (no exposure)

**Category II:** Nibbling of uncovered skin, minor scratches or abrasions without bleeding (exposure)

**Category III:** Single or multiple transdermal bites or scratches, contamination of mucous membrane or broken skin with saliva from animal licks, exposures due to direct contact with bats (severe exposure)

**Category IV:** Special consideration of severe bites to the face, head, and/or neck, or any additional considerations deemed by the clinician as extremely worrisome for RABV transmission (extremely severe exposure)

#### Pathogenesis (*Samprapti*)

*Sushruta* has stated that Poison originated from rabid animals vitiated the *Vata & Khaph* situating in *Sangyavaha Srotas* causing *Sangya Vinasha* (loss of sensation).<sup>[7]</sup>

*Charak* stated Dog bite causes vitiation of all the body constituent (*Tridosha*) & Essence (*Rasadi Dhatu*) while another carnivorous causes vitiation of vitiated the *Vata-Khaph*, while *Vagbhata* stated Dog bite causes vitiation of *Kapha*, invading the channels carrying sensation after situating in *Sangyavaha Srotas* (Nervous System) causes *Sangya Vinasha* (loss of sensation).<sup>[8-9]</sup> As per Modern medicine, the first event in rabies is the inoculation of the virus through the skin, usually through a bite that delivers virus-laden saliva. Initial viral replication appears to occur within striated muscle cells at the site of inoculation.

#### Incubation period

Incubation period varies in humans from a minimum of 9 days to many months but is usually between 4 and 8 weeks, severe bites, especially if on the head of the neck, are associated with shorter incubation periods.<sup>[10]</sup>

#### Rabies specific sign & Symptom

The prodromal period lasts 1 to 4 days. Fever, Headache, Malaise, Anorexia, Nausea, Vomiting, Sore throat, Non-productive cough Acute neurologic the encephalitic phase 1-2 days to < 1 week Excessive motor activity, excitation, agitation, confusion, hallucinations, bizarre aberrations of thought, muscle spasms, meningism's, seizures, focal paralysis, hyperesthesia with excessive sensitivity to bright light, loud noise, dilated irregular pupils, increased lacrimation, salivation and perspiration, upper motor neuron paralysis with weakness, increased deep tendon reflexes and extensor plantar responses, paralysis of the vocal cords, hydrophobia

#### Coma death several days to 1 week

Autonomic instability, Hypoventilation, Apnea, Respiratory arrest, Hypo-hyperthermia Hypotension, Pituitary dysfunction, Rhabdomyolysis, Cardiac arrhythmia & arrest.

#### Diagnosis

- Isolation of viruses from saliva of the brain (Negri bodies).
- Detection of viral antigens by direct fluorescence of skin biopsy specimens or from corneal impression smears.
- Measurement of rabies neutralizing antibodies in the serum or C.S.F.
- Postmortem diagnosis in humans and animals by immunofluorescent staining of brain tissue.

#### Ayurvedic Management of Alarka Visha

1. *Agada* (anti poisonous medicine) should be applied as a warm poultice on the area he should be made to drink old ghee.<sup>[11]</sup>

2. *Palala* (paste of tila) or tila taila mixed with milky sap of Arka should be administered or paste of Sweta Punarnava mixed with milky sap of Rupika (arka) and Guda (jaggery) mixed and consumed destroys the poison of rabid dog etc. Just like wind drives away the cluster of clouds.<sup>[12]</sup>

3. Root of Sarapunkha - 1 karsa (10 gms)

Root of Dhattura -1/2 karsa (5 gm)

- Macerated along with tandula (rice)using tandulodaka (rice-wash).

- This ball of paste is enveloped with leaves of Datura and apupa (pancake) made it.

This cake should be consumed at the time of meals (mid-day). If after the digestion of this pancake the person still performs the activities of the rabid animal as before, then he should be kept confined in a cold room and devoid of water.<sup>[13]</sup>

The next day, he must be made to take warm meals of boiled rice or swastika rice along with milk. This kind of treatment should be done for three to five days and by half its degree for further days.

4. If the poison is situated in the head, then the use of *bandhujva*, *bhargi* and *black Tulasi* (*Agada yoga*) roots snuff is advised in Ayurveda.<sup>[14]</sup>

5. *Pippaliyadi anjana (Agada yoga) - Pippali, Marica, Yavaksara, Vacha*, rock salt, and *Sigru* pounded with the bile of rohita fish and applied to eyes as collyrium destroys the poison in the eyes.<sup>[15]</sup>

6. Ashrayik Chikitsa of Alarka Visha:

i. If poison is in the throat, the unripe fruit of *Kapittha* should be taken and mixed with sugar and honey.<sup>[16]</sup>

ii. If poison located in the stomach 40 gms. Powder of tagara mixed with sugar and honey should be taken.<sup>[17]</sup>

iii. In poisoning of flesh, khadirarist with honey or root of kutaja should be crushed and taken with water.<sup>[18]</sup>

iv. In poisoning of the blood, root bark branch of soft leaf of *Slesmataka*, the shoot of *Badara*, *Udumbara* soft leaves, and *Katabhi* soft leaves crush with water should be taken.<sup>[19]</sup>

v. If poison is spared the whole whole body two type of bala (bala, atibala) root, mahuaa, mulethi, tagara are equal amount of powder are crushed with water should be taken.<sup>[20]</sup>

7. Agada yoga- *Pippli, sunthi, yavaksara* mixed with fresh butter should be painted on the site of bite if there is aggravation of kapha.<sup>[21]</sup>

8. Mansyadi yoga (drink, nasya, anjana, and lepa) - *Jatamansi, kesar, tejpata, dalchini, haridra, tagara, chandana, realgar, vyaghranakha, surasa(tulsi)* in equal proportion taken and crush with water than use drink, *nasya, anjana*, and *lepa* all type of swelling and poison effect are destroying.<sup>[22]</sup>

9. Root of Ankola 8 tole *kawath* in mixed 4 tole gritha.

10. Bhimarudra Rasa-1: Parad, gandhak, abhrak, kant lauha bhasma and Swarash of Vishala, brihati, brahmi, shaugandhik, dadim, markati, atmagupta.<sup>[23]</sup>

### Prevention vaccination

#### Pre-exposure prophylaxis

It requires those who handle potentially infected animals professionally, those who work with rabies virus in laboratories and those who live at special risk in rabies - endemic area. Protection is afforded by two intradermal injection of 0.1 ml human diploid cell strain vaccine, of two intramuscular injection of 1ml, given 4 weeks apart, followed by yearly boosters.<sup>[24]</sup>

#### Post- exposure prophylaxis

Passive immunization: by human rabies immunoglobulin (RIG) 20 Units/kg. Half is infiltrated around the bite and half is given intramuscularly at different site from vaccine. Hyperimmune animal serum 40 units/kg; hypersensitivity reaction, including anaphylaxis, are common.<sup>[25]</sup>

The safest vaccine, free of complication, is human diploid cell strain vaccine per 0.1 ml is given (HDCV) 6 injection on days 0 (bite), 3,7,14,28, and 90 into deltoid muscles, the first injection of HDCV is accompanied by RIG in the opposite arm.<sup>[26]</sup>

### Epidemiology and Preventions

The natural reservoirs of rabies are foxes, mongooses, and bats. Spread to domestic animals, especially dogs, increases the risk of human infection.

Rabies was eradicated from Britain 70 years ago, but it is enzootic in foxes in mainland Europe. It is an important medicinal problem in some developing countries, causing at least 15000 human deaths each year.<sup>[27]</sup>

Rabies eradication control vaccination of domestic animals.

### DISCUSSION

According to Ayurveda, Sthavara Visha should be used to treat any jangama Visha (Animate Poison). It is clear that the uses of Dhatura (Sthavar Visha), Shweta Punarnava, and Sharapunkha have been described as possible treatments for dog bites. Many yogas, including Pipalyadi anjana and Mansyadi yoga, which are beneficial in curing the Alarka visha, are described by Sushruta and Ashtanga Sangraha. The same opinion is held by Ayurveda. Numerous yogas are suggested in Sushruta Samhita to stop the pathogenesis of rabies. Yoga Dhatura Sarpunkha is reported to have an antipoison effect, making it effective against alarka visha.

### CONCLUSION

Various combination of drugs have been explained in all the classical texts for *Ayurveda* and *Brihatrayee* for *Alarka Visha*. It is also mentioned that once the morbid symptoms appear in a dog bitten person it is almost impossible to cure. *Sushruta Samhita* explains the person will not survive in which the poison increases in the body on its own, and so it should be made to increase as early as possible. This is a clear indication that the prophylactic treatment has been explained in our classics along with its importance. Further studies need to be done in this field as this is the need for today world. By which *Ayurveda* can contribute a lot to the society as the drugs are known to be safe and efficacious.

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