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AYURVEDIC ASPECT OF RAT BITE AND ITS MANAGEMENT-A REVIEW

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ABSTRACT

In Ayurvedic texts rat bite is described as mooshikaa visha. Eighteen types of rats, signs and symptoms of their bite and its treatment is described by Sushrutaacharya and Vaagbhataacharya. There are five modes of spread of mooshika (rat) poison. Semen, faeces, urine, scratches by nails and bites with teeth of rat are poisonous. The description of rat bite fever and leptospirosis shows that both are having similarity with mooshika poisoning described in ayurvedic texts. In case of mooshika bite, bite site should be cauterized and blood letting should be done. After this various drugs paste should be applied on bite site. Various purificatory therapies should be given e.g. vamana (Vomiting), virechana (Purgation), nasya (Nasal medication), anjana (Collyrium) etc. Various drug preparations like medicated ghee, decoctions, paste of drugs, juice of drugs are described. Ayurvedic treatment of mooshika poisoning can be given in all diseases where source of infection is rat.

Keywords: Mooshikaa visha, Rat bite fever, Leptospirosis.

INTRODUCTION

Agadtantra is one of the eight branches of ayurveda which describes animate and inanimate poisons and its management in detail.1 In Ayurvedic texts rat bite is described as mooshikaa visha.2 Brihatrayee describes its signs and symptoms, types, incurable features and treatment in detail. Eighteen types of mooshikas (rats), signs and symptoms of their bite and its treatment is described by Sushrutaacharya and Vaagbhataacharya. Laalan, Putraka, Krishna, Hansira, Chikira, Chuchundra, Alasa, Kashaayadanta, Kulisinga, Ajita, Chapala, Kalia, Aruna, Mahakrishna, Mahashweta, Mahakapila, Kapota are the eighteen types of mooshika (rat).3 There are five modes of spread of mooshika (rat) poison. Semen, faeces, urine, scratches by nails and bites with teeth of rat are poisonous. Mooshika (rat) semen is most poisonous. Contact with semen of mooshika (rat) directly or indirectly (Substance contaminated with semen of rat) can cause poisoning.

Symptoms of mooshika (rat) bite:
Vitiation of blood, pallor, lumps, swelling, rashes and reddish patches on skin, giddiness, loss of taste, fever with rigors, severe pain, debility, shivering, arthralgia, horripilation, exudations, fainting of long duration and repeated vomiting of large quantity of mucoid material appearing like young ones of rat.

Incurable signs:
Fainting, oedema all over body, discoloration of skin, exudation, loss of hearing, fever, heaviness of head, excess of salivation, haematemesis, retention of urine, discoloration of lips, body covered with small nodules resembling rat, body emitting smell of rat.

Treatment of mooshika (rat) bite:
1. Cauterization of bite site and blood letting from bite site should be done.
2. Drugs for local application after cauterization and blood letting-
   a) Paste of shireesh (Albizia lebbeck), haridra (Curcuma longa), kushtha (Aussurea lappa), keshar (Crocus sativus), guduchi (Tinospora cordifolia) should be applied on bite site.
   b) Paste of trivrutta (Operculina turpethum), shweta aparaajita (Clitoria ternate), root of bilva (Aegle marmelos), and guduchi (Tinospora cordifolia) should be applied on bite site.
3. Vamana (Vomiting)-
   Paste prepared by macerating roots of shireesh (Albizia lebbeck), katutumbi (Langenaria vulgaris), fruit of madana (Randia spinosa), and devadali (Luffa echinata) along with curd and consumed to induce vomiting. This is useful in all types of rat bite.
4. Virechana (Purgation)-
For purgation use the paste of trivruta (Operculina terpethum), danti (Baliospermum montanum), and triphala (Terminalia chebula, Terminalia belerica, Emblica officinalis)\(^{10}\).

5. *Nasya* (Nasal medication)- Fruits of shireesh (*Albizia lebbeck*) are used for preparing drugs for nasal administration.\(^{10}\)

6. *Anjana* (Collyrium)- Juice of cow dung mixed with trikatu (*Zingiber officinale, piper nigrum* and *piper longum*) may be used for making preparations for collyrum.\(^{11}\)

7. Drugs useful in *mooshika* (rat) bite-
   a) In case of *mooshika* (rat) bite when there is fever decoction of following drugs should be given. Kiratatikata (*Sweta chirata*), amruta (*Tinospora cordifolia*), manjishtha (*Rubia cordifolia*), arjuntwaka (*Terminalia arjuna*), palash (*Butea frondosa*), kashmarya (*Gmelia arborea*), kshirvidari (*Ipomoea digitata*), tanduliaka (*Amaranthus spinosus*), madhukar (*Merremia emarginala*), madhulika (*Marsdenia tenacissima*), kapitha (*Limonia acidissima*), rajvruksha (*Casia fistula*).\(^{12}\)
   b) *Nileekaranjaadi Kashaaya* (Decoction) - This decoction has been found to be highly effective in rat bite when there is fever decoction of the following drugs should be given.

   - *Kaarpara* leaves (*Gossypium arboreum*), twaka (*Jejunea glauca*), anuvarghadhaadi gana.
   - *Kushtha* (*Zingiber officinale*), *Saariva* (*Hemidesmus indicus*), *Kartik (*Atheta kerri*), *Kollunta* (*Rhapis excelsa*), *Vitex* (*Vitex negundo*) and *shunthi* (*Zingiber officinale*), with warm water is very useful in rat bite, it use after *karekar* (cow dung) and *musta* (*Murraya koenigii*).

   c) *Kapitha* juice (*Limonia acidissima*) and juice of cow dung along with honey should be given.\(^{14}\)
   d) Paste of *ativisha* (*Aconitum heterophyllum*) along with honey is useful.\(^{14}\)
   e) *Tanduliyaka ghee* (*Amaranthus spinosus*) is effective in rat bite.\(^{14}\)
   f) *Root of saariva* (*Hemidesmus indicus*), and root, fruit, leaves, flower and bark of *kapitha* (*Limonia acidissima*) are used to prepare medicated ghee which is useful in rat bite.\(^{14}\)
   g) Powder of *sharapunkha* (*Tephrosia purpurea*) seeds along with buttermilk is useful.\(^{15}\)
   h) *Root of ankota* (*Alangium salvifolium*) macerated with goats urine used in the form of drink and external application on bite site.\(^{15}\)
   i) *Kaarpara* leaves (*Gossypium arboreum*) triturated in tilailata (*Sesamum indicum*) should be given orally.\(^{16}\)
   j) Decoction of *musta* (*Cyperus rotundus*), madhuka (*Madhuca indica*) and *jeeraka* (*Cuminum cyminum*) along with honey is useful.\(^{16}\)
   k) Equal quantity of *twaka* (*Cinnamomum zeylanicum*) and *shunthi* (*Zingiber officinale*) with warm water is very useful in rat bite.\(^{17}\)

### Treatment of poison which is remaining in the body for long time:

The poison remaining in the body may be aggravated on cloudy days. Due to seasonal changes toxicity may increase. In such cases various putrifictory therapies are used and treatment should be give as per *dooshivisha* treatment.\(^{18}\)

<table>
<thead>
<tr>
<th>Rat type</th>
<th>Symptoms of bite</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laalan</td>
<td>Salivation, hiccup, Vomitting.</td>
<td>Tanduliyaka (<em>Amaranthus spinosus</em>) paste with honey.</td>
</tr>
<tr>
<td>Putraka</td>
<td>White discoloration and weakness of body, appearance of small nodules on body resembling rat.</td>
<td>Paste of shireesh (<em>Albizia lebbeck</em>) and ingudi (<em>Balanites aegyptiaca</em>) with honey.</td>
</tr>
<tr>
<td>Krishna</td>
<td>Swelling, haematemesis.</td>
<td>Decoction of shireesh fruit (<em>Albizia lebbeck</em>) and <em>kushtha</em> (<em>Saussurea lappa</em>) with ash of <em>palaash</em> flower (<em>Butea frondosa</em>).</td>
</tr>
<tr>
<td>Hansira</td>
<td>Aversion to food, yawning and horripilations.</td>
<td>Patient should be made to vomit well by use of drugs and then drink the decoction of <em>aarvyadhadaadi gana</em>.</td>
</tr>
<tr>
<td>Chikkira</td>
<td>Headache, swelling, hiccup, vomiting.</td>
<td>Patient should be made to vomit by drinking the decoction of <em>jalini</em> (<em>Langenaria vulgaris</em>), <em>madana</em> (<em>Randia spinosa</em>) and <em>ankota</em> (<em>Alangium salvifolium</em>).</td>
</tr>
<tr>
<td>Chuchundara</td>
<td>Thirst, vomiting, fever, debility, stiffness of neck, swelling of the back, loss of sense of smell and gastroenteritis.</td>
<td>Decoction of <em>chavya</em> (<em>Piper cheba</em>), <em>haritaki</em> (<em>Terminalia chebula</em>), <em>shunthi</em> (<em>Euphorbia neriifolia</em>), <em>vidanga</em> (<em>Emilia ribes</em>), <em>pippali</em> (<em>Piper longum</em>), <em>ankota</em> (<em>Alangium salvifolium</em>) along with honey.</td>
</tr>
<tr>
<td>Alasa</td>
<td>Stiffness of neck, pain at bite site and fever.</td>
<td><em>Mahaagad</em> with honey and ghee.</td>
</tr>
<tr>
<td>Kashayadanta</td>
<td>More sleep, dryness of region of heart, emaciation.</td>
<td>Powder of shireesh bark and fruit (<em>Albizia lebbeck</em>) with honey.</td>
</tr>
<tr>
<td>Kulingaka</td>
<td>Pain and swelling at bite site.</td>
<td><em>Mudgaparni</em> (<em>Phaseolus trilobus</em>), <em>Maashparni</em> (<em>Teramnus labialis</em>) and <em>sinduvara</em> (<em>Vitex</em>).</td>
</tr>
</tbody>
</table>
DISCUSSION

According to modern science rat bite fever is an infectious disease transmitted in the secretions of the mouth or nose or urine of an infected rodent. Rat bite fever can be caused by two different organisms streptobacillus moniliformis and spirillum minus. Most people acquire rat bite fever through contact with urine or oral or conjunctival secretions from an infected animal. This commonly occurs via a bite, yet some cases may occur simply through contact with these secretions. The source of infection is usually rat. Symptoms of rat bite fever are fever, chills, headache, muscle aches, diffuse rash, large joints are swollen, red and painful.20

Leptospirosis is a zoonosis caused by spirochaetes belonging to the genus leptospira and occurs in endemic and epidemic forms. Rodent is the most important reservoir of infection. Leptospirosis exists in some animal species like rats without producing any disease such animals may shed leptospira in urine for prolonged periods. Symptoms of leptospirosis are fever, severe headache, myalgias, conjunctival haemorrhage, sore throat, maculopapular skin rash. In severe disease symptoms are severe jaundice, acute renal failure, haemorrhagic manifestation include subconjunctival haemorrhage, epistaxis, haemoptysis, echymosis and gastrointestinal haemorrhage.21

The description of rat bite fever and leptospirosis shows that both are having similarity with mooshika poisoning described in ayurvedic texts. Mode of transmission, signs and symptoms of these diseases are similar to those of the descriptions of mooshika poisoning in ayurvedic texts. The involvement of liver and kidney is evidenced by the presence of symptoms like discoloration and oedema all over body. Myalgia, haematemesis, tenderness, petechial haemorrhages from skin and mucous membrane etc. are common in both diseases.

CONCLUSION

In ayurvedic texts line of treatment of mooshika bite given in detail. In case of mooshika bite, bite site should be cauterized and blood letting should be done. After this various drugs paste should be applied on bite site. Various putrifictory therapies should be given e.g. vamana (vomiting), virechana (Purgation), nasya (Nasal medication), anjana (collyrium) etc. Various drug preparations like medicated ghee, decoctions, paste of drugs, and juice of drugs are described. In Kerala much research and development has been done in the ayurvedic management of animate poisoning. Ayurvedic treatment methods and medicinal recipes for mooshika poisoning are still being practiced by vishavaidyas (Physician) in Kerala. Ayurvedic treatment of mooshika poisoning can be given in all diseases where source of infection is rat.

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