



**A REVIEW ON SHALYA CHIKITSA WSR TO TRIVIDHA KARMA**

**Vd. Laxmi Narhare\***

Professor, Department of Shalyatantra, Yashwant Ayurveda College, Kodoli, Kolahpur Maharashtra.

\*Corresponding Author: Vd. Laxmi Narhare

Professor, Department of Shalyatantra, Yashwant Ayurveda College, Kodoli, Kolahpur Maharashtra.

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**ABSTRACT**

*Shalya Chikitsa* is among one of the main branches of *Ayurveda* which involve surgical and para-surgical interventions. The *Shalya Chikitsa* deals with different surgical approaches for the management of various diseases such as pilonidal sinus, *Arsha*, cysts, carbuncles, abscesses, *Charmakeela*, *Kadar*, etc. *Acharya Sushruta* has given the concept of *Trividha karma* which indicates three types of operative procedures. *Acharya Sushruta* has classified *Ashtavidha* and *Trividha chikitsa karma* in detail in his classics. *Purva karma* means preoperative procedures which includes *Agropaharna* (collection of material for surgery), patient's preparation and surgeon's preparation, *Pradhan karma* means operative procedures including *Ashtavidha shastra karma* (different type of surgical procedures) and *Paschat karma* means post-operative procedures which includes care of wound and patient.

**KEYWORDS:-** *Shalya Chikitsa, Trividha chikitsa, Ashtavidha, Pradhan karma, Purva karma, Paschata karma.*

**INTRODUCTION**

*Acharya Sushruta* was the first in world to describe and practice surgical procedures.<sup>[1]</sup> *Acharya Sushruta* had given description about wounds and ulcers and their management, description and management of abscess, different types of tumors and cysts, fracture, accidental burn, amputation surgeries, reconstruction surgeries etc. *Shalya Tantra* is meant for extraction of various types of wood, stone, dust, metal, bone, hair, nail, pus discharge, matrix of dirty wounds and also of abnormal fetus; for application of blunt instruments, sharp instruments, caustic alkali and cauterization and also for diagnosing and deciding of wounds.<sup>[2]</sup> He has mentioned *Trividha karma* as adaptable approach for therapeutic purposes based on scientific principles. *Acharya Sushruta* mentioned that there are 3 kinds of procedures in surgical practice which includes *Purva Karma, Pradhana Karma, Paschata Karma* and the *Ashtavidha Shastra Karma* comes under *Pradhana Karma*.<sup>[3]</sup>

**Purva karma**

It is the first step of any surgery or basic requirement to perform an operative procedure. *Purva karma* includes collection of materials required, preparation of patient and preparations done by surgeon. It is considered as a pre-operative preparation to overcome the operative and post-operative complications.

**Sambharsangrahan (collection of required material) -** *Purva karma* means preparation of the patient along with collecting all the essential equipment needed during the

*Pradhan karma. Purva karma* includes collection of all the data and preparation of patient prior to surgery.<sup>[4]</sup> According to *Acharya Sushruta*, collection of materials such as *Yantra* (sharp instrument), *Shastra* (blunt instrument), *Pichu* (pieces of cloth), *Sutra* (thread), *Patta* (cloth), *Madhu* (honey), *Ghrta* (ghee), *Paya* (milk), *Taila* (oil), *Kshara* (alkalies), *Agni* (fire for thermal cautery), *Salaka* (metal roads), should be done.

**Nirjantukaran (sterilization and asepsis) -** There are various references regarding sterilization and asepsis present in *Ayurveda* text books. Before surgical procedure all the instrument should be heated to kill all the bacteria to avoid infection and pus formation.<sup>[5]</sup>

**Pre-operative feeding (nil by mouth period) -** Patients are advised not to take solids before six hours of surgery. Clear fluids are allowed within two hours, before anaesthesia. Patients can continue to take their specified routine medications with sips of water in nil by mouth period. In various cases such as *Mudhagarbha* (dead or abnormal position of fetus), *Udara* (abdominal enlargement), *Arsha* (piles), *Ashmari* (calculus), *Bhagandara* (fistula in ano), *Mukharoga* (diseases of mouth) the patient should be operated empty stomach.<sup>[6]</sup>

**Consent -** *Acharya Sushruta* mentioned that before any surgery, consent of the patient is necessary. Consent should be obtained by the person who is actually going to carry out the procedure or certainly by somebody who

is suitably trained and qualified and has sufficient knowledge of the proposed treatment.

### Some important preoperative procedures <sup>[7]</sup>

**History taking-** Specific questions should be asked to clarify the diagnosis and severity of symptoms. Surgery specific symptoms, onset, duration, and relieving factors need to be documented.

**Examination and investigation** - Systemic examination include Cardio vascular, Respiratory, and Neurological. Investigation Routine blood examination for total count, differential count of WBC., HB%, PCV, ESR, Bleeding time, coagulation time, grouping and cross matching should be done.

**Care of bowel** - If the patient's bowel habit is quite regular, a soap-water enema in the morning of surgery is sufficient. In case of constipation, laxatives should be prescribed 36hrs before the surgery and the patient must have morning enema before he goes to the operation theatre. In ano-rectal surgeries enema should be given twice so as to prevent the hindrance to the operative field.

**Preparation of part** - The field of operation should always be examined carefully to stop the chance of sepsis. If present, then sepsis should be treated first, and operation should be postponed till proper healing. The extent of skin preparation must be well beyond the field of operation

**Administrations of anesthesia** - It is necessary to ensure a pain less, unresisting field of surgery.

**Preparation of skin and draping the patient** - Skin preparation should include the surgical site and a wide area around it, starting from the incision site and working away from it. Contaminated areas (groin, perineum, axilla) should also be covered. Two coats of 1% iodine and methylated spirit are used. Draping is necessary to create a protective zone around the operative site to avoid contamination.

### **Pradhana karma** <sup>[8,9,10,11]</sup>

It is the main operative procedure. *Acharya Sushruta* has given eight sort of *Shastra karma* (surgical procedure).

**Chedana:** It involves excision of part from the body using *Mandalagra*, *Karpatra*, *Vridhipatra*, *Mudrika* and *Utpalpatra*, etc. As per contemporary science, it is the procedure of - ectomy. It can be used in fistula in ano, cyst, ulcer margin, tumors, etc.

Indications: *Aam granthi*, *Tila kalak*, *Vrana vartma*, *Arbuda*, *Arsha*, *Charmakilla*, *Asthi-maamsa gata Shalya*, *Jatamani*, *Maamsa-sanghata*, *Galasundika*, *Snayu kotha*, *Maamsa kotha*, *Sira kotha*, etc.

**Bhedana:** It involves incision produces to open a cavity for draining out tissue debris, *Rakta*, Pus and waste discharge using *Vridhipatra*, *Utpalapatra*, etc. As per contemporary science, it is the procedure of - tomy. It is executed to open a cavity for draining out tissue debris, pus discharge, cysts, carbuncles, abscesses, crico thyroidectomy, fasciotomy, sternotomy, cardiopulmonary bypass and surgical embolectomy, craniotomy, etc.

Indications: Cysts, Carbuncles, Abscesses, *Kumbhika*, *Dantapupputa*, *Gilayu*, *Vataj*, *Pittaj* and *Kaphaj vidradhi*, *Granthi* and *visarpa*, *Vrudhhi*, *Vidarika*, *Prameha pidika*, etc.

**Lekhana:** It involves scrapping out waste (debris) dead materials from affected part with the help of *Mandalagra*, *Vridhipatra* and *Karpatra* etc. It can be done in keloid, skin patches, debridement of wound or ulcer.

Indications: *Upajivika*, *Rohini*, *Adhijivika*, *Keloid*, *Rohini*, *Kilaasa*, *Upjihva*, *Medojanya Danta vedarbh*, *Granthi*, *Vartma*, *Adhijihvika*, *Arsha mandal*, etc.

**Eshana:** It involves sponging of waste discharge, debris and foreign body etc., with the help of *Eshani* from affected body parts. It can be used in sinus, wound, fistula in ano, endoscopy, colonoscopy, angiography, cystoscopy, etc.

Indications: Sinuses, wounds, abscesses, *Nadivrana*, *Sashalya Vrana*, *Unmargi Vrana*, etc.

**Aaharna:** It involves extraction of waste from diseased body parts using *Badisha*, *Dantashanku* and *Nakha*. It can be used for extraction of teeth, urinary calculi, abnormal confounded fetus, ear wax and feces if accumulated in rectum, extraction of clot of intracranial hematoma, etc.

Indications: Calculi, ear wax, feces if accumulated in rectum etc.

**Vedhana:** It involves puncturing of affected part using needle, *Kutharika* and *Aara* etc. It can be used in ascitis, plural infusion, laproscopic procedures, inter costal drainage, etc.

Indications: *Mutra-vridhi*, *Nadis*, ulcers lodged with foreign matter.

**Visaravana:** It involves use of needle, *Trikurchaka*, *Shararimukha* and *Aatimukha* for the purpose of bloodletting or draining of pus. As per modern medical science, it can be used in abscess, skin diseases (inflammatory swelling), elephantiasis, blood poisoning (snake bite), cysts and infected edema, etc.

Indications: Abscess, skin diseases, elephantiasis, mild tumors, cyst and infected edema, *Slipada*, *Visha dushita Rakta*, *Arbuda*, *Visarapa*, *Granthi*, *Upadansa*, *Stana roga*, *Vidarika*, *Sushiro*(danta roga), *Gala saluki*, *Talu kantak*, etc.

**Seevana:** It is a para-surgical approach involves use of sutures, needles and threads as post-operative management.

Indication - *Meda samuthya vyadhi* (disease), *Bhinna sulikhita gada* (incised and well scraped lesions), *Sadyovrana* (fresh wounds) and *Chalasanghi vyapashrita vrana* (those situated in movable joints).

### **Paschata Karma**

After the completion of operative procedure, the patient ought to be assured by sprinkling cold water on his face and feet. The wound should be squeezed slowly(all around) and washed with decoction, then by the cotton swab the decoction remained in the wound should be wiped out and thick paste of *Sarshapa* (sesamum), *Madhu* (honey) and *Ghrita* (ghee), should be applied then followed by covering with medicated paste and putting a piece of gauze, wound should be bandaged. After this, fumigation should be done with drugs like *Guggulu*, *Agaru*, *Vacha*, *Lavana*, *Nimb patra* etc. The patient is kept in *Vranitagara* (post operative care unit) for 10 days.

**Vranitagara** - In *Vranitopaasaniya adhyaya*, *Sushruta* tells that the chamber where the patient resides should be free from dirt, infection, so that the patient will not suffer from physical, mental and traumatic disorder. Fumigation should be performed using drugs like *Sarsapa*, leaves of *Arista* (nimba) added with *Ghrita* and *Saindava*.

**Vranitopasana (care of the wounded)** - Dressing should not be removed on the second day, by removing it on second day the wound develops hardness, heals after long time and produces severe pain. On the third day of surgery, the bandage should be removed; wound is cleaned; medicated and again tied with bandage. It is important for faster recovery that patient should avoid *Viharas* (*Vyayama*, *Vyavaya*, *Harsha*, *Krodha*, *Bhaya*, *Divaswapna*) and *Aharas* (*Amla*, *Ruksha Teeshna* and *Ushna*).

**Some important post-operative procedure<sup>[12]</sup>** - Position of patient should be comfortable. Fluid must be given in a very restricted manner starting with a sip of water and then increasing to a glass of fruit juice. On next day of operation, semi-solid foods are allowed and from the third day normal diet is allowed.

Antibiotics should be given to prevent post-operative infections. Antacids are given to prevent excess gastric secretion and gastric irritation. Analgesics can be used to

relieve pain at operation site. Anti-emetics are given to avoid nausea and vomiting.

Draining of wound is important to separate the fluid from the cavity, to enhance the rapid healing. Catheter is used during and after surgery to monitor the urine output and to prevent postoperative retention. It is removed after 24hrs.

**Care of wound** - If there is collection and discharge, dressing is done daily. Unnecessary change of dressing may cause infection and delay wound healing. Normally, in healthy adult, without any post-operative complications, the stitches are removed on fifth day of operation on the head and neck, on eighth day for operation on thorax, and abdomen.

### **DISCUSSION**

Our *Acharyas* were very much aware about management of wounds. *Acharya Sushruta* described sixty procedures for the treatments of wound. *Acharya Sushruta* mentioned that there are three kinds of procedures in surgical practice which includes *Purva Karma*, *Pradhana Karma*, *Paschata Karma* and the *Ashtavidha Shastra Karma* comes under *Pradhana Karma*. *Sushruta* has described 101 blunt and 20 sharp instruments which can be considered as the precursors of modern surgical instruments.<sup>[13,14]</sup> *Ashtavidha Shastra karmas* are the eight basic principles of all the surgical procedures which can be used for any surgery. Each and every surgery comprises either one or more of them. In *Ayurveda Purva* and *Paschat karma* has been explained in different context. In the context of surgery, *Acharya Sushruta* has explained, *Purva* and *Paschata karma*, mainly relevant to *Shastra karma*. *Agropaharana* i.e. collection of materials required before and after surgery has been explained by *Sushruta*, which is very much essential for successful surgery and to manage the complications. Contraindications of ingestion of food before surgical procedures are also indicated in *Ayurvedic* classics. *Vrana Dhoopana* and *Vranitagara Dhoopana* is also given important place for faster wound healing. After the *Seevan karma* has been done, *Paschata Karma* is done in which wound bandaging with gauze is done by sprinkling powder of *Priyangu*, *Mulhethi*, *Lodhra*, *Shaalaaki phal*, etc. The patient is kept in post-operative care unit (*Vranitagara*) for 10 days.<sup>[15]</sup> Diet regimen (*Aharaja pathya-apathya kalpana*) is one of the important therapies to be followed after surgical procedure. *Ahara* such as rice with *Ghee*, *Jivanti*, *Bathuwa*, *Amalak*, *Mung*, *Sattu*, boiled water etc. should be preferred. Patient should not consume *Nava dhanya*, *Mastu*, *Sarshapa*, *Klaaya*, etc.

### **CONCLUSION**

Every surgeon must be familiar with all the eight surgical procedures because almost all surgeries performed with these eight techniques of *Acharya Sushruta*. The principles behind application of *Shastra Karmas* mentioned by *Acharya Sushruta* proved to be logical and

thus holds good in present era. *Acharya Sushruta* led the foundation of surgical procedures which is even practiced in present days with advanced techniques. He has mentioned *Trividha chikitsa karma* in detail with proper steps to be implemented during surgery. He has also mentioned eight types of surgical procedures under main heading of *Pradhan karma* to cure the pathological conditions. After correlating with modern surgical practices one can conclude that *Ayurvedic* surgical practices were well developed in older times.

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