



A CLINICAL CONCEPT OF MOOSHIKA VISHA [RAT POISON] AND ITS CHIKITSA

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ABSTRACT

In Ayurveda Agadtantra (toxicology) deals with the knowledge of different types of Vishas (Poisons) of animal or plant origin. It also deals with the origin, types, signs, symptoms and management of poisoning resulting from the bites of Sarpa (snake), Mooshika (rodents), Kita (insects) and Luta (spider).^[1] Mooshika visha (rodent visha) is one of the janghama visha (animal poison) which has been described in various Ayurvedic classical texts. Jangham visha means poison of animal origin.^[2] In all Brihatree, Mooshika visha (rodent visha) is described. Acharya Charaka mentioned it in Chikitsa sthana in the name of Akhu visha^[3]. Bangasena mentioned it in Dusi visha, (cumulative toxicity)^[4] Acharya Susruta in Kalpa Sthana and Acharya Vagbhata mentioned it in Uttartantra. Moreover all other classics and regional texts have recited concerning the Mooshika visha. (Rodent visha) Acharya Shusruta and Acharya Vagbhat described it elaborately. They mentioned 18 types of Mooshika (rodent), with their Lakshana (sign and symptoms) that are caused by their Damsha (bite) and they have also mentioned Chikitsa (treatment) like Sodhana (purification) and Samshaman (pacification) accordingly. In modern system of treatment, Mooshika visha is comparable with Rat bite fever. In Ayurveda, Mooshika Visha (rodent poison) represents a significant area of study, particularly due to the increasing incidence of accidental or occupational exposure to rodent bites or ingestion of toxic substances derived from them. Understanding this concept is crucial to bridge the gap between ancient Ayurvedic perspectives and modern toxicology. While modern medicine provides symptomatic treatment, Ayurveda offers a holistic approach by addressing the underlying Dosha imbalances caused by the poison. This article can explore how Ayurvedic chikitsa, (treatment) including Visha chikitsa (toxicology treatment), herbal formulations, and dietetics, can complement conventional treatment protocols.

Key words: Visha, Jangam Visha, RBF.

INTRODUCTION

In Ayurvedic texts, the concept of Visha (poison) holds a significant place, representing substances that have the potential to disrupt the normal physiological balance of the body. Visha (poison) is broadly categorized into Sthavara Visha (poison of plant), Jangama Visha (poison of animal origin), and Krutima Visha (artificially poisons). These substances are known to possess qualities such as Tikshna (sharp), Ashukari (quick-acting), and Vyavayi (diffusive), which can disturb Dosha, Dhatu, and Agni when introduced into the body.

Among the various forms of Visha (poison), Mooshika Visha (rodent poison) is a distinct entity often encountered in clinical practice. Rodent poisons, typically of Jangama Visha (animal origin), pose a significant health risk due to their widespread use in agricultural and domestic settings.

This article explores the clinical concept of Mooshika Visha, its pathophysiology, symptoms, and comprehensive management through Ayurvedic principles, highlighting its relevance in modern toxicology.

Acharya Sushruta described Mooshika Visha under Jangama Visha & explained 18 types of Mooshika.

Table -1: Types of Mooshika.

Sl. No.	Acharya Shusurta ^[5]	Acharya Vagbhata ^{[6][7]}
1	Laalan	Laalan
2	Putraka	Chapala
3	Krishna	Putra
4	Hansira	Hasira
5	Chikkira	Chikkira
6	Chuchundra	Ajira
7	Alasa	Kashayadanta
8	Kashaayadanta	Kulaka
9	Kulinga	Kokila
10	Ajita	Kapila
11	Chapala	Asita
12	Kapila	Aruna
13	Kokila	Shabala
14	Aruna	Sweta
15	Mahakrishna	Kapota
16	Mahashweta	Palitondura
17	Mahakapila	Chhuchhundar
18	Kapota	Rasaalaa

Adhistan (site) of visha in mooshika ^{[8][9][10]} - Sukra (semen).

Mode of spread ^{[8][9][10]}

- i) Directly – by direct infiltration of mooshika sukra (semen).
- ii) Indirectly – by mala (feces), mutra (urine), nakha (nails) and danta (teeth), when they are contaminated by mooshika semen.

Table 2: Samanya lakshan of mooshika visha according to different acharyas -

Sl. No.	Name of Samhita	Samanya lakshana
1	Caraka ^[11]	Pandu varna rakta srava from site of bite, Mandala (rashes), Jvara, Aruchi, Loma harsha, Daha.
2	Shusruta ^[12]	Granthi (tumour), Mandala (rashes), Karnika (eruptions), Swelling.
3	Astanga hridaya ^[13] / Astanga samgraha ^[14]	Pandu, Granthi, Kshvathu, Kotha mandala, Bhrama, Aruchi, Sita jvara, Atiruka, avasad, vepathu, parva bheda, roma harsha, srava, murchha, vaman.
4.	Bangasen Samhita ^[15]	Pandu varna rakta, mandala, jvara, aruchi, roma harsha, daha.

Table 3: Vishesha lakshana and Chikitsa^{[16][32]}

Sl. No.	Name of mooshika	Damsha lakshan	Chikitsa
1	Laalan	Lala srava, hikka, vaman.	Tanduliyaka kalka with madhu
2	Putraka	Angasad, pandu varna, granthi in whole body	Shirisha and ingudi(hingota) kalka with madhu
3	Krishna	Sopha, rakta vaman,	Shirisha phala, kustha with palasha puspa bhasma take with madhu
4	Hansira	Anna dwesha, jrimbha, romaharsha	Vaman followed by aragvadhadi gana kwath.
5	Chikkira	Siro vedana, sophia, hikka, vamana	Vaman with jalani (katutumbhi), madhanphala, ankotha Kashaya with yavakshara, kevacha, brihati.
6	Chuchundra	Trishana, vaman, jvara, durbalya, griva sthambha, pristha sophia, gandha agyan, vishuchika.	Chavya, harad, sunthi, vidanga, pipapli and ankotha with madhu.
7	Alasa	Griva stambha, urdha vayu, vedana at dams site, jvara.	Maha agada ghee and madhu.
8	Kashaayadanta	Nidra, hridya sosha, krishata.	Sara, phala, chhala churna of sirisha with madhu.

9	Kulinga	Vedana, sophia, mandal on damsha site.	Mugdhaparni, mashaparni and Sindhuvar (nirgundi) with madhu.
10	Ajita	Anga krisshna varna, vaman, murchha, hridyagraha.	Nisoha and manjistha paste with snuhi kshir and take with madhu.
11	Chapala	Vamana, murchha, trishana.	Triphala, devadaru, jatamansi with madhu.
12	Kapila	Vrana kotha, jvara, granthi and trishna.	Sweta aparajita and sweta punarnava with madhu.
13	Kokila	Granthi, tivra jvara, tivra daha,	Punarnava, nilini kalka and kwatha siddha grita.
14	Arunadi pancha mooshaka	Granthi, mandala, karnika sotha.	Karanja, amlatasa, sunthi, pipali, maricha, kantikari, prishanparni, shalaparni kwath added with nisotha, gavjava, guduchi, tagar, sarpagandha, kali mritika, kapitha twak and dadima twak churna with dughda, dadhi and ghrita.

According to Acharya Vagbhat, visha of mooshika possess mainly vyavayi property (spread quickly), that's why it is difficult to treat and it is called krichha sadhya. ^{[17][18]} Where as Murchha, anga sophia, vaivarnya, kleda, sabda asruti, siro gurutva, lala asriga chhardi are Ashadhya lakshna ^{[19][20][21][22]}

Varjita rogi lakshana ^{[23][24]}- suna vasti(swelling of bladder), vivarna osth (discoloration of lips), granthi all over the body, emitting smell like rats.

Samanya chikitsa –

- i) **Sodhana chikitsa-**
 - a) Agni karma- Damsa site daha with tapta ghrita. ^{[25][30][31]}
 - b) Rakta mokshana and then use of lepa on damsia site with Sirisha, Haridra, Kustha, Kumkum and guduchi. ^[25]
 - c) Vaman yoga – i) Devadali phala, Katutumbi mula, Madhaphala, Kukaralata phala with Dadhi. ^[25]
 - ii) Jalani kwath and Sirisha seed. ^[28]
 - iii) Kwath of Nilini, Sukakhya and Ankola. ^{[30][31]}
 - iv) Dadhi mixed with curna of Koshataki phala,

d) Virechana- i) Trivrita, Danti and Triphala. [25][30][31]

ii) Virechan with kalka of Trivrita, Triphala, and Danti. [28]

e) Sirovirechan- Sirisha saara and phala. [25][30]

f) Pradhama nasya- With Kutaja phala, Tagara, Devadali, Tikta Ikshvagu churna. [27]

ii) Samshamna chikitsa-

Internal

- a) Phaladi yoga- Madanphala, Vacha, Devadali, Kutha paste with Gomutra and given with Dahi. [26]
- b) Liha- Kapitha rasa or Gorasa with Madhu. [26] [28] [30][31]
- c) Kalka- kalka of Rasanjan, Haridra, Indrayava and Katurohini given with Madhu. [26]
- d) Kalka- kalka of Ativisha with Madhu. [26]
- e) Ghrita – Tanduliya mula siddha Ghrita to be given orally. [26] [30]
- f) Ghrita- Prepared with Dvanisha, Katabhi, Raktayasti and Amrita. [30]
- g) Sariva kwath or Pancha kapitha kwatha siddha ghrita to be given orally. [26][30]
- h) Mooshika visha nasaka yoga- Fine churna of Twak and Nagar with usna jala. [27]
- i) Visha nasak yoga –Equal amount of Kutaja phala, Tagara, Devadali, Tikta Ikshvagu churna are mixed and given with water. [27]
- j) Sirisha mula with madhu or Tandula ambu. [28]
- k) Ankola mula kalka with Aja mutra. [28][30]
- l) Vishala(indrayan) mula, Ankola mula, Tila mula with Sita(misri), Madhu, and Ghrita. [28]
- m) Kusum pushapa, godanta, svarna kshira, kapota vid, danti, trivrita, saindhava lavana, ela, punarnava, tila kalka with milk. [28]
- n) Majara (bilaava) pitta, mamsa rasa and rakta pan. [28]
- o) Gavakshira, bilva, kakoli mula, tila mula and misri with madhu and ghrita. [28]
- p) Tanduliyaka mula kala siddha ghrita. [28]
- q) Vaca, madana, jimuta and kustha paste with go mutra. [30]
- r) Kwath- Sinduvara, nata, sigru, bilva mula, punarnava, vaca, svadamstra and jimuta kwath with madhu. [30]
- s) Sarpunkha beej churna with takra. [30]
- t) Kapitha phala sara, tilaka, tila, and ankola mula mixed with go mutra. [30]
- u) Kalka of tilaka manjari with milk. [30]
- v) Peya- Peya prepared by kwath of dvapippali and amumati. [31]

External –

- a) Anjana – Trikatu with gomay swarasa.^{[26][28][31]}
- b) Lepa – i) Sirisha mula with madhu or tandula ambu.^[28]
 - ii) Ankola mula kalka with aja mutra.^{[27][28][30]}
 - iii) Angardhuma, manjistha, rajani and lavanottam.^{[30][31][33]}
 - iv) Paste of phalani, sweta katabhi, bilva mula and guduchi.^{[30][31]}
- c) Prakshalan- Damsa site clean by amla dravya rasa.^[30]

Chikitsa of karnika – i) After incision, treatment according to dosha and vrana chikitsa should be adopted.^[29]

ii) After incision paste of sirisa, rajani, vakra, kumkum, and amritavalli is applied over vrana.^{[30][31]}

Contemporary view of Mooshika visha:^[34]

In modern medicine, Mooshika visha can be compared with Rat Bite Fever (RBF). Anyone can get RBF if they have contact with rodents infected with the bacteria that cause RBF. Certain groups of people are more at risk for this serious and sometimes deadly disease.

The rodents that carry RBF include rats, mice, gerbils, guinea pigs, and squirrels. The bacteria that cause RBF is part of the natural germs in these rodents' bodies. Rodents that are carrying the bacteria that cause RBF do not show signs of illness, so it's not possible to tell if a rodent carries the bacteria just by looking at it.

Causes:

RBF is caused primarily by *Streptobacillus moniliformis*. These bacteria have several microbiological features; fastidiously growing, gram-negative, pleomorphic, non-sporulating, non-encapsulated rod, facultative anaerobes, non-motile, and tangled filaments with bulbous or "Monilla"-like swellings.

Spirillum minus more often cause RBF infections in Asia and are characterized as short, thick, motile spirochetes, having bipolar flagellar tufts.

Symptoms:

The early symptoms of RBF can be like the flu. If any person is infected by contact with rodents, symptoms usually include fever, vomiting, headache, and muscle pain. About half of people will also have joint pain or swelling, and 3 in 4 will develop a rash. Symptoms usually begin in 3 to 10 days after contact with rodents. They can appear up to 21 days after the contact. By that time, the bite or scratch should be healed. Within 2 to 4 days after the fever begins, a rash may appear on the hands and feet. This rash looks like flat, reddened areas with small bumps. One or more joints may then become swollen, red, or painful.

The bacteria that cause RBF in Asia can be different than the bacteria that causes RBF in North America. In Asia, symptoms might be different. They can include fever, swelling around the bite if you have one, rash, and swollen lymph nodes.

Complications:

Complications of RBF can include pockets of infected fluid in the body, like in abdomen. The disease can also cause infections of many major organs, including the liver, kidneys, lungs, heart, brain, and nervous system. Early treatment with antibiotics is important to prevent complications of RBF. These complications are rare but can be very serious and even deadly.

How it spreads:

RBF can spread to people through scratches, bites, or contact with a rodent's saliva or pee. It can also spread by having contact with contaminated materials (rat bedding, cages, etc.), kissing pet rats, or eating or drinking contaminated food or drinks. RBF transmission does not necessarily require contact with rodents.

Although rare, some animals like dogs, cats, ferrets, and rabbits can be infected by contact with infected rodents and then pass the infection on to people. People usually start to show signs they are sick 3-10 days after exposure. The virus cannot be spread from man to man.

Treatment and recovery:

If anyone develops signs or symptoms of RBF, antibiotics should be started immediately.

There is limited research on the effectiveness of specific antibiotics to treat RBF. However, *S. moniliformis* is generally susceptible to several antibiotics. These includes – Penicillin's, Cephalosporin's, Carbapenems, Aztreonam, Clindamycin, Erythromycin, Nitrofurantoin, Bacitracin, Doxycycline, Tetracycline, Teicoplanin and Vancomycin.

Intravenous penicillin G given for 7 or more days, then oral penicillin, is usually recommended for the treatment of RBF. However, patients can experience adverse reactions to penicillin treatment which usually improve quickly once antibiotics are started. In patients allergic to penicillin, doxycycline or streptomycin are alternative choices.

Endocarditis is a rare complication and may require combination therapy with both intravenous penicillin G and streptomycin or gentamicin for effective treatment. However, no recent studies have been done to evaluate the effectiveness of combination treatment.

CONCLUSION

The concept of Mooshika Visha (rodent poison) in Ayurveda presents a unique perspective on envenomation and its management, rooted in ancient classical texts. The clinical presentation, pathophysiology, and treatment principles provide a holistic framework that emphasizes both symptomatic relief and systemic detoxification. The chikitsa (treatment) approaches, including internal medicines, external applications, and procedural interventions like Panchakarma, underscore the importance of personalized care based on the severity and type of envenomation. Integration of Ayurvedic principles with modern toxicological insights can enhance the understanding and management of rodent poisoning in contemporary settings. However, further research is needed to validate these concepts through experimental studies and clinical trials. By bridging traditional knowledge and modern evidence, the principles of Mooshika Visha Chikitsa have the potential to contribute significantly to public health and toxicology.

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