



PRANASHTA SHALYA AND ITS NIRHARANA-A REVIEW ARTICLE

Dr. R. S. Gaayathri Krishna*¹, Dr. Anjali Bharadhwaj² and Dr. Shailaja S. V.³

¹PG Scholar, Department of Shalya Tantra, Sreekalabyraveswara Ayurvedic Medical College, Hospital and research Centre.

²Assistant Professor, Department of Shalya Tantra, Sreekalabyraveswara Ayurvedic Medical College, Hospital and Research Centre.

³HOD, Department of Shalya Tantra, Sreekalabyraveswara Ayurvedic Medical College, Hospital and Research Centre.

***Corresponding Author: Dr. R. S. Gaayathri Krishna**

PG Scholar, Department of Shalya Tantra, Sreekalabyraveswara Ayurvedic Medical College, Hospital and research Centre.

Article Received on 27/08/2018

Article Revised on 17/09/2018

Article Accepted on 07/10/2018

ABSTRACT

Acharya Sushruta defined *Shalya Tantra* as the science that deals with the removal of different kinds of *Shalya* (foreign body) and application of *Yantra*, *Sastra*, *Kshara*, *Agni* and *Vrana Nidana*. In that for *Pranashta Shalya* (foreign body) Diagnosis and its removal, *Acharya* had given separate chapters. During the times when there were no radiological investigatory techniques, *Acharya Sushruta*, the surgeon of ancient India had wonderfully traced out those foreign bodies lost in the body with the simple *Lakshana*'s. *Acharya* had also mentioned the methods of removal of *Shalya* with the instruments available on those days. Some of the methods used to diagnose and treatment are adopted in practice now-a-days also. In this article we are trying to make a review on *Ayurvedic* approach to *Pranashtashalya* and its usage even in this era.

KEYWORDS: *Pranashta Shalya*, *Nirharana*, Foreign body.

INTRODUCTION

Acharya Sushruta Considered, that which is causing pain to body as "*Shalya*".^[1] *Pranashta* means that which is not visible. *Pranashta Shalya* means invisible foreign body hidden inside the body.^[2] If it is left unnoticed it may lead various conditions and in some cases it becomes fatal too. So early diagnosis of such hidden foreign body and its removal is necessary. *Acharya Sushruta* had given detailed description of *Pranashta Shalya* in *Sutrasthana* 26th chapter and it's *Nirharana* in 27th chapter. In that he explains about Definition of *Shalya* and *Pranashta Shalya*, its *Bheda*, *Gati*, *Ashraya*, composition, *Samanya* and *Visesha Lakshanas*, *Shalya sthana Jnanopaya*, *Anthah Shalya Avastha*, *Visheshena Asakta Shalyas* and different methods of *Nirharana* in detail. He had also explained about the features which will indicate whether *Shalya* is removed from the affected area or not. *Acharya Sushruta* had explained about the Instruments used to remove *Shalya* which can be used in present scenario also.

Shalya Bheda

Shalya is mainly of two types. They are *Saaririka* and *Aagantuja*.^[3] *Saaririka Shalyas* are *Danta*, *Roma*, *Nakha*, *Dhatu* and *Anna mala*, *Dushta Dosha*. *Aagantuja Shalyas* are those originating outside the body.^[4]

Shalya Gati

Shalya whether it is Big or Small, it will take only five directions. They are *Oordhva* (Upward), *Adhah* (Downward), *Arvachina* (Backward), and *Tiryak* (Sideward), *Riju* (Straight).^[5]

Shalya Ashraya

Due to the obstruction in the force of the *Shalya*, it get obstructed in places such as *Twagadi Vrana Vastu* (*Twak*, *Mamsa*, *Sira*, *Snayu*, *Asthi*, *Sandhi*, *Koshta* and *Marma*), *Dhamani*, *Srotas*, *Asthivivara* and *Pesi*.^[6]

Shalya Lakshana^[7]

It is of two types. *Samanya* and *Visheshika*. *Samanya Lakshanas* are *Syavam* (blackish discoloration), *Pidakaachitham Sopha* (Swelling associated), *Vedanavantham Muhurmuhu* (pain often), *Sonitasravinam* (Hemorrhage), *Budbudavadunnatham* (Elevated like Bubble), *Mrdumamsam* (surrounding skin is soft)

Visheshika Lakshana

Twak Gata - Vivarnata (discolouration), *Aayatha sopha* (widened swelling), *Katina* (hard).

Mamsa Gata - Sophaathivrdhhi (increase of swelling), *Salyamarganupasamrohana* (appearance of new growth in the path of the foreign body, *Peedanaasahishnutha*

(Inability to tolerate pressing), *Chosha* (Sucking pain), *Paaka* (formation of pus).

Pesi antara– Same symptoms of *Mamsa Gata* except *Chosha* (sucking pain), and *Sopha* (swelling).

Sira Gata – *Siraadhmanam* (distention of veins), *Sirashoola* (Pain), *Sira sopha* (Swelling of vein).

Snayu Gata – *Snayujaalotkshepanam* (Lifting up of ligament), *Samrambha* (Swelling), *Ugra ruk* (severe pain).

Sroto Gata – *Srotasam Svakarmagunahaani* (loss of function and quality of srotas).

Dhamani Gata – *Saphenam Raktameerayannanilaha Sasabdo Nirgachath* (*yata* getting aggravated cause flow of frothy blood associated with sound, *Angamarda* (pain all over the body), *Pipasa* (thirst), *Hrllaasa* (nausea).

Asthi Gata – *Vividhavedana Pradurbhava* (different kinds of pain), *Sopha* (swelling).

Asthi Vivara Gata–*Asthipoornatha* (filling of the cavity), *Asthinisthoda* (constant pricking pain), *Samharsho Balavaamscha* (profound horripilation).

Sandhi Gata – Symptoms same as that of *Asthi Gata* along with *Cheshtoparama* (loss of function).

Koshta Gata – *Aatopa* (Gurgling noise), *Aanaha* (flatulence), *Mootrapurishaaharadarsanam chavranamukhath* (appearance of flow of urine, feces and food particles from the orifice of the wound).

Marma Gata – *Marmavidhaveshta* (symptoms similar to marmabhighata mentioned in 25th chapter of *Sushrutha Samhitha Sutrasthana*).

Sookshma Shalya - Lakshanaanyaspashtani (Symptoms will be present but slightly).

Shalya Sthana Jnanopaya^[8]

Twak Gata – 1. It should be anointed, fomented and then a paste of mud, flour of masa, yava, and godhuma or cow dung is applied on the skin, the site/place where swelling, redness or pain develops, that should be determined as the site of lodging of the foreign body. 2. When a lump of solid ghee or paste of mud or chandana is applied on the body, the place where the ghee spreads out and the paste dries up quickly by the heat of the foreign body, that place is to be understood as the site of lodging.

Mamsa Gata – Patient should be administered Oleation, Sudation and other therapies which are not harmful to him. By these the patient becomes emaciated, the foreign body becomes loose and non-sticking and when moved, gives rise to redness and swelling or pain, the place

where these symptoms develop should be determined as the site of presence of foreign body.

When it is lodged in the *Koshta*, *Sandhi*, *Pesi Vivara* and *Asthi*, the place should be determined by these methods only.

When it is lodged in *Sira*, *Dhamani*, *Srotas* and *Snayu*, the patient should be made to sit in a chariot with broken wheels and taken for a fast ride. Then the place where swelling, redness or pain develops that should be understood as the site of the foreign body.

When it is lodged in the *Asthi*, the patient should be given oleation, fomentation and then the bones should be tied with bandage tightly or squeeze hard, the place where redness, swelling or pain develops, that should be determined as the site of the foreign body.

When it is lodged in *Sandhi*, the joints should be given Oleation and Sudation and the joint subjected to movements such as extension and contraction, or bandaged or squeezed tightly. The place where redness, swelling, or pain develops, that should be understood as the site of the foreign body.

When it is lodged in *Marma*, since these are not other than the tissues, the same methods described so far may be adopted for determination of the site of foreign body.

Antah Shalya Avastha^[9]

Asthi(bone) gets broken inside the body or split into small pieces; those of *Srnga* (horns) and *Aayasa* (iron) get bent without doubt, those of *Vrksha* (wood), *Venu* (bamboo), and *Trna* (grasses), when not pulled out quickly, will cause suppuration of blood and muscles; those made of *Kanaka* (gold), *Rajatha* (silver), *Tamra* (copper), *Raikkam* (brass), *Trapu* (tin), and *Seesakam* (lead) stay long, get dissolved in the same place by the heat of pitta; those which are cold and soft by nature and such other qualities get liquefied inside the body and become fused with the tissues; those foreign body such as *Srnga*, *Danta*, *Kesa*, *Asthi*, *Venu Daaru*, *Upala* do not get destroyed inside the body.

Salya Nirhana

Salyais of two types Avabaddha and Anavabaddha.^[10] Methods of removal of foreign body which are not fixed are fifteen in brief such as Svabhava, Pachana, Bhedana, Darana, Pidana, Pramajana Nirdhmapana, Vamana, Virechana, Prakshalana, Pratimarsa, Pravahana, Achushana, Ayaskantha, Harsha,^[11] and its description as follows.^[12]

1. Svabhava: By nature/on its own

Shalya in nayanadi- By *svabhava* it will come out during acts like *Asru*, *Kshavathu*, *Udgaara*, *Kasa*, *Mutra*, *Purisha*, *Anila* Eg. *Shalya* in *nayana* comes out by tears.

2. Pachana: making *paaka*/suppuration

3. Bhedana- cutting/breaking

Shalya which is deep seated in *mamsa* & not causing burning should be removed by making *Paka* using *lepa*, if it's not coming out after *paaka* also then do *bhedana*.

4. Daarana- making bursting

After *Paaka* if *Shalya* doesn't come out then *Daarana* with *Ushna Lepa* is done.

5. Pidana-squeezing/kneading

If after *Daarana Shalya* is not coming out then *peedana* should be done with hand or with *Peedana Dravya Lepa*.

6. Pramajana- cleansing

If minute *Shalya* has entered the eyes- it should be removed by wiping using hair brush or hand or cloth.

Note: *Parisheka* & *Dhmapana* also used for *Anu Shalya*

7. Nirdhmapana- Snuff

Shalya which is *Aahara Shesha*, *Anu* and *Heena*- Removed by *Svasana*, *Utkaasana* and *Nirdhmapana*.

8. Vamana- vomiting

Annaja Shalya- By inducing *Vamana*, if it is in stomach.

9. Pratimarsa- *Angulya Gharshana* with inserting fingers if *shalya* is in throat.

10. Virechana- Purgation

Shalya in *Pakvasaya*- By giving *Virechana*.

11. Prakshalana- Washing

Vrana Dosha- By *Prakshalana*

12. Pravahana- straining to expel out

[In case of *Vata*, *Mutra*, *Purisha* and *Garbha Sanga*- By *Pravahana*]

13. Aachooshana- Sucking

In case of *Maruta/Udaka/Visharudhira/Dushta Sthanya Sanga*- By *Achooshana* using *Shranga* or by mouth. Eg. Breast pump to extract milk, *Shrangavacharana*

14. Ayaskantha- use of magnet to pull out

Shalya which is in *Anuloma Gati*, *Anavabaddha*, *Akarna*, *Analpa Vrana Mukha*- By *Ayaskantha*

15. Harsha- making happiness

Shoka Shalya produces due to many reasons- Removed by *Harshana*.

Shalya Aharana Marga

For all kinds of foreign bodies whether big or minute, modes of extraction are only two, viz *Pratiloma* and *Anuloma*; in *Pratiloma*- pulling out is in backward direction and in *Anuloma* pulling out is in forward direction.^[13]

Visheshena Asakta shalyas^[14]

When the face of the foreign body is seen protruding out, then it should be shaken, then cut with cutting materials and pulled out. In places such as abdomen, chest, axilla, groin, and spaces in between two ribs, the foreign body if seen protruding out and if possible to hold by the hand, attempt should be made to pull out by hand itself, in the same route.

If it is not possible to pull it out by hand, then it should be cut with a sharp instrument and pulled out using blunt instruments.

Shalyain Sira and Snayu: Foreign body when stuck up in veins and ligaments should be freed by using metal rods etc. and then pulled out; if the handle is embedded in the swelling; then it should be pulled out by squeezing the swelling; if the handle is weak it should be tied to kusa etc. and pulled out.

Shalya near Hrdaya: When the foreign body is near the heart, then it should be pulled out in the same direction of its entry; comforting the patient who is agitated by the use of cold water; that which is at other places should be pulled out by cutting it.

Asthivivaragata Shalya Aharanopaya: When the foreign body has entered into the cavity of the bone or stuck up tightly in the bone, then the physician should hold the patient by the legs and pull out the arrow using a blunt instrument. If by this method it is not possible to remove it, then the patient should be held tightly by strong persons, the handle of the arrow should be bent with help of an instrument, and then fastened with five tailed bandage to the string of a bow at one end and the reins of the horse at the other end, then the horse should be whipped so that it lifts its head suddenly with force, resulting in pulling the arrow out or a strong branch of a tree bent down and the arrow pulled out as before and released, the resulting force pulls out the arrow.

Foreign body if stuck up in a wrong place and seen protruding out, it should be stroked by a stone hammer or any such thing, made loose and then pulled out in the same way of its entry. Foreign body having ears which are not troublesome and seen protruding out, then its ear-like attachments should be bent and the arrow pulled out from the front only.

Kanta Shalya- When a foreign body made of shell lac is found stuck up in the throat, then hollow tube should be introduced first and a heated metal rod inserted through it till it touches the foreign body, when the foreign body adheres to the heated rod it should be bathed with cold water and after it becomes stable it should be pulled out. Foreign body which is not made of shell lac should be pulled out by using a rod smeared with lac or bees wax in the same manner as described earlier. A piece of bone or any similar foreign body, if found stuck up in the throat horizontally, then the patient is made to swallow a

ball of hairs, fastened to a strong and lengthy thread, along with liquid food, followed by consuming more liquid food, till his stomach becomes full, then he is made to vomit. During vomiting, after determining that the foreign body has stuck to the ball of hair, the thread should be pulled suddenly or a soft tooth brush may be used. If by these acts, if it does not come out, then it should be pushed deep inside. Any injury to the throat happening by this act, then the patient should be given a mixture of honey and ghee or powder of triphala added with honey and sugar, to lick.

Annagrasa shalya^[15]

When a bolus of food is present in the throat acting as a foreign body, then the person should be made to bend and given a hard hit with the fist over his neck without his knowledge or he may be made to drink fats, wine or water.

Kanta rodha^[16]

When the throat is held tight by the arms, rope or creepers, then vata gets aggravated along with slesma and blocks the passage and brings about flow of saliva, froth in the mouth and loss of consciousness. Such a person should be anointed with oil, given sudation, administered strong purgative therapy to the head and given soup of meat mitigating Vata.

Upadrava Chikitsa^[17]

The patient who has fainted should be sprinkled with cold water, his vital spots should be protected and he should be assured.

Paschat Karma^[18]

After foreign body having been removed, the wound should be made free of blood; if the person is suitable for sudation, then the area should be burnt by fire or ghee etc., smeared with mixture of ghee and honey, bandaged and regimen of food and activities advised.

Nisshalya Sthanam^[19]

The place which has mild troubles, no swelling, no pain, no complications, clean, soft all around, static, not elevated, searchable thoroughly by probing in all sides through the passage of entry, not having any difficulty for extension and contraction then only the physician should declare such a place as free of foreign body.

The intelligent physician after carefully observing the shape of the foreign body, the place of its lodging and deciding the particular instruments to be used, should pull out the foreign body; those which have ears attached and which are difficult to pull out should be removed with appropriate methods, if necessary with the help of other instruments using them with his intelligence; if not pulled out, these are going to produce swelling, ulceration, severe pain, deformities and even death, hence these should be removed by all efforts.

DISCUSSION

Shalya is a foreign body and *Pranashta Shalya* is that foreign body which is not visible to the naked eye. These *Shalya* will move inside the body, gets *Ashraya* in different places and produces discomfort. Therefore it should be removed at the earliest. Foreign body can be inert or active. Active foreign bodies are those which causes inflammation and discomfort and hence to be removed at earliest. Some foreign bodies are found to be inert which do not cause any adverse reactions even if it is retained. *Sushrutha* has highlighted the concept of inert foreign bodies while explaining about *Pranashta Shalya Anaharana* from *Vishalyapranahara Pradesha* and stressed upon *Kanakadi Shalyas* which are inert in nature and thus harmless if retained inside the body. *Acharya Sushrutha* has also emphasized the concept of active foreign bodies like *Varkshya*, *Vainava*, *Tarna* which causes *Kshipra Pachana* of *Rakta* and *Mamsa* leading to the manifestation of *Lakshanas*. Most of the *Lakshanas* mentioned by *Acharya* can be seen in the clinical features of foreign body mentioned in contemporary texts. *Budbudavathunnatamrudumamsa*, mentioned in *Samanya Lakshana* is compared with proud flesh/ exuberating granulation tissue. *Shalyamarga Anupasamroha* mentioned in *Mamsagata* can be compared with retained foreign body – delays wound healing. Diagnostic methods mentioned by *Acharya* such as *Eshanya Sarvato Drushta* is now-a-days used as metallic probe to find the foreign body deep in the cavity. Most of the *Nirharanopaya* mentioned by *Acharya* are followed now-a-days also like *Vrana Prakshalana* and *Pramarjana*, *Kanta Shalya* & *Anna Grasa Shalya Nirharana* etc. *Acharya* mentioned *Svabhava Nirharana* as *Kaasa*, *Kshavathu* etc can be understood as removal of inhaled foreign body by forceful cough and sneezing. *Ayaskanta* mentioned for removal of *Loha* can be seen used now as removal of intra ocular foreign body by magnet. In *Kanta Shalya Nirharana* *Acharya* mentioned after inserting *Naadi Yantra* through that insert *Shalaka* to remove *Shalya*, Same is used now-a-days as an overtube to endoscopy for the extraction of sharp foreign body from esophagus. In *Anna Grasa Shalya* *Acharya* mentioned *Skandhe Mushtina Abhinyath*, Same is followed for food bolus impaction in children and also he stated if food not removed by above method then ask the patient to drink *Madya* or *Sneha*, same followed as intake of fizzy drinks which dislodge foreign body down.

CONCLUSION

In olden days, without much investigatory methods and anesthesia, Surgeons put their best effort to extract the *Shalya* without much complication and damage to the body. In present day, Advanced techniques are there to detect foreign body. *Acharya* has also mentioned that whatever may be the method used the main aim is to remove *Pranashta shalya*. By using *Aaptavachana* and advanced techniques, we can diagnose and extract foreign body more appropriately.

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