ABSTRACT
In Ayurvedic text the Sushruta samhita, written by legendary surgeon of ancient age Acharya Sushruta is the foundation of Ayurvedic medicine as well as surgery. He has given special attention on describing basics of surgery. There is a general impression that Sushruta samhita is the only ancient Indian Ayurvedic text book of surgery. Sushruta samhita contains 184 chapters, divided into five sthana, having description of 1120 illness, 700 medicinal plants, detailed and elaborated knowledge of accurate anatomy, 64 preparation from mineral and 57 preparation based on animal sources. It still retains landmark position in the field of surgical text. Acharya Sushruta is worldwide known for his historical work on plastic surgery, he has also made similar numerous contributions on various aspects of medicine, such as fracture and dislocation, urinary stone, various type of skin disease as kustha, panchkarma procedure, toxicology, pediatrics, eye diseases, psychiatry, obstetrics and gynaecology etc. A very limited conceptual work has been performed on the selected chapters of Sushruta samhita. Therefore a review conceptual study has been carried out on the Shastipakrama of vrana of sushruta samhita. Outcome of the study shows that Sushruta samhita is written in the aphorism form and technique describe in it regarding treatment of vrana in its various stages are the basic of whole surgery. The all 60 upakrama can be simplified and included in 7 upakrama of sopha. It is need of hour to explore the hidden truth by decoding the versions of the text.

KEY WORD: Sushruta samhita, shastiupakrama, Shaptopakrama, Vrana

INTRODUCTION: Ayurveda is the most ancient medical science of our civilization. Ayurveda considered as fifth veda along with the Rigveda, Samveda, Yajurveda and Atharve veda. The vedas are considered to be the first record of the ancient knowledge and civilization. Among these four vedas maximum description of Ayurveda is found in Atharvaveda. Later on Ayurveda developed as a separate system of medical science and upgraded as upveda of Atharva veda. Ayurveda initially have main two stream i.e. medicine and surgery. Agnivesh tantra is the prime literature of medicine and Sushruta samhita is the main pillar of Ayurvedic surgery. In Sushruta samhita various surgical procedure are described in very simple and scientific manner. As we know in any kind of surgery there is a common thing that is wound. Either we made it or it already present in the patient. So to understand surgery it is very important to understand the wound first. Sushruta samhita was written in the holi city of Kashi sometimes around 1000BC. Sushruta was primarily a surgeon and recognized as the Father of surgery in the world. The management of wound is describing in Sushruta samhita in very detail manner. He advises sixty upakrama (method) of treating wound is lot of different conditions known as shashtiupakram in Chikitsa sthanam. In present study a attempt is made to understand various upakrama in nowadays surgical aspects.
AIM AND OBJECTIVE:
1. To evaluate, elaborate and discuss the various surgical concepts of Shashtiupakrama of Sushruta Samhita.
2. To understand the basic principle of wound management.

MATERIAL AND METHOD: The all reference of Shashti upakrama are collected and compiled from sushruta smahita and other Ayurvedic classics and various modern textbooks of surgery. The various upakrama are discussed with their method and importance of there in enhancing wound healing.

OBSERVATION: As Acharya Sushruta mentioned Shashtiupakrama in chapter one of Chikitsa sthanam of his Samhita in reference to management of Vrana. He describe almost all the basic principle of surgery in form of saptoupakrama of sopha, he shows very close and practical approach towards the patient of vrana sophaa. He started shashti upakrama with the Aptarpana, that means Langhana. Langhana is used probably to brake the pathology in very initial stage, as we know according to Ayurvedic text most of the nija vyadhi starts with the development of Aama, later on that after association with Doshas produces vyadhi. In case of sophaa when Aam associates with Dosh and brings them in vidagdhavastha, that cause pakva sopha leading to puya formation that require active and aggressive management. So with the first upakrama shushruta wants to break pathology very early to limit progression of disease.

Next upakrama Alepa and Parisheka are mainly use for the saman of local kupita Doshas and reduces sign and symptoms when used with different specific yoga stated in sutrasthana mishrak adhyay. Here approach of sushruta was to subside mainly Vedna and Daha locally.

Abhyang is the next upakaram, look more important when we see with the angle that by local Abhyanga pathology can be broken down, to prevent progression of disease. As we know according to Ayurvedic principle disease mostly starts due to srotorodha, play important role in producing sophaa. So with the help of Abhyanga Srotorodha might be relieved and opening srotasa at the site of sopha.

Swedana is the next upakrama that help both locally and systemically. As with the help of swedana, Aama pachan affects systemically and reduces kupita vata and kaphadosha at the site of vrana sopha. In cotest to vrana sopha Abhyanga may be very useful for dilution of Dosa to break srotosangha, responsible for Samprapti.

Vimlapana is the next upakrama advocated by sushruta is with the help of finger tip, thumb, or with green stick softly rubbing at the site of sophaa that may work by dispersing the accumulated Doshas in the corresponding srotas so that srotosangha may be release and pathology may break. If we discuss within light of modern medical science, that before developing a cutaneous abscess, mostly the focus lays in side any sweat gland, hair follicle root or close sebaceous gland, so with the help of vimlapana may be there is opening of mouth of that particular gland or focus so that progression of disease is checked.

Upanahupakrama is a form of swedna, which is used for the purpose to subside or aggravate the process of Sopha Paka. As if Doshas involved in sophaa are vidagdh then after upanah sophaa will go under pakvastha and if Doshas are avidagha then due to effects of upanah.
the Doshas after vilayana circulate in to whole body. Upanah breaks the Samprapti of sopha and sopha subsided completely. Pachana is the next upakrama describe by Acharyasushruta, when upanah unable to show result locally and sopha neither subsided nor become pakva, now Acharya taken a general or systemic approach for the pachan of aam Doshas by administering pachana drug by oral route. If involved Doshas are avidagdh then with the use of pachana drug the local focus is broken and Doshas left free into blood stream.

Next upakrama Vishravan is a kind of rakta mokshana with the use of Sringa, Alabu, jalauka and siravedha. The vitiated (Kupita) dosas are removed from the site of sopha with the rakta mokshana. Here different method of rakta mokshana is used according to prominence of involved dosa and level of dosas in body, as if dosas are present superficially/ skin then method of rakta vishravana should be jalaukavcharana. If dosas are little deep then alabu, shringa and Prachan should be method of choice. If dosas are spread throughout body and deep seated, then method of bloodletting should be Siravedha. This may work as illuminating the dosas outside the body and diminishes the local sign and symptoms. Leech therapy is specially indicated in toxic inflammation may be internal or external.

Next Snehan, Vamana and Virechana all these upakrama are very important part of panchkarma therapy. Basically this is again a conservative approach of Acharyas, by these method the dosas are expelled through body via urdhva and adho marga. Because prior to panchkarma dosas circulated in body are brings in to mahasrotas by Snehan and swedana so that make easy to sodhana of sharira, by these means the severity of inflammation reduces markedly. Vamana is indicated when kaphaja lakshana are more prominent and virechana is indicated when pitta dosha is prominent. By these sodhana karma diseases limits at the stage and not progress further. These reduces sign and symptoms locally as well as systemically.

Next upakrama from Daran to shivana all these are describe as shalya karma used in different types of Nija and Agantuja vrana to remove puya from pakva sopha. The Puya(pus) included dead pathogen and cellular debris. Pus consists of a thin, protein-rich fluid, known as liquor puris, and dead leukocytes from the body's immune response (mostly neutrophils). During infection, macrophages release cytokines which trigger neutrophils to seek the site of infection by chemotaxis. There, the neutrophils engulf and destroy the bacteria and the bacteria resist the immune response by releasing toxins called leukocidins. As the neutrophils die off from toxins and old age, they are destroyed by macrophages, forming the viscous pus. Puya nirharan is used to clear the pathogens in modern prospects and Dosas in Ayurvedic prospects. Beside shastra karma some other method are also used for puya nirharan. Some drugs are advised for local application for this purpose. By their chemical action pakva sopha ruptured itself without using any shastra. Acharya sushruta advised some drugs as Yavakhara, Samudrafen and saindhav lavana for the lekhana karma by their chemical debridment. Next four upakram Eshana, Aharana, Vedhana And Vidravana are performed by Shastra. Shivana and shandhana karma are used to
approximate the edges of non infected wounds by using shastra.

Peedan is the next upakrama used mainly for the vrana sophaa appear in soft vital organs define as marma Pradesh in our body. Because shastra karma in contraindicated in marma Pradesh. Some medicines are used in form of pralepa for purpose of peedana. Pralepa should be done in the manner so that the mouth of sopha left open, and let it dry. After some time dried pralepa provide a pressure on cavity by contraction that results into drainage of us collected inside the cavity. Peedana karma is a kind of vidravana without using shastra.

Sonita sthapana is the next upakrama describe just after shastra karma as we know every where, when shastra is use there is bleeding. So after drainage of puya, some amount of rakta is also discharge at the site of shalya karma that may be acceptable. But to avoid excessive loss of blood Acharya dictated sonitha sthapana. As blood being most important dhatu said by Acharya shushrut himself “Dehasya rudhiram moooolam rudhiyyam dharyat, tasya yatnena sanrakhsyam raktam jivit shithah“. So when there is bleeding we should stop immediately to avoid excessive loss.

Raktasthapan is achieved by four method advised by Acharya sushruta are Sandhan, Skandan Pachan and Dahana. From here Acharya concentrate on sodhana and ropana of vranasopha.

Nirvapana is the next upakram in which lepa and sheka of sheetal dravya are applied. It may help in sandhan karma and subside the local symptoms. Daha, paak due to Kupita pitta and kapha and rakta. So these upakram may help in sandhana karma.

Utkarika is the next upakram, in which vataghna dravya are used in the form of warm semisolid (paste like) formulation. May it subside the symptoms developed due to Vata prakopa. This is indicated in inflamed or necrosed wound.

From kashaya upto Dhoopan all the upakrama are used for Sodhana and ropana of vrana. The medicines used in upakrama decide the function of upakrama. If drug taken having sodhana properties then it clean the wound and if drugs having ropan properties then it enhances the healing of the wound. For example brihati, kantkari, hartaal and manahshila sadhita tail and ghrita are for sodhan karma and kanguka, triphla, rodhram, kasheesh, shravanhy, dhav, & ashvakrma tvak are used for ropan karma. From Dhoopan upto last upakrama Rakhsavidhan all may be considered into the last saaptaupakrama of sopha i.e. Vaikritapaham. As we know in our body when any nija vyadhi tends to develop then there must be some disturbences in the samyavastha of Dosas. So to resolve this vaikritavasth of dosas i.e. vikrti vaikritapaham should be employed.

This process of vaikritapaham is devided into Local and systemic. Among the Shashtiupakrama from utsadana to lomapaharan acts locally as utsadana means the wound having depressed or deep floor due to less developed granulation tissue are treated with some drugs which improve granulation tissue so that floor is raised in some extent. Next upakrama avshadna is used to remove unhealthy, unnecessary hyper granulation tissue from floor of the wound which produces delayed healing. Mridukaran is the next upakrama in which wound margins and edges are make soft. Because
hard fibrosed edges may hamper wound healing and produces chronicity. In mridukaran specially vataghna dravya are used.

Daruna karma is the next upakrama just opposite to mridukaran as some wound having less tensile strength so that wound margin easily separate causing early dehiscence and wound healing delayed. So to avoid long time wound healing daruna karma should be done.

Next upakrama kshara karma is used especially in chronic non healing wound for chemical debridement so that fresh healthy granulation tissues appears and improve healing.

Next upakrama Agnikarma is a very important and describe separately as a upyantra in sutra sthanam. It is very important therapy for treatment of many diseases, but in concern to wound management, it is especially employed when there is any kind of blood or liquid discharge from wound. The different type of shalaka are used for Agnikarma. Agnikarma stop bleeding immediately as well as do a kind of sterilization due to heat. As Acharya stated dahana is the method of rakta sandhan. So it important in discharging wound.

Krishna karma is the next upakrama that is very important method of vaikritapaham stated in saptaupakrama of sopha. Where ever there is a hyper pigmentation occurs after wound healing. We must try to make that area similar to surrounding skin surface that look cosmetically better. For this purpose some drug like Bhallataka is used for this purpose, so that vikriti developed due to disease may be resolved.

Pandu karma is the next upakrama similar to previous upakrama where hypo pigmented area is treated with drug like Haritaki with Ajaksheera that make skin similiar to surrounding skin.

Pratisarana is the next upakrama in which some rough powder of Mulethi, Kutkutandivak, Nirmali and Muktashakti mix along with gomutra tablets are prepared. These tablets are now rubbed on the surface of healed wound to make it rough which was very shiny after wound healing. So the healed area becomes enough rough as healthy skin.

Romasanjanan is the next upakrama in which ashes of elephant teeth is used for increasing growth of hairs. It may be used at the site where hairs are lost due to any kind of injury, that may re appear by romasanjanan.

Next upakrama Lomapaharana used to remove excess hairs present at the site of injury. For this purpose, shankha churna&harital in 2:1 ratio mix with amla dravya and apply as lepa.

Vasti is the next upakrama used especially for vataja wound which having sever pain & present in lover portion of body. Vatshamaka drugs are used for vasti that may act on vata dosah. In the continuation Uttarvati upakram used for the urogenital tract desease i.e. different mutraghata, mutradosh, sukradosh , Artava dosha and wounds caused by Ashmari.

Bandhan is the next upakrama used for the open wounds. Acharya provide it’s complete detail in sutrasasthanam. This protects wound being infected and fibrosed and keeps it mridu so that heal quickly.

Patradanam is the next upakrama is a kind of bandhan. Some chronic wound with fix and less fleshy areas are covered by some plants leaves poured with different Doshashmak drugs.

Krimighna is the next upakrama used specially for infected wounds. The
main aim is to decrease load of pathogens from wound site. This is done by washing with kwath (Decoction) applying Lepa prepared by krimighna drugs and Kharodaka . The extraction of krimi from wound site.

Brinhad karma is the next upakrama employed in the person that became ksheerana(emaciated) due to long time illness. So keeping mind the status of Jatharagni patient should be treated with brinhad drugs and karma.

Vishaghna is the next upakrama used for the treatment of wound made by the toxic effect of any substances Acharya Sushruta described in detail in the kalpasthanam.

Sirovirechana is the next upakrama mainly used for the wounds with kaphaj lakshan and present in the head, neck and throat areas.

Nasya is the next upakrama employed in the wound of kantha and above region which are affected by Vata Doshas.

Kanvala is the next upakrama used specially for the wounds of oral cavity, on gums and teeth. According to involvement of Doshas Usna and sheetal kanvala is advised.

Dhook is the next upakrama used mainly for the Kaphavataja vyadhi and vrana with sopha and peeda above jatru (jatrodha) Pradesh. Madhusarpis the next upakrama in which madhu and sarpi is used for sandhana karma of vrana especially in new and wide vrana. Here madhu and sarpi collectively acting for sandhan karma.

Yantra are used for the purpose of extracting shalya and used for debridment of vrana.Acharya sushruta consider these instruments for wound management as a upakrama.

Aahar is the most important part of management of any disease with the medicine. So patient having a large wound should avoided guru and vidahi aahar. So laghu aahar should be given in small amount but frequently

Raksha vidhana is considered as last upakrama of wound management. In this along with patient’sshalya karmagar and shastra should be fumigated with gugulu and mantrocharna is advised that may kill the small pathogenic organisms. The Yama and Niyama should be advised to patient that may help him for management.

These 60 upakrama are described in Sushrutasamhita in chikista sthanam for the successful management of wound. One, or more than upakrama may used at any time of treatment state.

DISCUSSION: In the present work there is detailed study on Shashti upakrama has been done. The Shashti upakrama are described in chikitsa sthanam chapter one in detail. Acharya Sushruta describes the basic of surgery in the form of management of wound. As we know in any kind of surgery either there is wound already or we made it. So being a good surgeon we have to know that how we deal with the different stages of wound. Acharya sushruta advised 60 upakrama for the management of wound.

Among these upakrama one or more than one upakrama may be employed according to condition of wound, disease, condition of patient, availability of drugs and all that. All these 60 upakrama can be classified into the seven upakrama of sopha Saptopkrama of sopha are stated in chapter 17 of sutrasthanam named Aampakvaeshniyam adhyaay. These upakrama are Vimlapana, Avasechana, Upnaha,Patana kriya,
sodhana, Ropnam and last vaikritapaham. These regimen of saptopakrama is described for both aam and pakva sopha means it included Nija and Agantuja both type of vrana.

As in nija vrana dosha are involved from initial and in agantuja vrana involment of dosh occure lateron. In refrence to sopha saptopakrama are advocated from initial to last, Vimlapana in aam sopha and vaikritapaham for the wound made during surgery after pakvavastha. In saptopakrama from vimlapana to upnaha our approach is conservative and for this purpose from alep to vaman initial eleven upakramaare used for the same purpose. So initial 11 upakrama may be included into initial 3 upakrama of saptopakrama of sopha. Next saptopakrama Patana included all the shastra karma as chedana, lekhana, bhedana, darana, eshana, Aaharana, Vedhana, Vishravana and sheevan karma. Among these all shastra karma which one should be employed is depends upon the condition of disease, patient’s condition, availability and choice of surgeon.

After Patana next two upakrama Shodhana and ropana included next 14 Shashti upakrama from sandhna to vranadhupan. These two upakrama are basically drug based so Acharya described the different drugs that act as shodhana and ropana purpose. As he described khashaya upakrama so for the sodhana purpose shodhan dravya are used as khashaya and for ropana purpose decoction of ropana dravya is used. Among all Saptopakram vaikritapaham is the most important and wast and included rest all the Shashti upakrama. As we vaikritapaham means the upakrama which is used for the purpose to reverse or decrease severity of the changes that occurs during/after wound healing process. These all upakrama broadly can be categorizes into two types as systemic vaikritapaham and local vaikritapaham. During disease condition Doshas becomes unbalance and may dhatus becomes kheerna and any kind of unwanted material accumulates in body so by the use of vasti, uttaravasti krimighna,sirovirechana,bandh,kanval,nas ya,dihoom,adhusarpi,yantra, ahar and Rakhsavidhana the doshas may be in samyavastha.

The upakrama of local vaikritapaham plays an important role in the process of wound healing. These included utsadna, avshadna, Mridu karma, darana karma, kshara karama , Krishna karma ,Pandu karma Pratisarana,Lomapharana and Lomasnjan. These above upakrama work as local vaikritapaham. Utsadan karma used to elevate the floor of wound by improving granulation tissue with the use of stated drugs in chapter and Avsadana is used to depress the over elevated surface of wound by removing excess granulation tissue which may produces hindrance in healing process. Mridu karam is used to soften the wounds margin that reduces speed of healing.Krishna karma used often after healing to reduce the hypo pigmentation produce on scar. Pandu karma is also used in contrast to reduce the discoloration on scar. Lomapaharan and Lomsanjanan are also use according to vikrity produces on scar surface. This is the most important upakrama amongs saptopakrama and having lot of procedure under this.

CONCLUSION: The study can be concluded that Acharya Sushruta describe Shashti upakrama in the management of wound in detail. That can be employed
according to the different stages of wound. The concrete of study is that Shashti upakrama are expansion of saptpakrama of vrana sopha. It is easy to learn and apply the principle of saptpakrama in the management of surgical wounds. Where as Shashti upakrama provide us lot of option for the management of wound in different stages. Among all these upakrama those which comes under vaikritapaham are having more importance in present scenario. In modern surgery there is no any definitive method to managing the scar that develops after surgery. With the use of krina Karma and pandu we thoroughly manage the deformity develop after surgery with the use preparation advocated in samhita. Beside this Kshar karma, utsadana and avsadana are also having lot of important in management of chronic ulcers. There is need of time to do more retrograde study on different procedure of Shashtiupakrama in clinical area of Ayurveda

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Corresponding Author:
Dr. Alok Varma
Lecturer Dept of Shalya Tantra
BKAMCH, Daudhar, Moga, Punjab, India.

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