Sushruta’s concept of Seevana Karma - A Review Article

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ABSTRACT

Ayurveda is eternal science and considered by many scholars to be the oldest healing science. Ayurveda consists of Ashtangas (8 branches of ayurveda) and Shalyatantra is one and foremost among them. Acharya Sushruta is considered as pioneer of Shalyatantra and contribution of Acharya Sushruta to Shalyatantra are innumerable. Ashtavidha Shastra Karma is unique contribution of Acharya Sushruta. Ashtavidha Shastra Karma includes Chedana, Bhedana, Lekhana, Eshana, Aharana, Vedhana, Visravana, Seevana.¹ These eight specific surgical procedures are useful in the management of all the diseases which require surgical intervention. In the present scenario though modern surgery has developed a lot but the basic concepts remain the same and they are base for these developments. Seevana is one among Ashtavidha Shastrakarma. Acharya Sushruta has emphasised clearly on Seevana Karma like its indication, contraindication, materials and the procedure. Suturing is the term used in Modern science for Seevana. A suture is any thread which brings into opposition two surfaces or tissues.² Suturing is a stitch or series of stitches made to secure opposition of the edges of a surgical or traumatic wound. No surgery is complete without suturing. A lot of scope in developing suturing material told by Acharya Sushruta are on lines of modern medical science. Hence in this regard a small attempt has been made to through light on Seevana Karma and Suturing. This article summarises concept of Seevana Karma according to Acharya Sushruta.

Key words: Seevana, Ashtavidha Shastra Karma, Suture, Suturing

INTRODUCTION

Seevana Karma is Pradhana Karma and one among Ashtavidha Shastra Karma and one among Chaturvidha Raktersrava Nirodha Upayas.³ Suturing is term used in modern science. We get reference of Seevana Karma in Brihat Trayees like in Sushruta Samhita Sutra Sthana 5th and 25th chapter, Charaka Samhita, Chikitsa Sthana

25th chapter, Ashtanga Sangraha 38th chapter. Acharya Sushruta had given detailed description of Seevana Karma including its indication, contraindication, material and its types, techniques of Seevana Karma. Suturing is the procedure of mechanical wound closure with the help of suturing material. The principle behind wound closure is to bring the wound edges together, prevent infection and promote rapid healing and provide support until wound healing is complete.

Seevana Karma

Joining of the bifurcated tissue with the help of Suchi and Sutra is called as Seevana Karma. Acharya Sushruta has given importance to the practical training for students who are well versed in Shastra (theoretical knowledge) to make him Yogya (fit) before he starts his profession. This is well explained in Yogyasutreeya Adhyaya of Sutrastana of Sushruta Samhita like student after getting theoretical knowledge should be made Yogya (fit) by instructing the practical methods...
of Snehadi and Chedyadi Karma firstly on models and later on patients. Seevana Karma is initially practiced on Sukshma Ghana Vastra and Mrudu Charma.[4]

**Indication**

Seevana Karma is indicated in the diseases (wounds) arising from fat such as tumours etc which are being cut or incised and scraped well, Sadyovrana (traumatic wound) and diseases localised on moveable joints require suturing.[5] This implies that Acharya Sushruta was so practical at that itself as those indications mentioned are relatable even today.

**Contraindication**

Seevana Karma is contraindicated in diseases (wounds) caused by alkali, fire and poison, those which emit air (gas) from inside, those having blood and foreign body inside should not be sutured but these should be well purified and also sand, hairs etc bones which are present and moving inside the wound as these will cause suppurition and pus formation so these should be cleared and then sutured.[6] This implies that Acharya Sushruta had given importance to the cleaning of the wound and asepsis.

**Seevana Dravya**

1. Seevana Sutra
2. Seevana Suchi

**Seevana Sutra**

Acharya Sushruta had mentioned various kinds of Seevana Sutras. These can be again classified into plant origin and animal origin as well as absorbable and non absorbable as like modern (Table 1) Seevana Sutra includes thin thread of bark of Ashmantaka, Shanaja Sutra, Kshouma Sutra, Snayu, Bala, fibre of Murva and Guduchi.[7] Heads of giant ants are used to staple a wound over intestine while performing surgery for Chidrodara (intestinal perforation). The live ants are affixed to the edges of the wound, which clamp the edges by shutting with their pincers. Then Vaidya cut their bodies off, leaving the jaws in place which acts as suture.[8] Seevana Sutra binds and holds the tissue together and acts as mechanical support till wound heals. Suture is any thread or strand which brings into opposition two surfaces or tissues.

<table>
<thead>
<tr>
<th>Absorbable</th>
<th>Non-Absorbable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorbable sutures are made of materials which are broken down in tissue after a given period of time.</td>
<td>Non - Absorbable sutures are made of materials which are not metabolized by the body, and are removed after a few weeks.</td>
</tr>
<tr>
<td>Natural</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Catgut</td>
<td>Polyglactin 910 (Vicryl)</td>
</tr>
<tr>
<td>Fascia lata</td>
<td>Polyglycolic acid (PGA)</td>
</tr>
<tr>
<td>Kangaroo tendon</td>
<td>Polydioxanone suture (PDS)</td>
</tr>
<tr>
<td>Beef tendon</td>
<td></td>
</tr>
</tbody>
</table>

**Ideal suture material**

1. Freely available and less expensive
2. Should not promote growth of bacteria around it
3. It should have uniform diameter
4. Non allergic, non-carcinogenic
5. Adequate tensile strength
6. Minimum tissue reaction, easy to handle and to sterilise

**Seevana Suchi**[9]

There are twenty types of Shastras and Suchi one among them. Suchi is sharp instrument which pierces the tissues and aids in suturing. Acharya Sushruta had mentioned three types of Suchis. They are as follows -

A. Vritta Suchi - two Angula, used for suturing over places which have less muscles and over joints
B. Tryasra Suchi - three Angula, used for suturing in places which are broad and with more muscles

C. Dhanurvakra Suchi - used over vital points, scrotum and abdomen

Even Suchis mentioned in those days are relatable to present day traumatic and atraumatic needles.

<table>
<thead>
<tr>
<th>Suchi</th>
<th>Needle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vritta</td>
<td>Round body</td>
</tr>
<tr>
<td>Tryasra</td>
<td>Cutting body</td>
</tr>
<tr>
<td>Dhanurvakra</td>
<td>Reverse cutting body</td>
</tr>
</tbody>
</table>

Qualities of Suchi

Suchi should have sharp point, manufactured nicely that ideal in their size and shape and their hind tip resembling the stalk of Malati flower.

Ideal Needle

1. Made up of high-quality stainless steel
2. Thin and slim as possible without compromising strength
3. Should cause minimal trauma to tissue
4. Should able to penetrate tissue with minimal resistance
5. Should resists bending

Procedure of Seevana Karma

Seevana Karma is one among the Ashtavidha Shastra Karma and one among the Chaturvidha Raktsarva Nirodha Upayas. Acharya Sushruta had mentioned Seevana Karma systematically which starts with Poorva Karma and ends with Pashchat Karma.

Poorvarkarma

If wound is contaminated with Pamshu (sand), Roma (hair), Nakha (nail) these should be removed and wound should be cleaned and wound edges are elevated and placed in usual position.

Pradhanakarma

After proper cleaning the Seevana Karma is carried out with the help of Seevana Suchi and Seevana Sutra. And there are four patterns of Seevana Karma.

Principles of Wound Suturing

1. Primary suturing should not be done if there is oedema / infection / devitalised tissues / haematoma
2. Always associated injuries to deeper structures like vessels / nerves or tendons should be looked for before closure of the wound
3. Wound should be widened by extending the incision whenever needed to have proper evaluation of the deeper structures
4. Proper cleaning, asepsis, wound excision / debridement
5. Untidy wound should be made tidy and clean before suturing
6. Proper aseptic precautions should be undertaken
7. Sutured wound should be inspected in 48 hours
8. Sutures are removed after 7 days

**DISCUSSION**

Seevana is one among the Ashtavidha Shastrakarma. The concept of Seevana Karma mentioned by Acharya Sushruta in Sutrastana 25th chapter i.e., Ashtavidha Shastra Karma Vidhi Adhyaya is very relatable to today’s practice of suturing. Starting from the material used like absorbable and non-absorbable sutures, needle types traumatic and atraumatic needles, indications, contraindications, techniques for suturing are practiced even today. Though there are some modifications in these but the basic principles behind remains the same.

**CONCLUSION**

Seevana Karma is one among the detailed contribution of Acharya Sushruta. Yet there are so many relatibilities between those days practice to now a days practice there are emergence some modifications as per the need. Going back to era of Sushruta and making use of those techniques and evolving its significance is the need for today's research. One such research is to test efficacy of suture materials like fibres of Murva, Guduchi, Shana, Ashmantaka, Kshouma Sutra, Snayu, Bala etc. and bring them to market as Herbal Suture material which can be cost effective and ecofriendly.

**REFERENCES**


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