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# Ayurvedic Aspect of Alark (Rabies)–A Peer Review

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## <u>Abstract</u>

Alarka (Rabies) is a disease of sangyavaha srotas in Ayurveda. Rabies is an acute, highly fatal viral disease of central nervous system caused by Lyssavirus type 1.It is a zoometric disease of warm blooded animals such as dogs, is transmitted to man usually by bites or licks of ras alarka visha. Incurable features include, image of bitten animal observed by the affected person water and in mirror in ayurved term i.e. Hydrophobia in which it is stand that Jalasantrasa sight, touch and sound of water aggravates the symptoms. Treatment of the Alarka is described by Sushruta acharya in sushruta samhita. The treatment mention by Acharyas include drinking of Puran ghrita, Virechana, Dhatura-Sharpunkha yoga etc.

#### Key Words: Rabies, Hydrophobia, Alarkavisha, Ayurvedic treatment.

# Introduction

According to the modern view Rabies is an acute, highly fatal viral disease of central nervous system caused by Lyssavirus type<sup>1</sup>. It is a zoometric disease of warm blooded animals such as dogs, jackals and wolves. It is transmitted to man usually by bites or licks of rabid animals.<sup>1</sup> Rabies is present in all continents with the exception of Antarctica, but more than 95% of human death occur in Asia and Africa. Once symptoms of the disease develop, bies is nearly always fatal. Every year, more than 15 million people worldwide receive a post-exposure vaccination to prevent the disease.<sup>2</sup> In Ayurvedic texts Alarka is described as visha.<sup>3</sup> Brihatrayee describes its signs and symptoms, incurable features and treatment in detail i.e. Charka, Shusruta, Vagbhatadetail explanation about sign & symptom of Alarka incurable features & treatment of Alarka is mentioned.

# Ayurvedic view about Alarka (Rabies)

According to Charaka, due to vitiation of tridosha and contrariety of dog suffers from headache, drooped face.<sup>4</sup>According to Sushruta vaagbhata, When vata gets aggravated in the body of dog,

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fox,jackal,bear,tiger etc. combines with aggravated mulates in the channels of their sense organs resulting in loss of sensation.deprived animal runs at r drooped tail, lowered jaw and shoulder uding more saliva and bite come close.<sup>5,6</sup> Due to bite of such alarka peedita pashu (Rabid animal) following signs and symptoms are produced in human being.

# **Pathogenesis of Rabies**

Rabies is a viral disease which affects all mammals. It is usually contracted through a bite from an infected animal though transmission can occur if the virus is introduced onto any membrane (eyes, nose, mouth).

When the virus is-

- 1) **Introduced through a bite** it begins to replicate in the skin or muscle tissue before it works its way into the peripheral nerves. Since the nervous tissue is stationary
- 2) The virus moves slowly as it jumps from nerve cell to nerve cell on its way to the brain. Though very small amounts of virus could enter the blood stream when the bite occurs, it would be unable to replicate there, so the blood from a rabid animal is not considered infectious.
- 3) The time it takes the virus to go from the bite wound to the brain is the incubation period. The incubation period can range anywhere from 2 weeks to several months. The average incubation period for dogs and cats is about 2 months. Usually, the location of the bite wound will determine the length of incubation. If an animal is bitten on the neck, the virus would have a relatively short distance to travel to the brain, and would likely have a short incubation period.
- 4) As soon as the virus reaches the brain it works itys way into the salivary glands. where it replicates in abundance and is shed in the saliva. At this point the animal becomes infectious and can transmit the disease through a bite. There is a period of about 3 days that the animal will be actively shedding the virus but will not appear to be sick in any way.
- 5) The virus in the brain has infected enough of the brain tissue that it begins to affect the animal's behaviour. Symptoms of rabies may include unexplained aggression, impaired locomotion, varying degrees of paralysis, and extreme depression or viciousness. Individual animals may be affected in different ways. Some animals will display the well known "vicious" form, while others, displaying the "dumb" form, will merely appear sick or dazed and become very lethargic. Once an animal begins to show signs of rabies it is likely to die within 5 days. Usually, the longest any dog or cat can live while actively shedding the virus is only going to be about 8 days. However, some wildlife species have been observed to shed virus for several weeks before showing any signs of illness and dying. Because of this, in any situation where a human or a domestic animal is exposed (bitten or scratched) by a wild animal, if at all possible, the wild animal should be immediately killed and tested for rabies.

# Symptoms of Rabies in Human<sup>8</sup>

The initial symptoms of Rabies are mild, but they quickly become serious.

• The incubation period

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- The incubation period is the time it takes for symptoms to develop after a person is infected with the virus. The incubation period for rabies is usually two to 12 weeks, although it can be as short as four days. It is unusual for the incubation period to last for more than a year.
- The closer the site of infection is to your brain, the shorter the incubation period. For example, a bite to your face, head or neck will have a shorter incubation period than a bite to your arm or leg.

The length of the incubation period is important as it's the only period in which treatment can be successful.

#### • Initial symptoms

The initial symptoms of Rabies are often vague & it can be easy to mistake them for other, less serious, types of infections. They include

➢ Fever

- ➢ Headache
- Feeling generally unwell
- Feeling scared or anxious

Around half of people also experience pain and a tingling sensation at the infection site.

### • Advanced symptoms

Initial symptoms of rabies last for two to 10 days before more severe symptoms start to develop. These typically include aggressive behaviour, hallucinations, agitation & producing lots of saliva.

## • When to seek medical advice

If you're in a part of the world known to be affected by rabies, always seek medical advice as soon as possible if you're bitten or scratched by an animal, particularly a dog. You can also catch rabies if you have an open wound that is licked by an infected animal. In the UK, rabies is only found in bats. However, always seek medical attention if you're bitten by a bat or if you think someone in your care who is unable to report a bite may have been bitten (for example, if you find a bat in a young child's room).

#### Local and General Signs and Symptoms

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Signs and Symptoms	Ashtaang samgraha <sup>9</sup>	Ashtaang Hrydayam <sup>10</sup>	Charaka samhita <sup>11</sup>	Sushruta Samhita <sup>12</sup>
Suptata (Loss of sensation)	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Krishna asruka strava (Blackish coloured bleeding)	~	~	~	~
Kandu (Itching)	$\checkmark$	$\checkmark$	$\checkmark$	-
Nistoda (pain)	✓	$\checkmark$	✓	-
Vaivarnya (Discolouration)	✓	$\checkmark$	✓	-
Kleda(Exudation)	✓	✓	✓	-
Vidaha (Buring sensation)	$\checkmark$	$\checkmark$	$\checkmark$	-
Raga(Redness)	$\checkmark$	$\checkmark$	$\checkmark$	-

Shopha Granthi (Suppurative	$\checkmark$	$\checkmark$	$\checkmark$	-
and				
cystic swelling)				
Danshavdaran (Tearing of tissue)	$\checkmark$	$\checkmark$	$\checkmark$	-
Spota (Appearance of vesicles)	$\checkmark$	$\checkmark$	$\checkmark$	-
Nikunchana (Contractures)	$\checkmark$	$\checkmark$	$\checkmark$	-
Mandal (Ring like patches)	$\checkmark$	$\checkmark$	$\checkmark$	-

**General Signs and Symptoms** 

Signs and Symptoms	Ashtaang samgraha <sup>13</sup>	Ashtaang Hrydayam <sup>14</sup>	Charaka samhita <sup>15</sup>	Sushruta Samhita
Hritshula (Chest pain)	✓	✓	$\checkmark$	-
Shiroruka (Headache)	$\checkmark$	$\checkmark$	$\checkmark$	-
Jwara (Fever)	✓	$\checkmark$	✓	-
Stambha (Stiffness)	✓	✓	✓	-
Trishna (Thirst)	$\checkmark$	$\checkmark$	$\checkmark$	-
Murccha (Fainting)	$\checkmark$	$\checkmark$	✓	-

## Asadhya Lakshana(Incurable features)-<sup>16</sup>

- 1) When affected person imitates the voice and activities of an animal by which he got bitten, it becomes incurable.
- 2) When affected person sees the image of an bitten animal in water and in mirror it becomes incurable.
- 3) Jalasantrasa (Hydrophobia)- When affected person gets scared by sight, touch and sound of water such condition is called as Jalasantrasa (Hydrophobia), it is incurable

#### **Treatment-**

1) Prophylaxis methods- Sushruta acharyas had mentioned that -

The person in whom the poison is spontaneously aggravated has no chance of recovery, hence the poison should be artificially aggravated (and then remedied) before reaching that stage of aggravation.<sup>17</sup>

2) Agnikarma-

Blood containing poison should be removed from the site of bite and then site should be burnt by pouring hot ghee on it, Agada (antipoisonous medicine) should be applied as warm poultice on that area.<sup>18</sup>Juice of pratyakpushpa (Achyranthes aspera) flowers should be squeezed on the wound.

- 3) Ghritpaan (Drinking of ghee)and Purgation-Affected person should be made to drink Puran ghrita and purgative drugs along with milky sap of arka (Calotropis procera) should be administered.<sup>19</sup>
- 4) Sanshodhana (putrifictory therapies) After bath the person should be administered strong Shodhan therapies (Vomiting and purgation) because in a person who is not purified well, the poison gets aggravated again, though the wound has healed.<sup>20</sup>
- 5) Preparation of medicines and treatment in Alarka Visha.
- a) Palala (Paste of tila) mixed with tila taila (Sesamum indicum), milky sap of arka

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(Calotropis procera) and guda (Jaggery) should be administered. Dhatura (Dhatura metel) along with shweta punarnava (Boerhavia diffusa) should be administered. These drugs are said to destroy the poison of rabid dog as easily as wind drives away the cluster of clouds.<sup>21</sup>

- b) Repeated application of paste of tila (Sesamum indicum), guggula(Commiphera mukul), durva(Cynodon dactylon),dadima(Punica granatum) and guda as a warm poultice is best to treat the local symptoms of dog bite.<sup>22</sup>
- c) Dhatura Sharpunkha Yoga-<sup>23</sup>

Root of Sharpunkha (Tephrosia purpurea) one karsha(10gs) and root of Dhatura (Dhatura metel) half karsha (5gms) should be macerated along with tandula (rice) using tandulodaka (rice water) this paste should be enveloped with leaves of dhatura and apupa(pan cake) should be made with it. This cake should be consumed at the time of meals (mid day) by the person suffering from poison of rabid animal. If after the digestion of this pan cake the person still behaves like rabid animal as before, then he should be kept confined in a cold room devoid of water. Once the abnormal symptoms subside the person should be given bath the next day. He should be given warm meals of boiled rice along with milk. This kind of treatment should be given for 3-5 days and be continued by half its degree for further days until abnormal symptoms subside.

- d) Roots of nala (Arundo donax) macerated with water is beneficial for drinking and external application.<sup>24</sup>
- e) Decoction of leaves, bark, root of jalavetasa consumed cold is best medicine for dog bite. Medicated ghee prepared from this decoction used for drinking, nasaldrops, anointing and external application is best in all types of Jalasantrasa (Hydrophobia)<sup>25</sup>
- f) The wound caused by the nails or teeth of such rabid wild animals should be squeezed and warm oil should be poured over the area, as these aggravates vata.<sup>26</sup>Application of paste of somvalka (Myrica esculanta), ashvakarna(Dipterocarpus turbinatus), gojihva( Onosma bracteatum), hamsapadika( Adiantum lunulatum), haridra( Curcuma longa), daruharidra(Berberis aristata) and gairika removes the poison from the wounds caused by nails and teeth.<sup>27</sup>
- 6) Propitiatory bath-

The person should be taken to thebanks of river or a meeting place of four roads and be given bath with cold water from pots containing precious gems and medicinal plants.<sup>28</sup>

- 7) Sanshodhana (putrifictory therapies)- After bath the person should be administered strong putrifictory therapies (Vomiting and purgation) because in a person who is not purified well, the poison gets aggravated again, though the wound has healed.<sup>29</sup>
- 8) Recharge yourself with<sup>30</sup>
  - Shatavaradi Churna
  - Jatamansi Vati
  - Rasayan Haritaki

Dite for

- Balance your diet
- You can protect your brain by eating grape seed extracts cashewnuts and broccoli.
- Refined carbohydrate -stimulate the releasing of dopamine so avoid it.

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- Gluten free diet
- Omega -3- fatty acids are preferred.
- Food is a stimulating conflict
- Proteins to be included in every food
- Eat fresh food
- Avoid junk

#### DISCUSSION

According to modern science, there is no specific treatment for rabies. Rabies is usually fatal and major efforts are only for prevention.<sup>31</sup> Ayurveda emphasizes the same. In Sushruta samhita , many yogas are mentioned to prevent the pathogenesis of rabies. Dhatura Sarpunkha yoga is one of them. According to Bhavaprakash, Dhatura (Dhatura metel) and Sharapunkha (Tephrosia purpurea) are vishapaha (antipoisonous)<sup>32</sup>, when both the drugs are used in combination the anti poisonous effect is enhanced. Dhatura itself is a Sthawar visha (Vegetable poison) and use of Sthawar visha is recommended in treatment of Jangam visha (Animate poison)<sup>33</sup>, after shuddhikaran (purification) of Sthawar visha. Dhatura can also be used in combination with shwetapunarnava (Boerhavia diffusa) which is also vishghna (anti poisonous).

#### Conclusion

In Sushruta Samhita it is mentioned that, the person in whom the poison increases on its own accord, he does not survive, hence it should be made to increase quickly, if not increasing on its own. This indicates that the prophylactic treatment plays a major role, because as the disease is progressing it is very difficult to treat and becomes incurable. Various remedies useful in dog bite are described in Brihatrayee. There is need to study the efficacy of these drugs as the efficacy of these drug is proved it will be a precious gift to the world of medical science and ultimately a blessing for humanity.

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