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# Single Case study on Horse Shoe Fistula with Partial Fistulectomy followed by *Kshara Sutra* Procedure

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## ABSTRACT

*Bhagandara* is enumerated under *Astamahagada*<sup>[1]</sup> and it is a *Chedana Sadya Vyadi*, clinically which can be correlated to Fistula-In-Ano. It is a communicating track lined by unhealthy granulation tissue; opens internally in the anal canal or rectum and perianal region. Commonly this disease develops after spontaneous bursting or inappropriate surgical drainage of an abscess. It then remains open with pus discharge.<sup>[2]</sup> The incidence of a Fistula-in-Ano developing from an anal abscess ranges from 26% to 38%, the prevalence rate of Fistula-in-Ano is 8.6 cases per 100,000 population worldwide, in men the prevalence rate is 12.3 cases per 100,000 population and in women it is 5.6 cases per 100,000 population.<sup>[3]</sup> Depending upon the extent and nature of Fistulous tracks, *Acharya Sushruta* has described different type of incision in the management of *Bhagandara*. Here in this article a small attempt has been made to throw light on *Sushrutokta Chedana Karma* in *Bhagandara*.

**Key words:** *Bhagandara*, *Chedana karma*, *Fistula in ano*, *Fistulectomy*.

## INTRODUCTION

*Acharya Sushruta* who is called as father of surgery has given us the basic foundation and fundamentals principles of surgery, which are valid till date. *Shastra Karma* are performed in three different stages like *Purva Karma*, *Pradana Karma*, and *Paschat Karma*.

In *Pradana Karma*, *Acharya Sushruta* explains about 8 different surgical procedures under the heading

*Astavidha Sastra Karma* in *Sushruta Sutrastana* 25th chapter.

तच्च शस्त्रकर्मासृष्टविधिं; तद्यथा-

छेद्यं भेद्यंलेख्यंवेध्यम् एष्यम् आहार्यं विस्राव्यं सीव्यमिति<sup>[4]</sup>

*Chedana* (excision) is one among these *Astavidha Shastra Karma*.

The recent advancement in surgical techniques are nothing but modifications of the basic fundamental principles laid down by *Acharya Sushruta*.

ते तु भगगुदस्तिप्रदेश् दारण च भगन्दर इत्युच्यते ।

अभिन्न पिडक भिन्नु भगन्दर<sup>[5]</sup>

As it creates a tear in the area of pelvis, rectum and urinary bladder it is known as *Bhagandara* & it is enumerated under *Astamahagada* which is a *Chedana Sadyavyadi*. The clinical symptoms explained under *Bhagandara* can be compared with *Fistula-In-Ano* on Modern parameters. Depending upon the extent and nature of *Fistulous tracks*, *Acharya Sushruta* has

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described different type of incision in the management of *Bhagandara*. i.e., *Langalaka*, *Arda Langalaka*, *Gothirtika*, *Sarvatobadraka*, *Kharjura Patraka*, *Chandrachakra*, *Arda Chandra*, *Suchimukhi*, *Avangmukhi*,<sup>[6]</sup> there are the various kinds of incision we use when we explore the Fistulous tracks.

*Acharya Chakradatta* also described the successful use of *Kshara Sutra*, A medicated set on for the management of *Bhagandara* and *Nadivrana*<sup>[7]</sup> diseases which is even today one of the most effective methods of treatment for the management of *Bhagandara vis-à-vis* Fistula-in -Ano

### CASE PRESENTATION

A Gentle man aged 57years, Male, came to the Shalya Tantra OPD on May 2022 with the complains of soiling of the cloths in the Anal Region since 4 months on & off.

He is N/K/C/O DM; HTN; BA, IHD

### H/O Present Illness

As per the statement given by the patient, he was apparently normal before 4 months. Eventually he noticed pimple over the peri anal region which was pain full in nature associated with pus discharge. He took medication from Allopathic hospital and underwent Fistulogram, where he was diagnosed with Horse shoe type of Fistula-in-Ano. For the above complaints, he approached our hospital for surgical interventions.

### Personal History

*Ahara*: Vegetarian

*Vihara*: *Madyama*

*Nidra*: Disturbed sleep

*Vyasana*: Tea 4 times/day. Non-Alcoholic / Non-Smoker

*Mala*: Once in a day, Constipated

*Mutra*: 6-7 times/day.

### Astastana Pareeksha

*Nadi*: *Vata Kaphaja Nadi*

*Mala*: Once in a day, constipated

*Mutra*: 6-7 times a day,

*Jihwa*: *Alipta*

*Shabda*: *Prakruta*

*Sparsha*: *Prakruta*

*Drik*: *Prakruta*

*Akruti*: Lean in built.

### Samanya Pareeksha

Built: Lean in built

Appearance: normal

Temperature: 98°C

Pulse: 74bpm

RR: 18cpm

Bp: 130/80mmHg

Nourishment: Moderately nourishment.

Pallor: Absent

Icterus: Absent

Edema: Absent

Cyanosis: Absent

Koilonychia: Absent

Clubbing: Absent

### Systemic Examination

#### Central Nervous System

Higher mental function test: Conscious, well oriented to time place and person.

Memory: Recent and remote: intact

Intelligence: Intact

Hallucination /delusion /speech disturbance: Absent

Cranial nerve /Sensory nerve/motor system: normal

Gait: Normal

#### Cardio vascular system

Inspection: No scar/pigmentation found.

Palpation: No tenderness

Percussion: Normal cardiac dullness  
S1 and S2 heard.

### Respiratory system

Inspection: B/L symmetrical  
Palpation: Trachea is centrally placed, No tender.  
Auscultation: B/L NVBS heard.  
B/L NVBS heard, No added sounds.

Percussion: Normal resonant sound

### Gastro intestinal system

Inspection: Umbilicus centrally placed,  
No visible vein, No scar pigmentation.  
Palpation: Soft tenderness noted at right iliac fossa  
Auscultation: Normal peristaltic sound heard  
Percussion: Normal resonant sound heard over abdomen

### Musculo Skeleton System Examination

All range of movement possible, without pain/difficulty.

### Local Examination

Per Rectal Examination

On Inspection

Position of the Fistula track: External opening noted at 4 'O'Clock and 10 'O'Clock position.

No of opening - 2 in number

Previous operated scar mark - absent

Pus discharge present

Quantity of discharge - moderate

On palpation: Tenderness present

Induration: Present up to 2 cm of peri anal region.

Itching present

### Digital examination

Sphincter tone: normal

No active bleeding.

### On Probing

Internal opening: present  
Fresh discharge: present  
Direction of track: Curved.  
Blind internal fistula track.  
Length of the track: 8 cm.

### Investigation

FBS: 102mg/dl

PPBS: 120mg/dl

Blood urea: 19mg/dl

Serum creatine: 0.9mg/dl

Serum electrolytes: Sodium 137meq/l

Potassium :3-94meq/l

HB: 15.0gm/dl

TC: 6400Cells/cum - Neutrophils: 73%

- Lymphocytes:22%

- Eosinophils:3%

- Monocytes:2%

- Basophils:0.3%

Platelet count - 2.5lakhs/cumm

ESR - 35mm /1<sup>st</sup> hr

BT - 2.40 min

CT - 5.30 min

HIV, HBsAg - Negative

Urine routine: urine albumin, urine sugar - Pus cell -2-3

Chest X ray PA view - normal study

ECG - Normal limits

2D ECHO EF - 60%

### Operative Procedure

#### Pre-operative procedure:

- Informed Consent taken.
- NBM 6 hours prior to surgery.

- Part preparation was done.
- Inj. Xylocaine test dose given.
- Inj. T.T 0.5ml IM given.
- Physician Fitness taken.
- Proctoglycerine enema was given twice before surgery.
- IVF 1 Pint DNS 100CC/hr was connected.

#### Operative procedure:

Under all aseptic measure's patient was shifted to major OT.



Under Spinal Anaesthesia patient was given Lithotomy position.



Part prepared painted and draped. Lords 4 finger dilation achieved.



External opening was identified at 10 'o' clock position which was 3 cm away from the anal verge probing done and about 8 cm track was identified and internal opening noted at 9 'o' clock track was excised. from the same external opening secondary opening was probed and the track running down towards 6 'o' clock position which was blind external in the ischiorectal fossa with track measuring 4cm and a nick was taken and external opening created with wide excision primary threading done.



Similarly, one more Primary external opening identified at 4 'O' clock position which was 4 cm away from the anal verge. Probing done and about 7cm track identified and internal opening at 9 'o' clock position. the fistulous track was excised primary threading done. From the same primary external opening Secondary track probed and the track was identified to be running down towards 6 'o'clock position in the Ischiorectal fossa which is blind external. Track measuring 4 cm and nick taken and external opening created with wide excision. from the 6 'o' clock position retrograde probing done and about 5cm track identified and internal opening noted at 6 'o' clock position primary

threading done and again at 6 'o' clock position 2 cm above the external opening subcutaneous fistula noted and sub cutaneous fistulotomy procedure done. haemostasis achieved.



Wound wash given. Primary threading was changed with *Ksharasutra*. Fistula track was plugged with ribbon gauze mixed with *Jatyadi Taila*.



Anal pack with *Mahanarayana Taila*. Patient was catheterised. Whole procedure was done uneventful. Patient was shifted OT to Post-operative ward.

#### Post op procedure:

Patient was allowed to take clear liquid after appreciating Bowel sounds.

Restricted head movements.

Foot end elevation up to 4 hours.

Monitor vitals.

*Taila poorana* with *Jatyadi taila* 10 ml twice a day.

Sitz bath with *Panchavalkala Kashaya* twice a day.

Syp *Abhayarista* (20ml-0-20ml) After food with water for 1 month.

Syp *Drakshasava* (20ml-0-20ml) After food with water for 1 month.

Tab *Kaishora Guggulu* (2-2-2) A/F for 1 month.

Tab *Gandhaka Rasayana* (2-2-2) A/F for 1 month.

Tab *Kamadugda* with *Mouktika* (1-0-1) A/F for 1 month.

Prophylactic Antibiotics and Analgesics for 5 days.

Regular dressing with *Jatyadi Taila*.



Fig. 1: Pre-operative pic



Fig. 2: Chandrachakra incision



Fig. 3: Excision of fistula track situated at 4'0 clock and 10'0 clock



Fig. 4: Probing of subcutaneous fistula



Fig. 5: Fistulotomy of Subcutaneous fistula.



Fig. 6: Partial fistulectomy with Kshara Sutra Procedure.



Fig. 7: Excised fistulous track

#### Observation findings



Fig. 8: 1<sup>st</sup> Week Post Op



Fig. 9: 14<sup>th</sup> Day



Fig. 10: 21<sup>st</sup> Day



Fig. 11: 28<sup>th</sup> Day

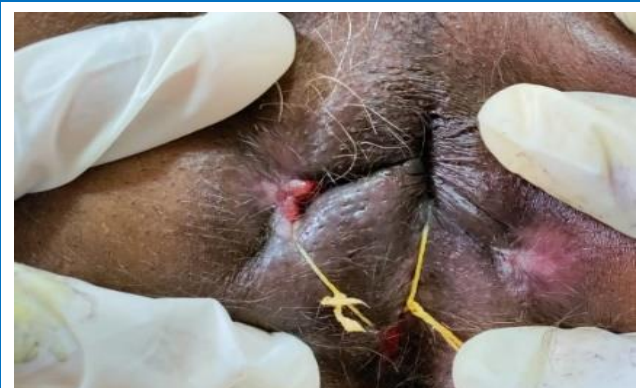


Fig. 12: 40<sup>th</sup> Day



Fig. 13: After 2 Months

Table 1: Track 1- at 10 'O' clock to internal opening 9 'O' Clock position

Date	First track length (A)	Pain	Pus discharge	Foul smell	Induration
2/6/2022	8cm	+++	+++	++	+
9/6/2022	7cm	+++	+++	+	+
16/6/2022	6cm	++	++	+	+
23/6/2022	5cm	++	++	-	+
30/6/2022	4cm	++	++	-	-
7/7/2022	3cm	+	+	-	-
14/7/2022	2cm	+	+	-	-
21/7/2022	1cm	-	+	-	-
28/7/2022	Ksharasutra removed	-	-	-	-

Table 2: 2<sup>nd</sup> fistula track, Fistula Track at 10 'O' clock to 6 'O' clock position

Date	First track length (cm)	Pain	Pus discharge	Foul smell	Induration
2/6/2022	4cm	++	++	+	+
9/6/2022	3cm	++	+	+	+
16/6/2022	2cm	+	+	-	-
23/6/2022	1cm	-	-	-	-
30/6/2022	Ksharasutra removed	-	-	-	-

Table 3: 3<sup>rd</sup> fistula track at External 4 'O' clock position to internal 3 'O' clock position

Date	First track length (cm)	Pain	Pus discharge	Foul smell	Induration
6/6/2022	7cm	+++	++	+	++
13/6/2022	6cm	++	++	+	+
20/6/2022	5cm	++	+	+	+

27/6/2022	4cm	+	+	-	+
4/7/2022	3cm	+	+	-	-
11/7/2022	2cm	-	-	-	-
18/7/2022	1cm	-	-	-	-
25/7/2022	Ksharasutra removed	-	-	-	-

**Table 4: External opening at 6 'O' clock and internal opening at 6 'O'clock**

Date	First track length (cm)	Pain	Pus discharge	Foul smell	Induration
6/6/2022	5cm	+++	++	+	++
13/6/2022	4cm	++	++	+	+
20/6/2022	3cm	++	+	+	+
27/6/2022	2cm	+	+	-	-
4/7/2022	1cm	-	-	-	-
11/7/2022	Ksharasutra removed	-	-	-	-

## DISCUSSION

*Bhagandara* is a chronic illness which is, though not fatal but quite discomforting and troublesome to the patient it also imposes psychological stress on the patient. Due to improper food habits and life style changes, prevalence of this disease has increased day by day.

A disease or sinus that tears or damages the area around the genitalia, urinary bladder and anus is known as *Bhagandara*. Often it results after bursting of *Bhagandara pidaka* or an abscess in this region. The sinus may discharge flatus, faeces, urine, seminal fluid or even worms at time.

There are five main types of *Bhagandara Pidaka* and after suppuration/burst open they lead to five different types of *Bhagandara*.

A full clinical history and diagnostic imaging techniques are indispensable to gain information about type of Fistula and to rule out associated conditions.

The Management of *Bhagandara* can be both preventive, and curative, in curative medical, Surgical and para surgical line of management.

Number of surgical procedures have been developed to minimize the recurrence and to prevent damage to the anal sphincter muscles in high anal fistula, cutting seton, Endorectal advancement flaps, Dermal advancement flaps have all been used as an alternative to fistulotomy with variable success rates. Each of these procedure carries significant risk of pain, healing complications an incontinence. This has led surgeons to switch to alternative methods of treatment like fibrin glue, anal fistula plug which do not carry any risk of sphincter function.

In the management of different types of *Bhagandara*, *Acharya Sushruta* recommended some incisions. These incisions have similarity in shape with some objects.

*Ksharasutra* procedure cuts and heals the tract. It destroys and removes unhealthy tissues and promotes healing of fistulous track. It is a minimally invasive procedure.

*Ardachandra* and *Chandra Chakra* type of incision the external opening has to be excised by creating a bigger track, allowing pus drainage. Many Surgeons follow this technique in partial fistulectomy followed by *Ksharasutra* ligation, where partial track is excised and at the level of internal sphincter *Ksharasutra* is ligated. This is called Sphincter saving surgery. {most common clinical practice procedure even in followed in contemporary science}

It is evident that by observing many Fistula cases, *Ardachandra* and *Chandrachakra* etc. type of excision holds good even according to Goodsall's rule.

Most of the posterior openings are having curved track similar to *Ardachandra* and *Chandrachakra* Incisions.

Subcutaneous and submucous fistula are having straight track similar to *Suchimukha* and *Avangamukha*.

The rationalities behind various types of excision is to protect the sphincter, to avoid the patient developing incontinence, enhance wound healing, minimize the



tissue damage to remove the external *Doshas* (Infection) from the track.

The patient shall avoid heavy exercise, over indulge in sexual activity, strenuous work or fighting to exhaust, for 1 year after recovery from *Bhagandara*.

## CONCLUSION

Despite many advances in medical sciences, it poses a big challenge to the surgeons as there is no suitable curative treatment available so far; For the same reasons, *Susrutha* has enumerated this disease under *Ashtamahagada* i.e., the disease which is quite troublesome and difficult to cure. According to *Acharya Sushruta*, *Chedana Karma* (excision), followed by *Kshara* or *Agni Karma* are done over the fistulous track. *Acharya Sushruta*, elaborated the importance of the excision advised for the management of different types of *Bhagandara*. Among these types of excision, *Chandrachakra* is commonly practiced by modern as well as *Ayurvedic* surgeons in current era as the fistulectomy performed resembles the *Chandrachakra* excision. Among all the treatment modalities for fistula in Ano, *Chedana Karma* (partial fistulectomy) along with *Kshara Sutra* proves to be boon for surgical field and also to the mankind, which is the only surgical procedure accepted by WHO to be the gold standard in the treatment of this complicated disease.

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