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REVIEW ARTICLE

IMPORTANCE OF RAKTAMOKSHAN AS A FIRST AID MEASURE IN POISONOUS SNAKE BITE

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Abstract:-

Ayurveda has its own way of approach towards the management of visha, which is unique and parlance with the concepts of current science. About 70% of Indian population lives in villages and forest area where agriculture is the main occupation. These people are prone to incidence of snake bite and estimation of snake bite mortality in India varies from approximately 50000 Indians mostly poor villagers die in 250000 incidence of snake bites¹. Raktamokshan (bloodletting) one among the panchavidha shodhan chikitsa (five purifactory treatment modalities) mentioned by Brihatrayee. Raktamokshan (bloodletting) aims to eliminate vitiated blood, as poison enters blood and spreads all over body very fast. The aim of present paper is to review importance of raktamokshan (bloodletting) chikitsa (treatment) in poisonous snake bite as a first aid measure.

Keywords: - Raktamokshana, bloodletting, poisonous snake bite

Introduction

Healing with the feeling is the hallmark identity of Ayurveda. Any science such as ayurveda has its practical findings based on certain concepts. Agadtantra one among the eight branches of ayurveda describes toxins and their effect on the body and its treatment.

Snakes are distributed as common emergency². Snake bite remains as an underestimated cause of accidental deaths in India. There are more than 3500 species of snakes all over the world but only about 250 are venomous and from that 52 are found in India³. India has long been considered to have the most snake bites incidents than any other country⁴.

Commonly the Indian Cobra (*Naja Naja*), Common Krait (*Bungarus Caeruleus*), Russels Viper (*Daboia Russelii*), and Saw Scaled Viper (*Echis Caranata*) which are commonly called "Big four" which are responsible for snake bite mortality⁵. In 25% - 50 % snake bite cases where no or minimal venom is injected

as a matter of defence or to give warning signal⁶.

Snake bite till date remains as a public health hazard in India. With high incidence in the states of Tamilnadu, West Bengal, Maharashtra, Uttar Pradesh and Kerala⁷. Considering this the world health organization has added snake bite to their list of neglected tropical disease and designed an exclusive protocol its management⁸.

In India mostly rural areas, health centres are inadequate and snake bite victims mostly depends on folklore healers and herbal antidotes, as an alternate treatment. By giving them proper awareness about raktamokshan (bloodletting) in poisonous snake bite definitely saves the life. Hence the aim of the present paper is to review raktamokshan chikitsa as a first aid treatment in poisonous snake bite

Material and Method

Indian ayurvedic surgery has probably the first detailed, rational, systematic description of

raktamokshan for several illnesses⁹. Raktamokshan procedure are beneficial where medical facilities are far away and specific antivenin is not available because according to the Acharya Sushruta if no treatment is given for poisoning, the poison will kill the victim within 2-3 hours (muhurta)¹⁰.

The 24 modalities mentioned by Acharya Charaka^{11,12} have their own significance in neutralizing the poison in different ways and there is certain ambiguity in the approach as compare to modern medical science. The raktamokshan among the treatment modalities emphasized in Ayurveda have a great significance and are valuable particularly in remote areas, where medical facilities are meagre.

Panchakarma (five treatment modalities) measures are designed to eliminate vitiated dosha but raktamokshan (bloodletting) aims to eliminate vitiated blood as a therapeutic measure as poison enters blood and spread all over body very fast¹³.

Poison after entering the body vitiates the blood first, next the kapha, pitta, and vata along with their respective seats then it invades the heart which leads to the death¹⁴. Prime aim of first aid measures is to prevent the poison from entering into the circulation and the second one is to eliminate the poison which entered into the local tissue.

In principle, the ayurvedic approach to the treatment of disease consists of two major procedures¹⁵.

1. Sanshodhana chikitsa (purifactory)
2. Sanshamana chikitsa (palliative)

Sanshodhana chikitsa includes

1. vaman 2. virechana 3. basti 4. nasya and 5. raktamokshan according to Acharya Vagbhata¹⁶.

Basically to expel out the vitiated blood, seven procedures were advocated: Venesection (sira vedhan), Horn application (Sringa avacharana), Gourd application (Alabu avacharana), Leech application (Jalauka avacharana), Scrapping (Pracchanna karma), Cupping glass application (Ghati yantra

avacharana) and needle application (Suchi avacharan)⁹.

According to Acharya Vagbhata, poison do not vitiates the body without reaching the blood, after mixing with blood even an atom of it spreads like oil on water which shows the importance of blood as a medium in spreading of poison¹⁷.

According to Acharya Sushruta in all cases of snake bite a wise physician should puncture the vein near the site of bite, either in the extremities or in the forehead and let out the blood. By allowing the blood to flow out, the poison also goes out quickly^{18,19}.

Next after cutting (incising or scraping) the site of bite it should be smeared with agada i.e. anti poisonous medicine and water added with chandana and ushira should be poured on the part^{20,21}.

According to Ashtanga Hridaya the poison remains for a period of one hundred matra (app. 90 - 100 sec) at the site of bite and then spread throughout the body vitiating the blood and other tissue. Within this period it incising the site of the bite should be done quickly so that the poison does not spread in the body²².

According to Ashtanga Hridaya, in case of predominance of pitta, incision should be made in between two tourniquets and blood sucked through the mouth filled with mud, ash, anti-poisonous drugs or cow dung^{23,24}. This may be a kind of precautionary measures, which prevents the contact of poison with oral mucosa.

When the veins are invisible the blood should be taken out by using sucking horn or leech.

Acharya Sushruta

In Darvikaar (Cobra) snake bites 1st vega, raktamokshan (bloodletting) should be done at site of bite²⁵.

Even in Mandali (Viper) snake bite 1st vega, raktamokshan (bloodletting) should be done at site of bite same as in Darvikaar (Cobra) snake bite²⁶.

In Rajimant sarpa dansha (Common Krait) 1st vega raktamokshan (bloodletting) should be

done with the help of alabu and then agadpaan (antidote) should be done along with honey and ghee²⁷.

Acharya Charaka

Acharya Charaka advocated 24 modalities¹¹ to counter the case of poisoning in which one has to examine and decide the procedure justifiable for that specific condition among 24 modalities. Among these raktamokshan is emphasized as par excellence.

When visha reaches the rakta dhatu, raktamokshan eliminates visha (poison) and its prabhav from body^{28,29}.

Acharya Vagbhata

As per Acharya Vagbhata Poison cannot damage the tissue without entering the blood. Even an atom of poison can spread all over the body along with blood and can damage the system¹⁴. Considering this priority has been given by the seers towards preventing the entry of poison into the systemic circulation.

When poison spreads all over the body puncturing vein is an important measure. As removal of blood takes poison out along with it^{30,31}.

In Rajimant (Kraits) snake bite 1st vega raktamokshan (bloodletting) should be done with the help of alabu with prior prachana karma^{32,33}.

In Darvikar (Cobra) snake bite 1st vega raktamokshan should be done and then agad (antidote) should be given along with honey and ghee^{34,35}.

Discussion

W.H.O provided a protocol for snake bite treatment in 2005 and emphasized the first aid measures as follows⁸.

1. Verbal reassurance: reassure the victim who may be very anxious.
2. Immobilization: immobilize the bitten limb with a splint or sling (any movement or muscular contraction increases the absorption of venom into the blood stream and lymphatic circulation).

3. Tourniquet: in order to prevent the spread of venom through superficial lymphatic's
4. Incision and suction: there is much controversy because of serious risk associated with it, including uncontrolled bleeding in patient with incoagulable blood (viper bite), damage to blood vessels and tendons.

The present paper includes detail elaboration of role of raktamokshan in treatment of poisonous snake bite. According to Acharya Sushruta it is clear that raktamokshan can act as a first aid measure in poisonous snake bites and it should be continued till proper raktamokshan signs appears like feeling of lightness of body, mitigation of suffering, subsiding of severity of disease. As per Acharya Vagbhata it should be performed as early as possible before poison gets mixed with blood and spreads all over the body, within the time period of one hundred matra (app.1- 2min)²². Some contraindication given by Brihatrayee for raktamokshan like pregnant lady, child, old persons, swelling all over body etc. should be taken into consideration while doing raktamokshan (bloodletting)³⁶.

W.H.O has contraindicated raktamokshan i.e. bloodletting but as per Samhitas mentioned by various Acharyas raktamokshan is having priority in life saving till the victim gets the antivenin therapy.

According to Chinese Acupuncture therapy bloodletting is done by Piercing a vein or small artery at the tip of the body-finger tips, toes, a few drops of blood let out from one or more peripheral points by quickly stabbing the skin with a lance as mentioned in Fundamentals of Chinese Acupuncture³⁷.

The points between each pair of fingers, at the top of the webbing joining the fingers, are the Baxie points which can be acupunctured with shallow insertion to cause bleeding, used to treat snakebite of the hand and point between dorsal venous network of the foot i.e. Befeng point can be acupunctured to treat for snake bite of the limb³⁸.

Conclusion

The main objective of present paper was to study the role of raktamokshan in poisonous snake bite and establish it as a first aid measure in acute cases.

After detail general review following conclusion are evolved:-

From all Brihatrayee's review it is clear that in treatment of poisonous snake bite raktamokshan (bloodletting) is important line of treatment as first aid measure.

References

1. Beejayini Mohapatra et al, snakebite mortality in India: a nationally representative mortality survey, articles from PLOS neglected tropical diseases are provided here courtesy of public library of science, v.5(4); apr 2011 [pubmed].
2. Mulay DV, Kulkarni VA, Kulkarni SG, Kulkarni ND, Jaju RV. Clinical profiles of snake bites at SRTR Medical college hospital, Ambajogai (Maharashtra), Indian medical gazettes 1986; 131:363-66.
3. K.S.Narayan Reddy. The essentials of Forensic Medicine and Toxicology, 2005; 24th edition; 29:474.
4. www.snakebiteinitiative.org/india retrieved on 16.03.2012.
5. K.G.Sam, M.F.Khan, S.Peerally, P.G.Kumar, P.G.Rao: snakebite envenomation: A comprehensive evaluation of severity, treatment and outcome in a tertiary care south Indian hospital. The internet journal of emergency medicine.2009, 5(1).
6. http://www.emedicinehealth.com/snakebite/article_em.htm retrieved on 21.03.2012.
7. Philip E. snakebite and scorpion sting.in: srivatava RN Editor. Paediatric and neonatal emergency care. Jaypee brothers; New Delhi:1994.p.227/34.
8. Guidelines for the clinical management of snakebite in the southeast Asia region, W.H.O., South east Asia, Delhi/2005.
9. Satish HS, Vaghela DB. Bloodletting-An Ayurvedic Perspective, Letter to the Editor. Journal of Postgraduate Medicine 2011; 57(3). <http://dx.doi.org/10.4103/0022-3859.85223> PMID:21941072.
10. K.R Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.36. 1st edition, Varanasi; Chaukhamba Orientalia;2010;p.442.
11. P.V Sharma. Charaka Samhita of Charaka, Chikitsasthana, chapter 23, verse no.35,36,37. 7th edition, Varanasi; Chaukhamba Orientalia; 2005;p.362.
12. Vidyadhar Shukla, Ravi dutt Tripathi. Charaka Samhita of Charaka, Chikitsasthana, chapter 23, verse no.35,36,37. 2007 reprint, New Delhi; Chaukhamba Sanskrit pratishtan;p.546.
13. K.R Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.15.reprint 2010, Varanasi; Chaukhamba Orientalia;p.452.
14. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 35, verse no.9.3rd edition, Pune; Anamol Prakashan;1999;p.458.
15. Brahmanand Tripathi. Ashtanga Hridaya of Vagbhata, Sutrasthana. Chapter 14, verse no.4.Reprint 2007, New Delhi; Chaukhamba Sanskrit prakashan;2007;p.191.
16. Brahmanand Tripathi. Ashtanga Hridaya of Vagbhata, Sutrasthana. Chapter 14, verse no.5.Reprint 2007, New Delhi; Chaukhamba Sanskrit prakashan;2007;p.191.
17. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.14.3rd edition, Pune; Anamol Prakashan;2009;p.529.
18. K.R Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.14.reprint 2010, Varanasi; Chaukhamba Orientalia;p.452.
19. Narayana ram Acharya, editor. Commentary: In:Yadavji trikamji acharya. Shri Dalhana tika on Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.14, reprint 2010, Varanasi: chaukhamba publication:p.575.

Raktamokshan (bloodletting) stops further spread of poison like in 1st visha vega by eliminating vitiated blood along with vitiated dosha.

Poison having entered the body vitiates the blood first next the kapha, pitta, and vata along with their respective seats then it invades the heart and lead to the death. I.e. in spread of poison rakta (blood) plays an important role³.

20. K.R. Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.15.reprint 2010, Varanasi; Chaukhamba Orientalia;p.452.
21. Narayana ram Acharya, editor. Commentary: In:Yadavji trikamji acharya. Shri Dalhana tika on Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.15, reprint 2010, Varanasi: chaukhamba publication:p.575.
22. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.38,39.3rd edition, Pune; Anamol Prakashan;2009;p.531.
23. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.47.3rd edition, Pune; Anamol Prakashan;2009;p.532.
24. K.R. Srikantha Murthy. Ashtang Sangraha of Vagbhata, Uttartantra, chapter 42, verse no.10.2nd edition, Varanasi; Chaukhamba Orientalia;2000;p.391.
25. K.R. Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.20.reprint 2010, Varanasi; Chaukhamba Orientalia;p.453.
26. K.R. Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.24.reprint 2010, Varanasi; Chaukhamba Orientalia;p.453.
27. K.R. Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.28.reprint 2010, Varanasi; Chaukhamba Orientalia;p.454.
28. P.V Sharma. Charaka Samhita of Charaka, Chikitsasthana, chapter 23, verse no.45. 7th edition, Varanasi; Chaukhamba Orientalia; 2005;p.369.
29. Vidyadhar Shukla, Ravi dutt Tripathi. Charaka Samhita of Charaka, Chikitsasthana, chapter 23, verse no.45. 2007 reprint, New delhi; Chaukhamba Sanskrit pratishthan;p.548.
30. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.48.3rd edition, Pune; Anamol Prakashan;2009;p.532.
31. Brahmanand Tripathi. Ashtanga Hridaya of Vagbhata, Uttartantra. Chapter 36, verse no.48.reprint 2009, New Delhi; Chaukhamba Sanskrit prakashan;p.1159.
32. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.80.3rd edition, Pune; Anamol Prakashan;2009;p.534.
33. Brahmanand Tripathi. Ashtanga Hridaya of Vagbhata, Uttartantra. Chapter 36, verse no.80.reprint2009, New Delhi; Chaukhamba Sanskrit prakashan;p.1162.
34. Ganesh Krishna Garde. Sartha Vagbhata, Uttartantra, chapter 36, verse no.74.3rd edition, Pune; Anamol Prakashan;2009;p.533.
35. Brahmanand Tripathi. Ashtanga Hridaya of Vagbhata, Uttartantra. Chapter 36, verse no.74.reprint 2009, New Delhi; Chaukhamba Sanskrit prakashan;p.1162.
36. K.R. Shrikantha Murthy. Illustrated Sushruta Samhita of Sushruta, Kalpasthana, chapter 5, verse no.30.reprint 2005, Varanasi; Chaukhamba Orientalia;p.454.
37. Ellis A, Wiseman N, and Boss K, Fundamentals of Chinese Acupuncture, 1988 Paradigm Publications, Brookline, MA.
38. <http://www.itmonline.org/arts/bleeding.htm>

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