

## Pre-operative Management in Ayurveda

### Review article

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### Abstract

*Ayurveda* is an ancient science of life since the time of immemorial. In *Ayurvedic classics*, there is two types of treatment for all diseases, either with use of *aushadhi* (medicines) or by use of surgery. In *Shalya Tantra*, there was description of eight types of *shastra karmas* to perform *shalya karma* but *poorva karma* should be done before any surgical procedure and this *poorva karma* is known as preoperative management in *Ayurveda*. If *poorva karma* is performed properly and timely, this results in great success of any surgery and complication free postoperative period. The surgeon does not get defamed even after death of patient during procedure if *poorva karma* is performed properly with time.

**Key words:** *Poorvakarma, Ayurveda, Pre-operative, Consent*

### Introduction:

*Ayurveda* being ancient science of life, is *Upaveda* of *Aharvaveda* which is one of the four *Vedas*. All subjects of *ayurveda* are described under *ashtang ayurveda* which consists of eight branches of *Ayurveda*. *Shalya tantra* is one important branch of the *ashtang Ayurveda*. *Shalya Tantra* is the *Ayurvedic* surgery which consists of many *shastra karmas* and every *shastra karma* is pre-operated with some procedures and formalities known as *poorva karma* in *ayurveda* and also post-operated with some procedures called as *pashchata karma*. *Shalya Tantra* dominating *Granth* is *Sushruta Samhita* written by *Maharshi Sushruta* and *Adya-Upadeshta* of *Sushrua Samhita* is God

*Dhanawantari* who is also called as Father of Surgery. Subjects of surgery are described all over *Sushruta Samhita*. Pre-operative management consisting of admission, consent & counselling, fasting, enema and part preparation etc. are described all over *Sushruta Samhita*. Some of these have been described under heading of *Mudhagarbha*, some under topic of *Shastra karma*, and some points are described under heading of *Arsha, Ashmari, Mukharoga, Bhagandar* etc. *Poorva karma* should be done properly before any surgical procedure and intra-operative and post-operative results have got better and complication free if pre-operative management has been done properly. The surgeon does not get defamed even after either death of patient or any other complication happened during surgery if proper written consent has been taken and appropriate counseling has been done. Aim of pre-operative management is to make patient mentally calm, anxiety free, no local or systemic infection, investigate the patient to reveal any

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pathology, local part preparation at surgical site, bowel preparation and evacuation to make aseptic intestinal tract, B.P., pulse rate, and respiratory rate should be examined and recorded very well.

### **Pre-operative management (Poorva karma) in Ayurveda:**

*Ayurveda* is the known ancient medical science of the world. In *Ayurvedic* classics, the concept of pre-operative preparation in abdominal surgery is available in different forms. Any surgery is completed in three steps i.e. pre-operative, operative and Post-operative. Pre-operative management of the patients is mainly concerned with the preparation of the patient for the surgery. It is the first step of the any operation or basic requirement to attain a operative procedure. In *ayurvedic* texts, our *acharyas* describe various instructions such as sedation, empty stomach, proper bowel evacuation and consent etc. *Acharya Sushruta*, who is the father of surgery has classified all the surgical procedure in three major steps.(1)

1. *Poorva karma*
2. *Pradhan karma*
3. *Paschat karma*

*Poorva karma* is defined as pre-operative management in *Ayurveda*. *Poorva karma* includes various other processes performed prior to surgery such as collection of instruments, other materials, medicated oils and different preparations of drugs such as *kwath*, *kalka*, *awaleha*, drugs used for surgical area as disinfectant and also in preparation of patient as well as surgeon required all above mentioned materials. The *poorva karma* is described as a pre-operative preparation to overcome the operative and post-operative complications.

The following instruction has been given by *acharyas* for preoperative preparation of a patient.

1. Admission
2. Consent & Counseling

3. Fasting (Upawas)
4. Sedation
5. Care of bowel
6. Medications
7. Investigations

### **Admission:**

For pre-operative preparation, admission of the patient in the hospital or ward is must. *Acharya Sushruta* has described about the significance of admission before surgery because hospitalization of patient is necessary in *sutikagar* for evaluation of general and systematic examination and routine investigations.(2)

### **Consent & Counseling:**

Surgical procedure is essential for saving the life of patient. It may be fatal during intra-operative and post-operative period if preoperative instructions has been neglected. Therefore, well counseling should be done about merits and demerits of surgical procedures and *sangyahaarana* drugs to the patient's attendant or guardians. Before doing any major surgery a written consent of guardian or attendant must be obtained and explaining that if the surgical interference not performed timely, patient may go in trouble or any major complication. In case of intestinal obstruction, huge uterine tumor, dead fetus, perforation and even in certain complicated condition, survival of patient is doubtful or surgery is not sure being successful.(3,4,5,6)

*Indu* who is the commentator of *Vagbhatta (Ashtang Sangraha)* also said that by obtaining a written consent, the surgeon does not get defamed even if patient expired due to surgery or surgical complications.(7)

### **Fasting (Upawas):**

Fasting or nil orally 6 hours prior to surgery is very important and essential indication to patient, that is if stomach is full with meal or gastric contents,

operation could not get successful, it will cause intra-surgical and post-surgical GIT complications.

Ancient *acharyas* also described about fasting before surgery. *Haran Chandra* who is commentator of *Sushruta Samhita* explained that before any major surgery, patient should take nothing orally till completion of his/her surgery or till patient able to take any thing orally or appearance of bowel sounds.

In our *Ayurvedic classic*, *Sushrua Samhita Sutra sthana 5/16*, *Acharya* has mentioned that in *Mudha Garbh*, *Arsha*, *Ashmari*, *Bhagandar*, *mukha rogas*, surgery should be done in empty stomach because in full stomach, there may be difficulty in insertion of instruments due to fullness of stomach, aspiration of gastric contents which causes so many complications even to death.(8)

In modern surgery, contraindication of ingestion of food before surgical procedure is advised as described by *ancient acharya*, because it can create many complications related with gastrointestinal, respiratory or nervous and even may results death of patient. If surgical procedures performed with full stomach, aspiratory pneumonia may occur due to aspiration of stomach contents under anesthesia. Such aspiratory pneumonia may ultimately cause death of patient if fasting guidelines are not followed before the surgery. Therefore, ancient *acharyas* also aware of merits and demerits of fasting before operative procedures.

#### **Sedation:**

Last night before surgery, surgeon/Physician should prescribe to patients to take anxiolytic drugs as these drugs are effective in falling preoperative anxiety and patients get sound sleep. It is well known fact that many psychological processes exert an important influence on mental status, So it is advisable to keep patients in such environment that their

mental status should not be disturbed with anxiety and emotional problems and patients may continue mentally quiet or sound.

To make patient stress free or in normal *mansik sthiti*, only counseling of patients is not sufficient, so without any doubt, patients should be offered the specific therapy i.e. anxiolytic drugs. These allopathic medication during obstetric surgery cause so many adverse effect including teratogenic effect of fetus. According to certain study, the *Medhya* drugs (*Sangyasthapana Mahakashaya*) have shown varying degree of anxiolytic property which are described by *Acharya Charaka*. Anxiolytic drugs in operative procedure if used prior to surgery, it can provide good post operative and perioperative results, so, patients remain tension free before surgery as our ancient *Acharya* had already mentioned in their classics.(9)

#### **Care of Bowel:**

Preoperative care of bowel should be done by two methods. First one is to regulate bowel by enema and second one is to make bowel germ-free by use of antibiotics. If Bowel habit is regular then patient is not required medication but in case of constipation or irregular bowel habit, first requirement is to make bowel regular to reduce postoperative complications. To clear bowel, we use soap water (s/w) enema, Glycerine suppository, biscodyle as laxatives drug, two days prior to surgery, so that during surgery, distention of abdomen, vomiting etc. complications to be reduced by using these drugs.

Ancient *acharya* also have been described about care of bowel in the form of *Vasti (Sanshodhana Karma)*. *Vasti* is a procedure in which medicated *ghrita*, *kwath*, or oil to be pushed inside bowel through anal route.(10)

**Medication:**

Regular bowel habit and germ-free bowel make complication free intra-operative and post-operative periods. To disinfect the bowel before surgery, patient is medicated with metronidazole and neomycine which act orally in stomach and intestine, one day before surgery to attain maximum efficacy.

Ancient *Acharya* also described *Kriminashaka* drugs to disinfect the bowel as aseptic in surgery.

**Discussion:**

Management of surgical patient starts with pre-operative care and ends with post operative care. So many physiological as well as psychological changes occur during these stages and differ from patient to patient. There are so many neurohormonal changes occurring in patients which affect overall outcome of operative procedures. Better Pre-operative management not only keeps the patients in harmony intra-operatively but it also improves the better post-surgical recovery. First of all, patient should be admitted in the indoor or ward 48 hrs to one week before any major surgery after proper examination of patient in O.P.D. Written Consent for surgical procedure and anesthetic techniques is being most important part of pre-operative management, protect and secure the surgeon from being defamed if post operative complication arises or death of patient occurred. In our *Ayurvedic* classics, *maharshi Sushruta*, *Vagbhatta dwaya* and even commentator *Indu* have explained largely about the significance of consent pre-operatively. Contraindication of ingestion of food before surgical procedure is also indicated in *Ayurvedic* classics like in modern literature because in full abdomen, there may be difficulty in insertion of instruments or the patient may die due to mendelson's syndrome and *vata*

also gets aggravated. *Sushruta* has described that in five diseases i.e. *mudhagarbha*, *arsha*, *ashmari*, *bhagander* and *mukharoga*, the surgery should be done in empty stomach. To be emptiness of stomach, proper and appropriate purgatives according to *bala* and *agni* of the patient, should be given 24 hrs to 12 hrs before surgery because aspiration of gastric content may occurred intra-operatively due to anesthetic effect and this aspirated fluid may go to lungs and causes respiratory failure and respiratory system related complications. *Triphala churna*, *Panchsakar churna*, *Shatashakar churna*, Dulcolax, castor oil or simple anema should be used as purgative. Injection Tetvac should be used pre-operatively to the prophylactic point of view of Tetnus disease due to either unsterilized instruments or from other sources. Infections are the most common cause of increased morbidity in surgical patient. One of objectives of pre-operative preparation is to prevent any form of infection including those acquired fracture hospital. Preoperative bath and a scrub on the day of surgery helps in decreasing the infection rate. This should be done with chlorhexadine, when it is not available then simple toilet soap can be used. Part preparation should be done in operation theatre to prevent the growth of bacteria in the nicks and cuts caused by saving. Because part preparation one day before can cause infection due to bacterial growth in nicks and cuts. Shorter hospital stay decreases the infection of hospital acquired bacteria on skin. Preoperatively prophylactic antibiotic use before surgery may decrease chance of wound infection postoperatively. Alprax or diazepam may be given one night before surgery to keep the patient calm and cool intraoperatively and postoperatively and also reduce her tension and anxiety about surgical procedure.

**Conclusion:**

In *Ayurveda*, *poorva-karma* before operative procedures has been described by different *acharya*, mainly by *Acharya Sushruta* with great stress for a better outcome of *Pradhana-karma* as well as *Pshchata-karma*. Any surgical procedure which follows proper pre-operative management, results complication free surgery in relation to the patient as well as surgeon both. Fame and defame of surgeon depend upon final result of a surgical case which mainly depends upon proper pre-operative care and management.

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