

## Conceptual review of *AshtavidhaShastrakarma-* *According to SushrutSamhita*

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### ABSTRACT

*Acharya Sushrut* is revered by every surgeon, both *Ayurvedic* as well *Allopathic*, as the **FATHER OF SURGERY**. Modern day surgical practices have their roots from the surgical practices described in the ancient classical texts of *Ayurveda*. Out of the *Bruhatrayee*, *Sushrut Samhita* propounded by *Acharya Sushrut* is a *samhita* focusing on mainly surgical and para-surgical line of treatment of various diseases. The concept of 8 types of surgical practices was laid down by *Acharya Sushruta* as *AshtavidhaShastrakarma*. These have proven to be the very strong and unshakable foundation on which modern day surgery is standing tall in its ever increasing glory. *Chedan, Bhedan, Lekhan, Vyadhan, Eshan, Aharan, Vistravanand Seevan* together make up the *AshtavidhaShastrakarma*<sup>[1]</sup>. Every surgical procedure being practiced and being researched about today can be traced back and categorized into these *AshtavidhaShastrakarma*. This conceptual study is being carried out to study and analyze the *AshtavidhaShastrakarma* for better comprehension and practice of modern *Shalyatantra*.

**KEYWORDS:** *Ashtavidha Shastrakarma, Surgery, Shalyatantra, Ayurved, Sushrut Samhita*

### INTRODUCTION:

The vast knowledge is available to us in the form of various classical texts viz. *Samhitas, Nighantus, Upanishads, Tikas* etc. *Sushrut Samhita* is said to be *Shalyatantrapradhaan samhita*<sup>[2]</sup>. Innumerable surgical interventions for the treatment of diseases, their indications-contraindications, procedure (pre, main, post), instruments, medications, diet, lifestyle etc. are all explained in detail by *Acharya Sushrut*. Many invaluable concepts regarding surgical and para-surgical procedures viz. *Yantra-Anuyantra, Shastra-Anushastra, AshtavidhaShastrakarma, Ksharakarma, Agnikarma, Raktamokshan (Siravedh, Pracchana, Jalaukavacharan), Bandhavidhi, Vranashotha-VranaChikitsa* etc. are well described on *sushrut samhita. AshtavidhaShastrakarma*, which is categorized under *Pradhaan karma*<sup>[3]</sup>, include *Chedan Karma* (Excision), *Bhedan Karma* (Incision), *Lekhan Karma* (Debridement), *Vyadhan Karma* (Puncturing), *Eshan Karma* (Probing), *Aaharan Karma* (Extraction), *Vistravan Karma* (Draining) and

*Seevan Karma* (Suturing). Every surgical intervention can be categorized into these 8 *karmas*.

### REVIEW OF LITERATURE

#### ➤ *Shalya Chikitsa Advantages:*

1. *Aashukriya*: Fast results or relief
  2. *Yantrashastraksharaagnipranidhaan*: In treatment *yantra, shastra, kshara, agni* all are utilized.
  3. *Sarvatantrasaamaanya*: It encompasses all the knowledge present in other *tantra* also.<sup>[4]</sup>
- **Yantra**: These are the instruments which aid the surgeon to remove the *shalya* (anything which causes discomfort or pain to either the body or the mind). They are blunt in nature, of 6 major types, 101 in number, of various dimensions and structures<sup>[5]</sup>, and are useful in the treatment of multiple diseases. *Upayantra* (Instruments which are not *yantra* but are supportive to them or can

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be used as a substitute in an emergency in the absence of *yantra*), 25 in number, also play a role in treatment.<sup>[6]</sup>

- **Shastra:** These are the sharp instruments used actually for the major surgical procedures. They are 20 in number, of various dimensions and structure<sup>[7]</sup> and are vital for any surgery. *Anushastra* (Instruments which are not *shastra* but have similar action like that of *shastra* and can be used as a substitute in an emergency in the absence of *shastra*) are 14 in number and are advised to be used in specific situations for achieving result.<sup>[8]</sup>
- **Yogyavidhi:** The repeated practicing of *ashtavidhashastrakarma* on substitutes before actually performing on the patient with an aim of achieving mastery in them is *Yogya*. It ensures that the surgeon is well prepared and has the confidence to perform a surgery in turn ensuring the safety of the patient.<sup>[9]</sup>
- **AshtavidhShastrakarma** - The 8 methods of surgery are as follows,

The Indications and *Yogya* for each *karma* are mentioned in Table. No. 1

The Instruments to be used for each *karma* (*Shastra-Anushastra* and *Yantra-Upayantra*) are mentioned in Table. No. 2

### 1. Chedan Karma (Excision) –

- a. *Chedankarma:* The act of completely or partially cutting off a part of the body, which is either abnormal or diseased, and separating it from the body is *Chedan*.
- b. Method of holding instrument for *Chedan:* Instruments like *Vridhipatra*, should be held in between *Phala* (blade) and the *Vrinta* (handle). *Karapatra* should be held at the base.<sup>[10]</sup>
- c. Excision: Excision is defined as the act or procedure of removing by or as if cutting out especially surgical removal or resection.<sup>[11]</sup>

### 2. Bhedan Karma (Incision) -

- a. *Bhedankarma:* The act of making a cut on the body in order to drain out the accumulated fluid or pus or to remove solid object like calculi etc. from the cavity within is *Bhedan*.
- b. Method of holding instrument for *Bhedan:* *Vridhipatra* and all instrument used for *bhedankarma* should be held in between *Phala* (blade) and the *Vrinta* (handle).<sup>[10]</sup>
- c. Types of *Bhedan:*

1. *Bhedan* - The qualities of wound created by proper *Bhedanare aayat* (of adequate length), *vishal* (of adequate extensibility), *sama* (Regular with uniform edges), *suvi bhakta* (properly separated from other structures) and *nirashray* (without any pockets for the collection of pus)<sup>[12]</sup>
  2. *Pratibhedan* - This can be correlated to counter incision.
  3. *Bahubhedan* - This is taking multiple incisions.
  4. Both these types of *bhedanare* done when there is a possibility that complete purification of a wound is not achieved by a single incision (Multiple tracts and multiple pus pockets). These are made use of as per the situation and condition at that time. These are performed so as to achieve complete drainage of *dosha* (pus) from all of its tracts/pockets. Incisions are advised to be taken where *whereutsang* of *dosha* is seen.
  5. *TiryakBhedan* - (Oblique incision) at eyebrows, cheeks, temporal region of head, forehead, eyelid, lips, gums, axilla, belly and groin.
  6. *ChandramandalaBhedan* - (Circular incision) at hands and feet.
  7. *ArdhachandrakrutiBhedan* - (Semicircular incision) at anal region and penis.<sup>[13]</sup>
  - d. Complications of *AsamyakBhedan:* Proper method and precautions mentioned in *Samhitas* must be followed as it is. If there is improper *Bhedan*, then complications like damage to *sira-snayyu*, severe pain, delayed wound healing, excessive granulation tissue, hypertrophic scar or keloid formation etc. make take place.<sup>[13]</sup>
  - e. Incision: Incision is basically a cut or a gash specifically a wound made especially in surgery by incising the body<sup>[14]</sup>
- ### 3. Lekhan Karma (Debridement) -
- a. *Lekhankarma:* *Lekhan* refers to forceful scrapping of debris or unwanted hardened tissue which in turn facilitates better wound healing.
  - b. *Gati of Lekhan* –It must always be done in *Anulomgati* *Pratilomagati* causes severe pain and increased bleeding.
  - c. Method of holding instrument for *Lekhan:* *Mandalagra* should be held by the hand in a slightly raised manner and held at the junction of *Vrunta* and *phala* and *Lekhana* should be done multiple times.<sup>[10]</sup>
  - d. Multiple references regarding *lekhanare* also found in *Chikitsa sthana* of *Sushrut Samhita*, 1<sup>st</sup> chapter, *DwivraniyachikitsitAdhyaya*.

- e. Debridement: The surgical removal of lacerated, devitalized, or contaminated body tissue is known as debridement.<sup>[15]</sup>
- 4. Vyadhan Karma (Puncturing or Paracentesis) -**
- a. *Vyadhankarma*: The puncturing of a fluid filled cavity and draining out the fluid via a small opening is known as *Vyadhan*.
- b. Technique for *Vyadhan*: *Kutharika* should be held in the left hand, the puncture is made by using on it by the middle finger of the right hand and supporting it with thumb. *Vrihimukhi* should be held in between the thumb and the index finger in such a way that its handle remains covered by the palm. *Aaraa* should be held at the base. These should be inserted up to proper depth in the seat of disease and the *dosha*, fluid, pus etc. should be allowed to drain out.<sup>[10]</sup>
- c. Puncturing followed by Paracentesis: A surgical puncture of a bodily cavity (as of the abdomen) with a trocar, aspirator, or other instrument usually to drain off an abnormal effusion for diagnostic or therapeutic purposes.<sup>[16]</sup>
- 5. Eshan Karma (Probing) -**
- a. *Eshankarma*: The passing of instrument in order to determine the position and situation of any foreign object or to determine the track in cases of pus formation in *Eshan*.
- b. Method of holding instrument for *Eshan*: *Eshani* should be held by its base.<sup>[10]</sup>
- c. Probing: The insertion of a probe (a slender medical instrument) with the purpose of exploration as of a wound or a body cavity<sup>[17]</sup>
- 6. Aaharan Karma (Extraction) -**
- a. *Aaharankarma*: The act of getting hold of any solid object or foreign body with the purpose of uprooting it and pulling it out of the body is *Aaharan*.
- b. Method of holding instrument for *Aaharan*: Instrument to be held according to comfort.<sup>[10]</sup>
- c. Extraction: Extraction is the act or process of extracting something. Usually it is the abnormal tissue or any foreign body which is of solid nature from the body.<sup>[18]</sup>
- 7. Vistravan Karma (Draining) -**
- a. *Vistravankarma*: The process of letting out of fluid accumulated in a closed cavity is *Vistravan*. It includes both *raktramokshan* (Bloodletting) and *Puyavistravan* (Pus drainage from pus pockets)
- b. Method of holding instrument for *Vistravan*: Instrument to be held near its tip.<sup>[10]</sup>
- c. Drainage: The act, process, or mode of draining is drainage. Fluids or pus accumulated in the body cavity are drained out in this process.<sup>[19]</sup>
- 8. Seevan Karma (Suturing) -**
- a. *Seevankarma*: The tying up of the 2 margins of any wound to facilitate wound healing is known as *Seevan*.
- b. Contraindications:
1. Wounds affected by *Agni*, *Kshara*, *Visha*.
  2. Wounds which emits *Marutha* (gas).
  3. Wounds which have blood or foreign body inside.
- In these cases, the wound should be cleaned and the dust, hairs, nails and bone pieces be removed. If they are not removed from the wound they cause severe suppuration of wound along with different types of pain.<sup>[20]</sup>
- c. Types of *Suchi* (needle):
1. *Vrutta* (Circular) - 2 *angula* length and used for wounds at places of lesser muscle mass and at joints.
  2. *Aayat* (Straight) - 3 *angula* length and used for wounds at places of greater muscle mass.
  3. *Tryasraa* (Triangular) - 3 *angula* length and used for wounds at places of greater muscle mass.
  4. *Dhanuvakra* (Semicircular) - Used for wounds at *marma*, scrotum and abdomen.<sup>[21]</sup>
- d. Technique of *Seevan*: Wound toileting must be done prior to suturing. Wound edges should be slightly raised up, and it is approximated, and then sutured.<sup>[22]</sup> If bite is taken very near the margin tear is possible and results in wound dehiscence and if the suture are taken very far from the margin there may be tension suture which causes very much pain at the operative site. So the needle should be passed neither very far nor very near from the margins of wound.<sup>[23]</sup>
- e. *Sutra* of *Seevan*: Fine thread, *ashmantakvalkal*, *shana sutra*, *kshauma sutra*, tendon of animals, hair, *murva*, fibres of *guduchi* etc.<sup>[22]</sup>
- f. Types of *Seevan*:
1. *Vellitaka* (Continuous suture)
  2. *Gofanika* (Reinforcing/Blanket/Interlocking Suture)
  3. *Tunnasevani* (Draining/Zigzag Suture)
  4. *Rujugranthi* (Interrupted Suture)<sup>[22]</sup>
- g. Suturing: A suture is defined as a strand or fiber used to sew parts of the living body i.e. a stitch made with the purpose of joining two free ends of a body structure. This act or sewing or stitching is known as suturing.<sup>[24]</sup>

Sr.no.	Shastra karma	Instrument			
		Shastra <sup>[25]</sup>	Anushastra <sup>[26]</sup>	Yantra <sup>[27]</sup>	Upayantra <sup>[28]</sup>
01.	Chedan Karma	Mandalaagra Karapatra Vruddhipatra NakhaShastra Mudrika Utpalpatra Ardhadhaar	Twaksaar Sphatika Kaach Kuruvinda  Nakha		
02.	Bhedan Karma	Vruddhipatra NakhaShastra Mudrika Utpalpatra Ardhadhaar	Twaksaar Sphatika Kaach Kuruvinda Nakha		
03.	Lekhan Karma	Mandalaagra Karapatra	Kshar		
04.	Vyadhan Karma	Kutharika Vrihimukha Aaraa Vetaspatriak Suchi			
05.	Eshan Karma	Eshani	Baal Ankur Anguli		
06.	Aaharan Karma	Badisha Dantashanku	Nakha	Swastika Sandansha Taal Naadi Shalaaka (Badishmukhi Masurdalamaatramukhi Nasarbudharan)	AshthilashmaMudgar Paanitala Anguli Nakha Ashwakatak Shakha
07.	VistravanaKarma	Suchi Kushapatra Aatimukha Sharaarimukha Antarmukha Trikurchaka Eshani	Jalauka Gojivhapatra Shefalikapatra Shaakpatra	Naadi	Mukha
08.	Seevan Karma	Suchi			Antarvalkal Baal

Sr.no.	Shastra karma	Yogya <sup>[29]</sup>	Indications	
01.	Chedan Karma	Pushpafal Alabu Kaalindak Trapusa Evaru Karkaaruka	<ul style="list-style-type: none"> <li>Bhagandar specially shataponaak</li> <li>Aamgranthi</li> <li>Tilakaalak</li> <li>Vranavartma</li> <li>Arbuda</li> <li>Arsha</li> <li>Charmakeela</li> <li>AsthimamsaagamShalya</li> </ul>	<ul style="list-style-type: none"> <li>Jatumani</li> <li>Maamsasanghaat</li> <li>Galashundhika</li> <li>Snaayukotha</li> <li>Sirakotha</li> <li>Vaalmika</li> <li>Adrusha</li> <li>Upadansha</li> <li>Mamsakandi</li> <li>Adhimamsa<sup>[30]</sup></li> </ul>
02.	Bhedan Karma	Udakapankapura Druti	<ul style="list-style-type: none"> <li>Vidhradhi (vataja, pittaja, shleshmaja)</li> </ul>	<ul style="list-style-type: none"> <li>Anushayi</li> <li>Naadivrana</li> </ul>

		<i>Basti Prasevaka</i>	<ul style="list-style-type: none"> <li>• <i>Visarpa (vataja, pittaja, shleshmaja)</i></li> <li>• <i>Vruddhi</i></li> <li>• <i>Vidarika</i></li> <li>• <i>Prameha pidaka</i></li> <li>• <i>Shofa</i></li> <li>• <i>Stanaroga</i></li> <li>• <i>Avamanthak</i></li> <li>• <i>Kumbhika</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Ekavrunda</i></li> <li>• <i>Vrunda</i></li> <li>• <i>Pushkarika</i></li> <li>• <i>Taalupupputa</i></li> <li>• <i>Tundikeri</i></li> <li>• <i>Gilayu</i></li> <li>• <i>Sheegrapakibhagandarpidika</i><sup>[31]</sup></li> </ul>
03.	<i>Lekhan Karma</i>	<i>Saromacharma</i>	<ul style="list-style-type: none"> <li>• <i>Rohini (vataja, pittaja, shleshmaja, sannipataja)</i></li> <li>• <i>Kilaasa</i></li> <li>• <i>Upajivha</i></li> <li>• <i>Medojadantavaidarbha</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Granthi</i></li> <li>• <i>Vartma</i></li> <li>• <i>Adhijivhika</i></li> <li>• <i>Arshamandal</i></li> <li>• <i>Mamsakandi</i></li> <li>• <i>Mamsonnati</i><sup>[32]</sup></li> </ul>
04.	<i>Vyadhan Karma</i>	<i>Mrutapashusira Utpalnaal</i>	<ul style="list-style-type: none"> <li>• <i>Bahuvidhasira</i></li> <li>• <i>Mutravriddhi</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Dakodara</i><sup>[33]</sup></li> </ul>
05.	<i>Eshan Karma</i>	<i>Ghunopahatkashta Venu Nala Naali</i>	<ul style="list-style-type: none"> <li>• <i>Naadivrana</i></li> <li>• <i>Sashalyavrana</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Unmargivrana</i><sup>[34]</sup></li> </ul>
06.	<i>Aaharan Karma</i>	<i>Panas Bimbifala Bilwafalamajja Mrutapashudanta</i>	<ul style="list-style-type: none"> <li>• <i>Sharkara</i></li> <li>• <i>Danta</i></li> <li>• <i>Karnamala</i></li> <li>• <i>Ashmari</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Shalya</i></li> <li>• <i>Mudhagarbha</i></li> <li>• <i>Varcha</i><sup>[35]</sup></li> </ul>
07.	<i>Vistravana Karma</i>	<i>Madhucchishta Upalitashaalmalifalaka</i>	<ul style="list-style-type: none"> <li>• <i>5 vidradhi (except tridoshaja)</i></li> <li>• <i>Kushta</i></li> <li>• <i>VedanayuktaVayu</i></li> <li>• <i>EkadeshaShofa</i></li> <li>• <i>Paalyaamayaa</i></li> <li>• <i>Shleepada</i></li> <li>• <i>VishjushtaRakta</i></li> <li>• <i>Arbuda</i></li> <li>• <i>Visarpa</i></li> <li>• <i>Granthi (vataja, pittaja, shleshmaja)</i></li> <li>• <i>3 Upadansha</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Stanaroga</i></li> <li>• <i>Vidarika</i></li> <li>• <i>Sushira</i></li> <li>• <i>Galashaaluka</i></li> <li>• <i>Kantaka</i></li> <li>• <i>Krumidanta</i></li> <li>• <i>Dantaveshta</i></li> <li>• <i>Upakush</i></li> <li>• <i>Sheetad</i></li> <li>• <i>Dantapupputa</i></li> <li>• <i>Oshtharoga (pittaja, raktaja, kaphaja)</i></li> <li>• <i>Kshudraroga</i><sup>[36]</sup></li> </ul>
08.	<i>Seevan Karma</i>	<i>Sukshmaghanavast raanta Mruducharmaanta</i>	<ul style="list-style-type: none"> <li>• <i>Vrana which are -</i></li> <li>• <i>Medasamuttha</i></li> <li>• <i>Bhinna</i></li> <li>• <i>Sulikhita</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Sadyovrana</i></li> <li>• <i>Chalasanghishita</i><sup>[37]</sup></li> </ul>

## CONCLUSION

*AshtavidhaShastra Karma* described extensively by *Acharya Sushrut* can be rightly said to be the base of modern surgery. Even though we come across many differences as compared to the data of ancient texts, they are nothing but modifications done over the years in order to need of the hour. But their basic principles do not vary even by a minute factor. Not only the surgical procedures, even the instruments

used, the concept of anesthesia, pre-operative preparation, post-operative care, possible complications and their management etc. all have their roots in these *Samhitas*. They were researched upon, developed, modified into better a version which was necessary for their respective time. Hence the basic framework of today's prestigious field of Surgery is an upgraded version of the *Shalyatantra* branch of *Ayurved*.

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