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Review Article Ashta vidhashastra karma – Fundamentals of Surgery

Dr Jyotik Omkar Subhash

Assistant Professor Shalyatantra (Tilak Ayurved Mahavidyalaya, Pune)
Consultant at Sheth Tarachand Ramnath Ayurved Charitable Hospital Pune
Consultant at Nanal hospital Pune, India

Dr Gauri Jaydeep Gangal

Assistant Professor Dravyaguna (Tilak Ayurved Mahavidyalaya, Pune)
Consultant at Nanal hospital Pune, India

Corresponding Author: **Dr Jyotik Omkar Subhash**

Abstract: Ayurveda is the ancient science of life which deals with eight different branches (Astanga Ayurveda) related to different therapeutic aspects. Shalyatantra is one of branch which deals with surgical and parasurgical concept. Sushruta Samhita gives importance to surgery, it contains 184 chapters and has described about 1120 diseases, 700 medicinal plants 64 preparations from mineral sources, 57 preparations from animal sources, and detailed anatomical description. Acharya Sushruta has given detailed description about Sandhan Karma (plastic surgery), Vranachikitsa (treatment of ulcers), YantraShastra (various instruments used for surgery), para-surgical procedures and also in other aspects of medicine such as ophthalmology, toxicology, paediatrics, obstetrics and gynaecology etc. All these concepts are significant in present day modern surgery also. So an authentic attempt is made to explore the surgical procedures mentioned in Sushruta Samhita by Acharya Sushruta and its relevance in modern surgery.

Keywords: Shalyatantra, Asthavidhashastrakarma, Acharya Sushruta, Principles of Surgery.

Introduction:

Importance of Ayurveda is increasing day by day and World is looking towards Ayurveda as an alternative to contemporary medicine. Ayurveda is a science that helps to preserve health by using nature's inherent values to bring the individual back into balance with his self-healing power.¹ According to ancient description of Rigveda legs have been amputated and replaced by iron replacements, and many such references are there which shows presence of surgery.² Acharya Sushruta in Sushruta Samhita around period of 1000 B.C has explained about Shalyatantra.³ According to evidences in Sushruta Samhita to prove that ShalyaChikitsa (Surgery) was in its glorious phase during ancient time. Acharya

Sushruta, who is known as the father of Surgery over the history of world, has described all the principles of Surgery in a very systematic way.⁴ Acharya Sushrut has explained concept of Shastra Karmas in very much scientific and undoubtedly no surgical procedure can be invented to overcome the limit of these Karmas. Sushruta has very scientifically classified all the surgical procedures in two groups – Yantra Karmas & Shastra Karmas. Yantra Karmas are the procedures which contain the use of blunt instruments, while Shastra Karmas contain the use of sharp instruments. In fact, each and every surgical procedure is nothing, but a planned and systematic use of blunt and sharp instruments. Ayurveda insists more upon the principles than any other description. And it seems to be the main factor why Acharya Sushruta described the Shalya Karma in such a way. Actually, he mentioned the basic principles of ShalyaChikitsa as Yantrakarmas & Shastrakarmas and left the elaboration of those on the wisdom of ShalyaChikitsaka (surgeon), as surgery is entirely concerned with skill and presence of mind of the performer. Sushruta has described 101 blunt and 20 sharp instruments which can be said to be the pioneers of modern surgical instruments.⁵⁻⁶ Acharya Sushruta has also explained about Bandhavidhi in detail which helps in surgical procedures.⁷

Acharya Sushruta has given in detail description about wounds and ulcers and their management, description and management of abscess, different types of tumours and cysts, fracture, accidental burn, amputation surgeries, reconstruction surgeries etc. Acharya Sushruta had described these procedures before any science. Acharya Sushruta explained three procedures before any surgery i.e. Poorva Karma, Pradhana Karma, Paschata Karma and the AshtavidhaShastra Karma comes under Pradhana Karma. It is composed of eight surgical procedures viz. Chhedana (excision), Bhedana (incision), Lekhana (scrapping), Vyadhana (puncturing), Visravana (drainage), Eshana (probbing), Aharana (extraction), Seevana (suturing). These Surgical techniques help in surgical diseases like; Sadhyovrana, Nadvirana, Bhagandara, Vidradi, Granthi etc.

Aim – To Study Asthavidhakarma as a Fundamental principle in Surgery.

Materials and Methodology: Charak Samhita, Sushruta Samhita, other Ayurvedic texts, modern textbooks, various articles in journals and online databases were reviewed thoroughly for the study material.

Yogyavidhi (Practical Training)⁸:

Acharya Sushruta has explained about yogyavidhi in relation to practice of ashavidhashastra karma. In following table various models that are used for surgical procedure are explained, these helps to obtain proficiency, acquiring skill, ability and speed.

Shastrakarma	Models used for asthavidhashastrakarma
Chedana, Utkarthana, Apakarthana	Phala of Kushmanda, Alabu, Kalinthaka, Trapusa, Ervaruka, Karkaruka
Bhedana	Drithi, Basthi, Prasevaka filled with Udaka, Panka
Lekhana	Charma with Roma
Vyadhana	Mrithapasusira, Utpalanaala
Eshana	Gunopahatakashta, Venu, Nala, Naali, SushkaAlabumukha
Seevana	Sookshmaghanavasthranthayo, Mriducharmaanthayo
Bandhana	Pusthamayapurushaangaprathyanga
Agni, kshara	Mridumamsakhanda
Karnasandhibandha	Mriducharma, Mamsa, Peshi, Utpalanala
Nethrapranidhanabasthi, Vrana basthipeedana	Udakapoornaghataparswasrotasi, Alaabumukha
Aharana	Panasa, Bimbi, Vilva-phalamajjaMrithapasudantha
Visravana	Madhoochishtaupalipthasaalmaliphala

Asthavidhashastra karma as fundamentals:

1) **Chhedana Karma:** It is karma which involves excision with the help of shastra like Mandalagra, Karpatra, Vrudhipatra, Mudrika and Utpalpatraka.⁹

Use of Anushastra in Chhedana Karma: Sphatika, Kacha, Agni, Kshara, Nakha. Indications of Chhedana Karma are Bhagandara, Kaphajgranthi, Vranavartama, Charmakeela, Asthimamsagata Shalya.¹⁰

Scalpel, Scissors etc. are modern instruments used for this purpose.

2. **Bhedana Nirukti:** “BhedyamBhedaneeyam, Vidradyadi”.

Use of Shastra in Bhedana karma -Vridhipatra, Nakhasastra, Mudrika, Utpalapatra and Ardhadhara.¹¹

Use of Anushastra's: Sphatika, Kaca (glass pieces), Agni, Kshara, Nakha.

Indications: All types of Vidradhi except Sannipataja, Vataja, Pittaja and KaphajaGranthi, Vataja, Pittaja and KaphajaVisarpa, Vridhi, Vidarika, PramehaPidaka, Sopha, Stanarogas, Avamanthaka, Kumbhika, Anusayi, nadivrana, alaji, kshudrarogas etc.¹²

3. **Lekhana Nirukti:** “LekhyamLekhaneeyam, Rohinyadi”.

Shastra's - Mandalagra, Karapatra¹³

Anushastra's: Kshara, Gojihva, Sephalikka, Nakha

Indication: Vataja, Pittaja, Kaphaja, SannipatajaRohini, Kilasa, MedajaGranthi, MedajaVartma, Adhijihvika, Arshas, Mandala Kusta, Mamsakanda and Mamsonnati.¹⁴

4) **Vyadhana Nirukti:** “VyadhyamAlpamukhahiShastraVyadhaneeyamSiradi”.

Use of Shastra's: Kutharika, Vrihimukha, Ara, Vetasapatra and Suchi¹⁵

Use of Anushastra's: Kareera.

Indications: Siravyadha, Mutravridhhi, Dakodara.¹⁶

5) **Eshana Nirukthi:** “EshyamEshaneeyamNadyadi”.

Use of Shastra's: Eshani¹⁷

Use of Anushastra's: Anguli, Baala, Kareera

Indications: Nadivrana, Sashalya Vrana and Unmargi Vrana.¹⁸

6) **Aharana Nirukthi:** “AharyamAharaneeyamSharkaradi”.

Shastra's and Anushastra's used for Aharana

Use of Shastra's: Badisa and Dantasanku¹⁹

Use of Anushastra's: Nakha, Anguli.

Indications: Dantamala, Karnamala, Ashmari, Shalya, Mudhagarbha.²⁰

7) **Visravana Nirukthi:** “VisravyamVisravaneeyamTacchaVidradhiKushtadi”.

Use of Shastra's: Suchi, Kushapatra, Atimukha, Sararimukha, Antarmukha and Trikurchaka.²¹

Use of Anushastra's: Jalauka, Nakha.

Indications: Five types of Vidradhi, EkadeshajaSopha, Sleepada, VisajustaSonitha, all kinds of Arbuda, all kinds of Visarpa, Vataja Pittaja Kaphaja Granthi, Vataja, Pittaja, Kaphaja Upadamsa, Stanaroga, Vidarika, Ksudrarogas.²²

8) **Seevana Nirukthi:** “Seevyam Seevaneeyam, Taccha Seevya Medha Samutthascha Bheena Sulekhitha Gada”.

Seevana used are in this karma are SuchiRhijugranthi, Anuvellita, Gofanikaa and Tunnasevani.²³

Indications: Diseases which are due to vitiation of Medas, cut wounds, SulikhithaVrana, Sadyo vrana and diseases localized on Chala Sandhi.²⁴

Contraindications for Seevana karma: Suturing should be avoided which are caused by Visha, Agni, Kshara, wounds which emits Maruta (gas), wounds which have blood and Lohainside should not be sutured.

Common Surgical procedures			
Sr no	AsthavidhShastra-karma	Modern Terminologies	Modern Surgical Procedure According to Ayurveda
1.	Chedana	Excision	Excision- fistula in ano, cyst caused by kapha, mole, margin of ulcer, tumors, hemorrhoids, fleshy growth, enlarged uvala, necrosed ligament, muscle and vessel et
2.	Bhedana	Incision	Abscesses, cysts, scrotal enlargements, carbuncles, inflammatory swellings, breast diseases, avamanthaka, kumbhika, two types of vrinda, puskarika, alaji, most of the minor diseases, talupupputa, dantapupputa, tundikeri, gilayu, aforesaid diseases which are suppurating, urinary bladder for extracting calculus.
3.	Lekhana	Scrapping	Puncturing in vessels, hydrocele, ascites etc
4.	Vedhana	Puncturing	Rohini, upajihvika, dantavaidarbha caused by medas, cyst, ulcer margin, adhijihvika, hemorrhoids, and patches on skin, keloid and hypertrophied muscle etc.
5.	Eshana	Probing	Sinuses and wounds, with oblique course and foreign body are subjected to probing.
6.	Aharana	Extraction	Urinary calculi, tartar of teeth, ear wax, foreign bodies, confounded foetus (in abnormal position) and faeces accumulated in rectum
7.	Visravana	Draining	Abscess, Skin diseases, localized inflammatory swelling, diseases of pinnae, elephantiasis, poisoned blood, tumours, erysipelas, cysts and soft chancre, breast diseases etc.
8.	Sevana	Suturing	Incised and well scraped lesions, fresh wounds and those situated in moving joints.

Discussion:

Acharya Sushruta's principles and teachings took surgery in ancient India to a noteworthy base, making it the Golden Age of Surgery. The above discussion is very exemplary and is just a glimpse of the universal approach of Ayurvedic ShalyaChikitsa and specifically the contribution in the field of surgical emergencies. AshtavidhaShastra karma is not only the eight surgical procedures, but also these are the eight basic principles of all the surgical procedures which can be used for any surgery. In description of these karma full description of all the surgical procedure is given. Each and every surgical procedure comprises either one or more of them. Thus Acharya Sushruta is considered truly as the Father of Surgery. It is necessary to apply principles into practice, and preserve the dignity of our noble profession. That would be the ideal tribute to this legendary figure. Acharya Sushruta has explained Shastra Karma logically and thus holds good in present era. Acharya Sushruta lead the foundation for the practice of surgical procedures which is even practiced in present days with advanced techniques. Acharya Sushruta was way ahead of his time, according to evidences in his approach to the Shastra Karma.

Conclusion: Acharya Sushruta used (Yantra) surgical instruments for Shastra Karma. AshtavidhaShastra Karma is described as vital aspects of Ayurveda surgery. In surgical practice, these approaches may be applied individually or in combination for many procedures. According to its practice AshtavidhaShastra karmas are not the eight surgical techniques, but rather the eight fundamental concepts underlying all surgical techniques, which can be applied to every surgery. In AshtavidhaShastra Karma following instruments and equipments are used Mandalagra, Vrudhipatra, Nakhgashastra, Mudrika, Utpalpatrak, Kutharika, Aara, Eshani, Badish, Dantashanku, Nakha, Trikurchak, Shararimukh and Karpatra, etc. AshtavidhaShastra Karma includes approaches like Chhedana, Bhedana, Lekhana, Eshana, Aharana, Visravana and Seevana Karma. These techniques used for treating various diseases such as; Bhagandara, Vrana, Arshas, Granthi, Vidradhi, Visarpa, StanaRogas, Kilasa and Vrana, etc. Thus Asthavidhashastra karma explained by Acharya Sushruta play important role in surgical practice.

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