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

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ABSTRACT

Bhagandara is enumerated under Astamahagada¹ 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.¹² 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.³¹ 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 Sushrutotka 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.

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 Sadyavayadi. 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
described different type of incision in the management of Bhagandara. i.e., Langalaka, Arda Langalaka, Gothirtika, Sarvatobadraka, Kharjura Patraka, Chandrachakra, Arda Chandra, Suchimukhi, Avangmukhi,[6] 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[7] 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 57 years, 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

**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

**Medical Details**

_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

Cranial nerve /Sensory nerve/motor system: normal

Gait: Normal

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 4’0’Clock and 10 ‘0’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 /1st 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 measures patient was shifted to major OT.

- Under Spinal Anaesthesia patient was given Lithotomy position.
- Part prepared painted and draped. Lords 4 finger dilatation 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 ‘0’ 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 subcutaneous 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.

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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: Fistolotomy of Subcutaneous fistula.

Fig. 6: Partial fistulectomy with Kshara Sutra Procedure.

Fig. 7: Excised fistulous track

Fig. 8: 1st Week Post Op

Fig. 9: 14th Day

Observation findings
CASE REPORT

Table 1: Track 1 - at 10 '0' clock to internal opening 9 'O' Clock position

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

Table 2: 2nd fistula track, Fistula Track at 10 '0' clock to 6 '0' clock position

<table>
<thead>
<tr>
<th>Date</th>
<th>First track length (cm)</th>
<th>Pain</th>
<th>Pus discharge</th>
<th>Foul smell</th>
<th>Induration</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4cm</td>
<td>++</td>
<td>++</td>
<td>+</td>
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</tr>
<tr>
<td>9/6/2022</td>
<td>3cm</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>16/6/2022</td>
<td>2cm</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>23/6/2022</td>
<td>1cm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30/6/2022</td>
<td>Ksharasutra removed</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3: 3rd fistula track at External 4 '0' clock position to internal 3 '0' clock position

<table>
<thead>
<tr>
<th>Date</th>
<th>First track length (cm)</th>
<th>Pain</th>
<th>Pus discharge</th>
<th>Foul smell</th>
<th>Induration</th>
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<tbody>
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<td>6/6/2022</td>
<td>7cm</td>
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<td>++</td>
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<td>++</td>
</tr>
<tr>
<td>13/6/2022</td>
<td>6cm</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>20/6/2022</td>
<td>5cm</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Fig. 10: 21st Day

Fig. 11: 28th Day

Fig. 12: 40th Day

Fig. 13: After 2 Months
**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 lifestyle 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, Ardhachandra 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 Ardhachandra 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

### Table 4: External opening at 6 ‘0’ clock and internal opening at 6 ‘0’clock

<table>
<thead>
<tr>
<th>Date</th>
<th>First track length (cm)</th>
<th>Pain</th>
<th>Pus discharge</th>
<th>Foul smell</th>
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<tbody>
<tr>
<td>6/6/2022</td>
<td>5cm</td>
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</tr>
<tr>
<td>13/6/2022</td>
<td>4cm</td>
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<tr>
<td>20/6/2022</td>
<td>3cm</td>
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<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>27/6/2022</td>
<td>2cm</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4/7/2022</td>
<td>1cm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11/7/2022</td>
<td>Ksharasutra removed</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

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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.

**REFERENCES**


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