

SUSHRUTOKTA ROLE OF MAMSDHARA TWACHA AND BHEDANA KARMA IN BAHYA VIDRADHI WITH ITS MODERN CORELATION

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ABSTRACT

Vidradhi (Abscess) is the most common condition in day today surgical practice. *Vidradhi* can form anywhere on skin surface to deep tissues. If not treated properly in time can cause spread of infection to local site, deeper tissue and spread of infection through blood stream. Detailed description of *Vidradhi* is mentioned in *Sushruta Samhita* about its diagnosis, location in skin to deep in organs, surgical treatment as *Bhedana karma* when a pocket of pus has been formed. *Sushruta*- The Father of Surgery has already mentioned this surgical procedure, diagnosis and anatomical site involved in formation of

Vidradhi. The same concepts are mentioned in modern science hence as research point of view there is curiosity to compare and correlate this description. A sincere effort has been made to study role of *Sushroka Mamsadhara twacha* and *Bhedana karma* in *Vidradhi* with its modern corelation.

KEYWORDS: *Vidradhi*, Abscess, *Twacha*, *Bhedana*.

INTRODUCTION

Sushruta the pioneer of surgery has mentioned *vidradhi* in detail in ancient time, in order to compare and study the relevance of mentioned texts according to modern concept this literature study has been done. Site/Location of occurrence is important, knowledge of which helps in prevention and treatment. Hence the study of site of *bahya vidradhi* i.e in *mamsadhara twacha* mentioned by *sushruta*, its role in formation of *vidradhi* and corelation of *bhedana karma* with modern procedures of draining the abscess will be done in this study.

MATERIAL AND METHOD

All references of *vidradhi* in *sushruta samhita*, journals, online literature and from related modern texts has been collected.

LITERATURE REVIEW

VIDRADHI (ABSCESS)- Ayurveda and modern view

Nirukti- Due to abundance of vitiated blood it quickly gets suppurated and that is why it is called *Vidradhi*.^[4]

Definition and Symptoms- *Sushruta* described that the vitiated *doshas* afflicts the skin, blood, muscles, fat and bones which gradually produces excessively severe inflammatory swelling. This swelling which is broad based, painful and round is known as *Vidradhi*.^[3] An abscess is collection of pus in the body.^[7] Cardinal clinical features of Abscess are redness, pain, heat, swelling, impairment of function.^[7]

Types and Location- *Vidradhi* is of two main types – *Bahya vidradhi* and *Abhyantara vidradhi*^[4] of which *Bahya vidradhi* are of 6 types *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*, *Kshataja*, *Raktaja* and *Abhyantara vidradhi* of 10 types depending upon the locations *Guda*, *Bastimukha*, *Nabhi*, *Kukshi*, *Vangshana*, *Vrikka*, *Yakrit*, *Pliha*, *Hridaya*, *Kloma*.^[3] Types of Abscess- Pyogenic, Pyaemic, Metastasis, and Cold abscess and Anatomical Classification- Cutaneous, Subcutaneous and Deep abscess. Site of Abscess - According to modern science abscess can be anywhere in the body from superficial skin abscess to deep abscess in muscle organs or body cavities.^[11] External sites- Fingers and hand, Neck, Axilla, Breast, Foot, Thigh, Ischiorectal and Perianal region, Abdominal wall, Dental Abscess. Internal sites- Abdominal (subphrenic, pelvic, paracolic, amoebic and pyogenic liver abscess, splenic abscess, pancreatic abscess.), Perinephric, Retroperitoneal, Lung, Brain, Retropharyngeal abscess.^[10]

Location of *Vidradhi* in *Twacha*(Skin)^[16]

Utpatti of *Twacha*– During the *paka* of *shukra* and *shonita* by *agni* or *pitta* seven layers of *twacha* appears on the surface of the body of *garbha* just like while heating milk, cream appears on its surface. Layerwise correlation of skin - *Sushruta* has described seven layers of skin namely-*Avabhasini*, *Lohita*, *Shweta*, *Tamra*, *Vedini*, *Rohini*, and *Mamsadhara*. *Sushruta* has mentioned the seventh *twacha mamsadhara* as the seat of *bhagandara*, *vidradhi* and

arsha. The number of layers described by *sushruta* and modern are same and according to descriptions they are correlated as follows-

Table 1: Corelation of *Sushrutokta Twacha* with Modern Layers of Skin on the basis of Thickness.^[6,14]

Layers in <i>Sushruta Samhita</i>	Layers in Modern Science
1.] <i>Avabhasini</i>	Stratum corneum
2.] <i>Lohita</i>	Stratum lucidum
3.] <i>Shweta</i>	Stratum granulosm
4.] <i>Tamra</i>	Malphagian layer
5.] <i>Vedini</i>	Papillary layer
6.] <i>Rohini</i>	Reticular layer
7.] <i>Mamsadhara</i>	Subcutaneous tissue

EPIDERMIS (rows 1-4)
 DERMIS (rows 5-6)
 HYPODERMIS (row 7)

There is similarity between *sushrutokta twacha* and present day description of skin. Hypodermis contains more of fat, bodies of sweat glands, hair follicles. The above layer dermis is rich in blood, lymph vessels, sweat glands and their ducts, hairs, arrector pilli muscles and sebaceous gland, infection can reach or penetrate upto this layer.^[5] Due to which it is one of the site of abscess formation after infection. But as abscess are caused by obstruction of sweat glands, inflammation of hair follicles which are more in dermis, modern science has considered cutaneous abscess formation more both in dermis and hypodermis.

Importance of recognition of *Pakva* and *Apakva Vidradhi*- *Sushruta* states that when an unripened swelling is incised it can harm *mamsa, sira, snayu, asthi, sandhi* and lead to excessive bleeding, pain with formation of many traumatic abscess. If a ripened swelling is not treated it destroys the local tissues causes necrosis becomes deep seated forms sinuses which makes it difficult to treat. Hence a physician who opens an unripened swelling and who neglects the ripened swelling both should be called as quacks. Hence decision of treatment depends upon knowing the *pakva-apkva lakshana* of swelling.^[2] Clinical examination of presence of pus is detected by- the temperature becomes elevated, brawny oedema with induration when pus is deep seated, when the pus becomes superficial, fluctuation test becomes positive. The fate of abscess is pus anywhere will come to the surface.^[10]

Surgical treatment of *Vidradhi*- If the *vidradhi* gets *pakva* one should do *bhedana* then *vranaprakshalana* for *shodhana* of wound and use *ropana yog* for healing of wound. *bhedana* is also indicated in *abhyantara vidradhi* when *pakva Avastha* is attained and rise is

seen externally. But the *abhyantara vidradhi* should not be allowed to attain *pakva avastha* as the success rate is uncertain.^[1]

Importance of draining pus- Once pus is formed it should be drained, if not it destroys the local tissues and harms other soft tissues.^[1] Modern science also applies the same principle where there is pus let it out.^[10]

BHEDANA KARMA

Bhedana karma is one of the eight surgical procedures.^[2]

Nirukti of Bhedana- The word *Bhedana* is originated from *bhid* + *lute* meaning- The procedure of cutting.^[9]

Shastra for Bhedana karma- *Shastra* mentioned in ancient time for *bhedana* are – *vridhipatra*, *nakha*, *mudrika*, *utpala*, *ardhadhara*. Some *anushashtra* for *bhedana* are also mentioned which are can be used instead of *shastras*, they are – *Twakasara*, *Spathika*, *Kaacha*, *Kurubind*, *Nakha*. The method for handling the *bhedana shastra*- The *shastra* should be held at the junction of blade and handle. The thickness of the edge of *shastra* should be like that of thickness of lentils.^[2]

Types of Bhedana according to site- They are namely- *Tiryaka*(oblique incision), *Chandramandala*(circular), *Ardhachandrakara* (semi-circular). *Sushruta* has mentioned different types of incision for different sites -as structures like veins, ligaments can get harm during incision, to avoid pain, for proper wound healing and to avoid formation of keloids.

Indication of Bhedana karma- Indication of *Bhedana karma* is mentioned in different diseases one of which is *vidradhi* (all types) except *tridoshaja vidradhi*.^[1] A surgeon before performing *shastra karma* should have practical knowledge hence *bhedana karma* should be practiced first on *druti*(leather bag), *basti*(urinary bag), *prasevaka* (leather bag) filled with water and slime.^[2] *Bhedana karma* is indicated for deep seated collection of pus without any opening, pockets of pus and for sinuses.

Steps before Bhedana karma- Anaesthesia was not in use during ancient times, patients were made to take appropriate amount of food before karma so as to avoid unconsciousness and excessive bleeding as blood flow goes to stomach after taking food. The patients who cannot bear pain were allowed to take alcohol.^[2]

Indication of *Pratibhedana* (Counter incision) and *Bahubhedana* (Multiple incision)- For large abscess second incision is necessary to drain the pus properly. Even multiple incision is necessary on multiple abscess and on openings/sinuses made by pus to completely drain out pus and avoid further infection.^[2]

Steps after *Bhedana karma*-1] Sprinkling of cold water on patient to make him conscious if he gets unconscious during karma. 2] The abscess site is pressed from all sides to remove pus and massaged by fingers to brake loculi of pus and letting it out from the cavity. 3] *Vranaprakshalana* to clean the wound. 4] *Varti* (guaze) is kept. 5] *Aushadhi kalka* is kept for healing. 6] bandaging. 7] *Dhoopana* to avoid infection of wound.^[2]

Surgical Treatment of Superficial And Soft Tissue Abscess^[7]

1.] Initial stage when pus is not localized conservative treatment- rest, elevation of affected part and antibiotic should be started. 2.] When the pus has been localized it should be drained.

Drainage of pus 1.] Anaesthesia- Surface anaesthesia ethyl chloride spray for superficial abscess. General anaesthesia in cases of deep abscess. 2.] Incision- Abscess is drained by 2 methods- **Free method** – On most prominent part and most dependant part incision is taken and pus gets drained due to gravity. If there are nerves and vessels, incision should be taken parallel to these structures. If muscles are present incision along line of fibres must be taken. **Hilton's method** – This method is used if there are more important structures like nerves and vessels around abscess cavity, which is liable to be injured. This is employed in places like axilla, neck, groin. In this method skin and subcutaneous tissue is incised on most prominent part of abscess cavity. Artery or sinus forceps is forced through deep fascia into abscess cavity and blade opened gradually pus is seen to be extruded out, increasing of deep fascia opening with the help of forceps and finger is introduced to explore abscess cavity. Exploration- Finger is introduced to brake all loculi for drainage of pus. Counter incision- When most prominent part is not most depended part complete drainage of pus is not possible in one incision. At that time another counter incision is taken at most dependant part. Drainage- Corrugated rubber sheet drain is usually used.

Cavity cleaned with H₂O₂ +betadine and washed with NS. Betadine gauze kept into abscess cavity. Pack kept for 48 hours. Suitable antibiotics given and pus send for culture and

sensitivity test. After 48 hours dressing is to be changed. Vit. C given for wound healing. Vit.B complex given when tetracycline is used as antibiotic.

DISCUSSION

- According to *Sushruta*, *vidradhi* formation takes place in '*Mamsadhara*' *twacha*. '*Mamsadhara*' is correlated with 'Hypodermis' on the basis of thickness. The role of *mamsadhara* in formation of *vidradhi* can be understood with the help of these points.

1] *Vidradhi* is formed due to vitiation of *twacha*, *rakta*, *mansa*, *meda*.

2] It's modern correlation hypodermis contains more of fat, bodies of sweat glands, hair follicles. The above layer dermis is rich in blood, lymph vessels, sweat glands and their ducts, hairs, arrector pili muscles and sebaceous gland, infection can reach or penetrate upto this layer hence a site for abscess formation.

Hence with the help of above two points it can be justified that *mamsadhara*(hypodermis) due to its above contents favours formation of *vidradhi* (abscess).

- Comparison of *Bhedana Karma* and Free incision/Hilton's Method

	<i>Bhedana Karma</i>	Free incision / Hilton's Method
Procedure	Involves <i>Purvakarma</i> for preparation of patient for <i>shastrakarma</i> and <i>Paschatkarma</i> for wound healing.	Requires Anaesthesia before incision and drainage, dressing after it.
Instruments	<i>Shastra</i> are mentioned which have sharp edges so as to facilitate a cut and helps draining out pus	Forceps, Scissors, Scalpel facilitates incision and draining out of pus
Time of incision	Deep seated collection of pus without any opening, pockets of pus and for sinuses.	Where there is pus let it out Exception- parotid, breast, axillary, thigh, ischiorectal abscess
Indication	In all <i>Vidradhi</i> except <i>Tridoshaja</i> , In <i>Abhyantara vidradhi</i> only when pus collected comes up	In superficial and soft tissue abscess
Procedure	The abscess site is pressed from all sides to remove pus and massaged by fingers to brake loculi of pus and letting it out from the cavity	Artery/Sinus forcep for exploring of the cavity and increasing the opening in deep fascia to facilitate drainage of pus properly. Finger is introduced to brake the loculi
Type of Incision	Oblique incision in order to avoid injury to blood vessels and ligaments	Parallel incision to blood vessel and in direction of muscle fibres
Other Incision	<i>Pratibhedana</i> (Counter incision) in cases of large abscess to drain the pus fully and <i>Bahubhedana</i> (Multiple Incision)	Counter incision- when most prominent part is not most depended part complete drainage of pus is not possible in one incision. At that time another counter incision is taken at most dependant part.

CONCLUSION

We can say that there is similarity between *sushrutokta mamsadhara twacha* and hypodermis and they are the site of *bahya vidradhi* (abscess) formation. We can also say that there is great similarity between the ancient technique, instruments and indication of *Bhedana karma* mentioned by *Sushruta* and today's modern surgical treatment of Abscess.

REFERENCES

1. Sushruta Samhita, Sushrut Vimarshini Hindi Commentary Along with Special Deliberation, Dr. Sharma A, editor, Chikitsasthana, Varanasi: Chaukhambha Subharati Prakashan, 298,299,300,301.
2. Sushruta Samhita, Sushrut Vimarshini Hindi Commentary Along with Special Deliberation, Dr. Sharma A, editor, Sutrasthana, Varanasi: Chaukhambha Subharati Prakashan, 37,40,41,66,67,69,71,148,149,150,159,209.
3. Sushruta Samhita, Sushrut Vimarshini Hindi Commentary Along with Special Deliberation, Dr. Sharma A, editor, Nidanasthana, Varanasi: Chaukhambha Subharati Prakashan, 525,527.
4. Charaka Samhita, Vaidyamanorama Hindi Commentary Along with Special Deliberation, Acharya Shukla V, Prof. Tripathi R, editor, Sutrasthana, Varanasi: Chaukhambha Sanskrit Prastisthan, 269.
5. Waugh A, Grant A. Ross and Wilson Anatomy & Physiology in Health and Illness, Protection and survival, 12th edition, Churchill Living Stone Elsevier, China., 362,363.
6. Abhijit B.Patil, Twacha Shareer with special reference to its Thickness- A Mathematical Application to Co-relate Ancient & Modern View, Int.J. Ayu. Alt. Med., 2014; 2(4): 41-47.
7. Das.S. A Concise Textbook of Surgery. Boil, Abscess, Carbuncle, Cellulitis And Erysipelas, 8th edition, Dr. S. Das, Kolkata, India, 78,79,80.
8. <http://www.merckmanuals.com/professional/infectious-diseases/biology-of-infectious-disease/abscesses>.
9. Dev R, Shabdakalpadruma Part-3, 3rd edition, Chowkhambha Series, Varanasi, 542.
10. Bhat S, SRB's Manual of Surgery, General Surgery, Infectious diseases, 4th edition, Jaypee Brothers, New Delhi, Reprint, 2013; 40,41,42,43.
11. <http://emedicine.medscape.com/article/1949772-overview>
12. <http://emedicine.medscape.com/article/1830144-overview>
13. <http://www.healthline.com/symptom/skin-abscess>

14. Dr. Balaji J, Dr. Vaikos CD, Conceptual study of Vedini Twacha-Sharir as a seat of Vicharchika with related to Eczema, *ejpmr*, 2017; 4(7): 320-322.
15. <http://en.m.wikipedia.org/wiki/Abscess>
16. Sushruta Samhita, Sushrut Vimarshini Hindi Commentary Along with Special Deliberation, Dr.Sharma A, editor, Sharirsthana, Varanasi: Chaukhambha Subharati Prakashan, 47.