

APPROACHES OF SANGYAHARAN(ANESTHESIA) IN SHALYA CHIKITSA,
INDICATIONS, CONTRAINDICATIONS AND COMPLICATIONS

Dr. Sandeep Aheer*

Assistant Professor, Saraswati Ayurved Hospital and Medical College, Mohali, Chandigarh, Punjab, India.



*Corresponding Author: Dr. Sandeep Aheer

Assistant Professor, Saraswati Ayurved Hospital and Medical College, Mohali, Chandigarh, Punjab, India.

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ABSTRACT

Shalya Chikitsa in Ayurveda deals with surgical techniques and it has wisdom of unique medicinal practices of ancient India to treat diseases requiring surgical attention. This stream consist many individual aspects and *Sangyahan* or anesthesia is one such aspect of *Shalya Chikitsa*. The uses *Sangyahan* or anesthesia is essential to conduct surgical intervention successfully. Surgery involves pain, and needs complete dissociation of patient in term of movement/flexibility and consciousness, etc. The uses of anesthesia provide these advantages and allow surgeon to perform surgery without any obstacles. The concept of anesthesia is advancing with time and modern medical science exploring many approaches in this area. The specific indications must take in consideration along with contraindications and complications of anesthesia to prevent hazardous effects that may results severe health consequences. This article highlights various approaches of *Sangyahan* (anesthesia) used in *Shalya chikitsa* along with their indications, contraindications and complications.

KEYWORDS: *Ayurveda, Sangyahanana, Anaesthesia, Surgery, Shalya chikitsa.*

INTRODUCTION

Sangyahanana or anaesthesia means condition of reversible loss of sensation; this concept is considered crucial for surgical procedures. The ancient *Rigveda* mentioned various procedures related to the surgery which includes leg amputations, removal of injured parts, extraction of arrow and other minor surgeries. In later stage these types of surgical intervention performed with the help of new techniques utilizing anaesthesia to protect patient from pain and fear. There are many approaches used for anesthetic purpose along with drugs which reduces pain and sensation for a while.^[1-3]

Sushruta gives detailed descriptions about the procedures, instruments and anesthesia used for surgical purpose. *Sushruta* described techniques used in surgery which induces insensitivity or unconsciousness and acts as anesthesia. Ayurvedic texts include references related to the substances used as anesthetic and termed as *Sangnaapanayana dravyas*, similarly *Madyenamohayitwaa* involve uses of alcohol to induce anesthesia before surgery. The various approaches of anesthesia are depicted in **Figure 1**.^[3-5]

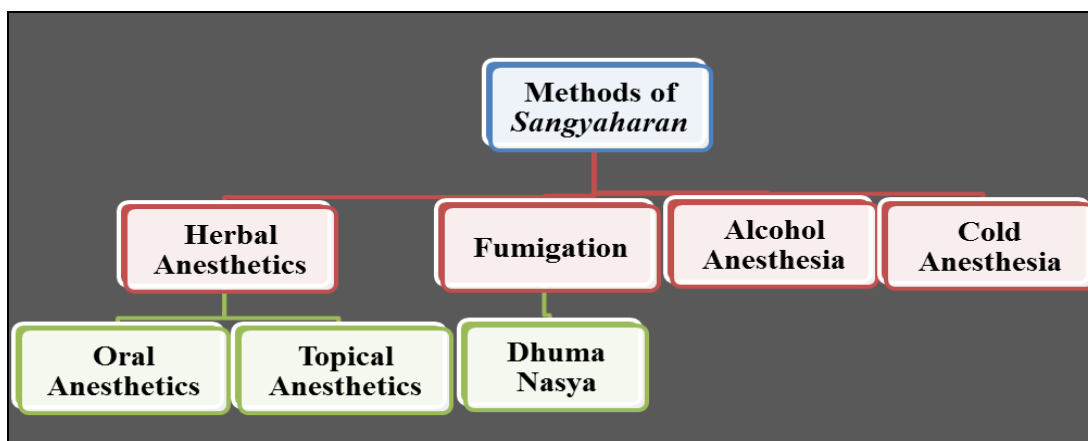


Figure 1: Some Common Methods of Anesthesia.

Oral Anesthetics

Sushruta described various concoctions of herbs for anesthetic purpose administered orally to induce numbness and sleep. These drugs include opium, plants of solanaceous category and cannabis, etc.

Topical Anesthetics

Paste or oils of herbs applied locally at the surgical site to induce numbness in particular area. Clove oil and resin extracts can be used for local anesthetic purpose.

Fumigation (Dhuma Nasya)

Dhuma Nasya means inhalation of medicated smoke also employed for anesthetic purpose. Herbs possessing sedative properties burnt and their smoke allow inhaling by patient to induce drowsiness or unconsciousness. This procedure is considered useful for head and neck problems.^[4-6]

Alcohol-Based Anesthesia

Sushruta advocated alcoholic beverages to induce dullness and relieving pain as well as anxiety. Alcohol drink helps to reduce pain sensitivity and also relaxes muscles.

Pressure Techniques

Pressure points or *Marma* points manipulated or pressed gently to induce loss of sensation in specific area. It is considered good for minor surgical interventions.

Cold Anesthesia

The application of ice or cold compresses to the surgical area also induces numbness for a particular time period.

Natural Drugs and their indications

- *Ahiphen* mainly used for post operative pain
- *Bhanga* indicated for post operative pain
- *Parasika* induces tranquilizing effect after the surgery
- *Shankhapushpi* used to achieve post operative tranquilizing effect
- *Vacha* loss of sensitivity after the surgery
- *Nirgundi* imparts post-operative anti-inflammatory action
- *Rasna* gives anti-inflammatory action after the surgical intervention.
- *Bhringraja* used as post-operative medicine.
- *Parijata* imparts post-operative anti-inflammatory effect.^[5-8]

General Indications of Sangyahaarana (Anaesthesia)

- ❖ Major surgeries (e.g., abdominal, cardiac, neurological)
- ❖ Minor surgeries (e.g., dental extractions, skin lesion removals)
- ❖ Orthopedic surgeries (e.g., fracture repairs, joint replacements)
- ❖ Obstetric procedures (e.g., cesarean sections)
- ❖ Endoscopic examinations (e.g., colonoscopy, bronchoscopy)

- ❖ Biopsies
- ❖ Severe pain
- ❖ Resuscitation procedures and intubations
- ❖ Hyper excitement/psychosis and mental trauma

Contraindications Sangyahaarana (Anaesthesia)

- ✓ Patient refuses and clinically shock condition
- ✓ Coagulation disorders, uncooperative patient
- ✓ Spine disorders, neurological deficits and severe depression
- ✓ Sepsis, infection at site of local application
- ✓ Haemorrhage risk
- ✓ Complicated cases of chronic illness and elderly patient looking intolerable

Complication of Sangyahaarana (Anaesthesia)

- Lacerations to the lips, gums and tongue
- Nerve injury and anaphylaxis or allergic reaction
- Malignant hyperthermia and aspiration pneumonitis
- Respiratory depression and stroke, cardiovascular collapse
- Hypoxic brain injury and aseptic meningitis
- Post-dural-puncture headache and urinary retention
- Paralysis or coma and death may result sometimes
- Peripheral Nerve Damage

Precautionary measure during anesthesia

Nerve damage sometime may occur caused by injury to nerve directly from the needle, or by infection. This can be prevented by observing radiating pain while injecting local anesthesia. The proper positioning of needle and sharp insertion needed in such cases.

Patient evaluation is prerequisite before administering dose of anesthesia. Pre-anesthesia evaluation is required to assess the patient's health status, allergies, medications and any pre-existing illness that may impact anesthesia. Accordingly anesthesia should be planned depends upon the patient's individual needs, considering factors such as weight, age, type of surgery and medical history, etc. Selection of appropriate dosage of anesthesia is very important to avoid complications.

Monitoring is very crucial during the administration of anesthesia dose. Vital signs (heart rate, blood pressure, oxygen saturation and respiratory rate) should be monitored throughout the anesthesia procedure. Physician should ensure proper airway management during anesthesia to maintain proper oxygen supply.

Administration of anesthesia should be as per the established protocols of dosage, dilution and administration techniques under the supervision of expert physician or surgeon. Temperature management during surgery is required since anesthesia can affect thermoregulation. Here warming devices can be used to prevent hypothermia.

Anesthetic physician should remain prepared to manage anesthesia-related emergencies such as airway obstruction, bradycardia, allergic reactions and hypotension, etc. Post-anesthesia care is required which includes monitoring the patient's vital signs, consciousness level and post-operative complications or side effects anesthesia, etc.^[6-8]

CONCLUSION

The approaches to *Sangyahan* in *Shalya Chikitsa* reflect ancient as well as modern techniques used for anesthetic purpose. The Ayurvedic medications used to relieve post-operative pain, reduces post-operative discomfort and induce calmness, etc. The approaches to *Sangyahan* remarkably advanced with time and modern anesthetic techniques offers advantages of precision and lesser toxicity. *Sangyahan* or anaesthesia is very essential to ensure patient safety and success of surgical interventions. Precautionary measures must be taken during the uses of anesthesia to prevent any complications related with them.

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