



Review Article

TRIVIDHA KARMA IN SURGICAL PRACTICE- A CONCEPTUAL STUDY

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ABSTRACT

In Ayurvedic classics there are various types of treatment and *Shastra chikitsa* is one among them. *Purva Karma Pradhana Karma, Paschat Karma* are *Trividha Karma*. According to *Acharya Sushruta*, *Purva Karma* means preparation of patient along with collecting all the materials needed during the *Pradhana karma*. *Ashtavidha Shastra Karma* is included in *Pradhana Karma*. *Paschat Karma* includes post operative care. Sushruta division of surgical activity into three parts i.e., pre-operative, operative and post-operative based on sound scientific principles. Sushruta has also described the pre-operative appreciation of foreign body, its size, shape, and exact location within the body and appropriate instrument for its removal should be selected pre-operatively. He has also mentioned the pre-operative diet and starvation for various types of surgeries. He has also emphasized that asepsis and antisepsis precaution should be taken, wound should be protected from dangerous and invisible creatures (*Nishachara*). Fumigation of *Vranitaagara* should be done for ten days, twice a day. By virtue of this article, we can understand the systematic method of arranging the surgical experience of arranging the surgical experience of the older surgeon, about preliminary measures, principal measures and after measures. All the procedures included under these three headings i.e., *Trividha karma* plays an important role in successful and complication free surgery.

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INTRODUCTION

Ayurveda, the medical science of the yore is a sub division of still older the *Atharveda*, one of the four *Vedas* the classical Indian literary masterpieces. *Sushruta Samhita* the great surgical treatise written by Sushruta, the father of surgery about 500 B.C has been inaccessible to the other medical sciences of the day and world, because of its original availability in Sanskrit, a language of ancient Indians only. Principles of Ayurveda which are interwoven with basic concept of life have significant value even in modern era.

Trividha means three types and word *Karma* means operation procedure.

Acharya Sushruta has described the entire course of medical treatment in connection with a disease which may be grouped under these

subheads as the preliminary measures (*Purva Karma*), the principle therapeutical or surgical appliances (*Pradhana-Karma*) and the after measures (*Paschat Karma*)^[1] whichever the surgical procedure may be it has the above said three parts in it.

Purva Karma (Pre-Operative Procedure)

Purva Karma includes preparation of the patient, sterilization and anaesthesia. *Acharya Sushruta*^[2] and *Vagbhata*^[3] gave a separate ritual called *Raksha Karma*^[2]. This is considered as an outdated formality in modern times even by the Ayurvedic practitioners. But still it has got its own ethical values and shows the surgeon's deep concern towards his patient. This consists of some *Mantras* to be chanted by the Surgeon for the

prosperity and for welfare of the patient. These *Mantras* are chanted either before or after operation. This *Raksha Karma* is nothing but aspiring best outcome and success to the patient. *Acharyas* have also given emphasis on thorough history taking physical examination and repeated assessment as not taking a correct history and not doing a thorough examination by inspection and palpation can mislead the physician.

The following points^[4] should be specially interrogated from the patient residence, climate of the locally concerned, race and caste, the articles which suits his constitution and those to which he is sensitive, onset and history of present illness. The symptoms are intensity of pain, general health, appetite, bowel, micturation, duration of illness etc. Before all operation the patients should take light diet.^[5] The patient should be completely starving before such surgical procedures as artificial or instrumental deliver, abdominal conditions, piles, calculus disease, fistula-in-ano and surgical conditions of the mouth. It has been mentioned that aseptic precautions before any surgical procedures, all instruments, being used should be heated up to red hot to prevent infection^[6]. Unlike modern surgery, Ayurveda throws light upon certain cleansing measures and special preparatory methods which comes under the first 12 of the 60 *Upkarmas* of *Vrana*.

1. *Apatarpana* - *Langhana* (faster)
2. *Alepa* - Ointment
3. *Parisheka* - Washing or dropping liquids on the inflamed area
4. *Abhyanga* - Massage to entire body
5. *Sweda Karma* - Sudation
6. *Vimlapana* - Softening the *Vrana shotha*
7. *Upanaha* - Poultices
8. *Paachana* - *Aam Pachana*
9. *Rokta Mokshana* - Blood letting
10. *Sneha Pana* - Oral oils and ghee
11. *Virechana* - Purgatives
12. *Vamana* - Emesis

All the above mentioned 12 steps of pre-operative care are essential in all the operations. These 12 steps have no place at all in modern surgery since Ayurveda believes these 12 steps improves the chances of quick and better healing.

Pre-operative Procedure As Per Modern Surgery^[7]: A proper, routine well planned pre-

operative procedure is essential for safe and uneventful recovery. For this, the patients should be admitted 2 days prior to operation in cases of elective operations. When bowel surgery is required, the patient is admitted earlier for bowel preparation. Proper history should be taken and thorough examination should be carried out.

Routine blood examination for Total count, Differential count of W.B.C, HB%, P.C.V, M.C.H.C, E.S.R should be done. Bleeding Time, grouping and cross matching are also very important. Routine urine and stool examinations should also be performed. Anaesthetist should be informed and a note should be left for him regarding salient features in history, examination and the type of operation to be performed and also mention any sort of patient's history of allergic responses towards certain drugs.

Pradhana Karma (Main Operation Procedure)

This includes mainly *Ashtavidha Shastra Karma* (eight surgical procedures) and every surgeon must be familiar with these eight surgical procedures. Almost all surgeries present today are conducted by modern surgeon with these. The surgical procedures or types of operation according to different authors are as follows:

Chedana, Bhedana, Lekhana, Eshana, Aaharana, Vedhana, Visravana, Seevana as per *Sushruta*.

Paatana, Vyadhana, Chedhana, Lekhana, Prachana, Seevana as per *Acharya Charaka*.

All the eight of *Susruta* along with *Uthpaatna, Kuttana, Manthana, Grahana Dahana*. *Chedhana* means excision or Ectomy. Indications of *Chedhana* are *Bhagandara* (Fistula-in-Ano) *Arshas* (Piles), *Arbudas* (Benign tumours), *Charma Keela* (Keloids) etc.^[8]

Bhedhana – *Bhedhana* means Incision or Otomy.

Indications of *Bhedhana* are all *Vidradhis* (abscesses) except *Sannipataj, Antra vridhi* (Hernia) *Stanvridhi* (Breast abscess) *Tundikeri* (Buccal cyst etc.^[9]) The incision should be made in the direction of hair.^[10] The incision should be oblique in the regions like eyebrow, cheeks, temple, forehead, eyelid, lip, groin, axilla, belly and groin^[11]. The experienced surgeon should make the incision like a full-moon (circular) or like a half-moon (semicircular) in the upper and lower limbs and about the anus and penis.^[12] *Lekhana* means scraping. The indications of *Lekhana* are *Adhijiwika* (uvulitis), *Mandal Kushta* (Patchy dermatitis) etc.^[13]

Eshana means Probing: The indications of *Eshana* are *Naadee Vrana* (Sinus), *Salya anaveshana* (Detection of Foreign body)^[14]. *Aaharana* means extraction. The indications of *Aaharana* are *Paada*

Sarkara (corns in foot), *Mudha garbha* (abnormal presentation of foetus), *Karna* and *Danta mala* (Earwax and dental Debris),^[15] *Vedhana* means puncturing. The indications of *Vedhana* are *Siras* (veins) in *Rakta Mokshna Jalodra* (Ascites), Hydrocele.^[16] *Visravana* means draining. The indications of *Visravana* are *Vidradhi* (abscess), *Raktaarbuda* (haemangioma), *Kushta* (Leprosy).^[17] *Seevana* means suturing. The indications of *Seevana* are *Sastra Vranas* (incised wound), *Agantuja Vrana* (Injuries in case of artificial parturition, in ascites, in piles, in skin, in the bladder, in fissure in ano and in diseases affecting the cavity of the mouth, the patient operated on should be kept in empty stomach.^[18]

Paschata Karma (Post Operative Care)

After completing the *Sastra Karma*, the surgeon and his assistant must take meticulous care till the patient recovers completely and the wound heals. After surgery, the medicinal pastes should be applied over the wound which should then be covered by a thick layer of pad or bandages.^[19] The old bandage should be opened on the third day reapplied exactly as before. After third day further dressings, lotions, ointments, bandages, diet and the period of ambulation depends upon the condition of the wound and general condition of the patient. In winter and spring, the dressings should be changed every third day and in summer and rainy season every second day. Acharya Vagbhata also described about sterilisation of bandages clothes, it should be sterilized and fumigated. In *Chikitsa Sthana*, Acharya Susruta has clearly mentioned that patient's health should always be maintained, as it helps to lessen the intensity of the disease process. The patient must be very careful in sitting, standing, moving, changing of position in bed etc. *Prasatha aahara* as *Snighda*, *Ushna*, *Saali anna* (unpolished rice), *Jangala maamsa rasa*, *Jivanthi* (spinach), *Modaka* (radish and carrot), *Kaaravella* (bitter gourd), *Mudga* (grass gram pulses), *Vilepi* and boiled water should be given: *Madhya* is to be avoided as this will deteriorate the patient's health and delay the wound healing. Severe pain due to operative procedure making the patient restless can be relieved by gently applying lukewarm ghee mixed with *Mulethi*.^[20]

Post-operative care according to Modern sciences^[21]: The immediate post operative period is critical and hence patient should be observed carefully. The patient was given physical and psychological support and NBM for at least 4 hrs or up to bowel sound to be heard. Vital signs should be taken. Give head low position to patient's if spinal

anaesthesia is given for at least 24 hrs. Also give I.V. fluids, analgesics, antibiotics accordingly.

Care of wounds: Routine operation wounds are seen on 7th day and stitches are removed if there is no infection. In emergency surgery with dirty peritonitis wound is seen on 5th day for early diagnosis of wound infection. In obese/DM/Malignancy, culture and sensitivity is done first and accordingly antibiotics are started and daily dressings are done.

DISCUSSION

In Ayurveda *Trividha karma* has been explained in different context.

In the context of *Panchkarma Acharya Vagbhata* and *Acharya Charaka*, has explained different types of *Purva karma* like *Paachana*, *Deepana*, *Snehana*, *Swedana* and *Paschat karma* like *Paeyadi samsarjana*. Acharya susruta has explained *Trividha karma* mainly pertaining to *Shastra karma Agropaharana* i.e. collection of materials required before and after surgery. In Ayurvedic classic, Acharya susruta in the context of *Ashmari chikitsa* has explained about significance of consent pre-operative. Contra-indication of ingestion of food before surgical procedure is also indicated in Ayurvedic classics like in modern literature. Acharya Susruta has described that in diseases like *Mudhagarbha*, *Arsha*, *Ashmari*, *Bhagandra* and *Mukharoga*, the surgery should be done in empty stomach. Acharya Susruta has also mentioned *Vrana Dhoopana* and *Vranitagara dhoopana* which helps in sterilization and faster wound healing. Acharya Susruta has also mentioned about *Raksha Karma* which is done to destroy the witch called *Kritya* and remove the fear of *Rakshas*. This procedure mainly aims at making the patient psychological strong.

CONCLUSION

All kinds of surgeries have one thing is common, i.e. they all require exclusive pre-operative care. Pre-operative care includes Pre-operative management which includes establishment of clinical diagnosis and preparation of patient. Intra-operative anaesthesia and procedure requires high degree of perfection for the smooth and uneventful outcome and also post-operative care is of utmost important for the proper recovery and rehabilitation of the patient.

Acharya Sushruta was well aware of this fact and gave it much importance which can be noticed as he described a complete chapter on perioperative management of surgical patient in *Agrahoparniya adhyaya* which describes as *Trividha karma*.

Therefore every surgery should include careful execution of *Trividha karma* to reduce morbidity and mortality.

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