

Clinical efficacy of svarnkshiri tail pichu with ksharsutra in the management of bhagandara

Research Article

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Abstract

Bhagandara i.e. Fistula in ano is one of the *Asthomahagadha Vyadhi* described by *Sushruta* which is difficult regarding its management. Fistula in Ano is disease of Ano rectum which characterised in humans by single or multiple sinuses with purulent discharge in the perianal region. The disease has been described in *Sushrut Samhita* and another *Samhitas*. Though it is a one of the *Asthomahagadha Vyadhi* the medical profession therefore has always been on the alert to devise and provide procedures and methods surgical or otherwise which could control disease effectively. The present study has been carried out to study the clinical efficacy of *Svarnkshiri Tail Pichu* with *Ksharsutra* in the management of *Bhagandara* was aimed to observe the efficacy of trial drug in *Bhagandara*. The clinical study was conducted on 60 patients selected randomly and divided into 2 groups based on the drug for the clinical trial. First group was treated with *Ksharsutra* with local application of *Svarnkshiri Tail Pichu*. Second group was treated with *Ksharsutra* only as controlled group. The clinical assessment was done on the basis of grading criteria with specific symptomatology of *Bhagandara* like *Gudasrava*, *Gudashula*, *Gandha*, *Gudashotha* and length of thread obtained at every sittings. Then mean scores levels of these symptoms before and after the treatment of 2 groups were subject for student paired 't' test for statistical analysis. The results were statistically and clinically significant not only to cure but also to prevent recurrence of the *Bhagandara*.

Key words: *Bhagandara*, Fistula in ano, *Svarnakshiri Tail, Pichu, Ksharsutra*.

Introduction

Ayurveda is an ancient health care system of India based on eternal principle of healthy life. *Ayurveda* is name given to the science of life and longevity, which is vast body of invaluable knowledge with eight branches. Out of eight branches of

Ashtang Ayurved Shalya Tantra is one of the prime branch(1) which dealt with surgical and Para surgical procedures along with medicinal treatment. The Para surgical (minimal invasive surgery) includes *Ksharkarma*, *Agnikarma*, *Siravedha*, *Jaloukavcharan* etc. which are the specialty of *Shalyatantra*.

Bhagandara is a disease for which operative procedure have been advocated and practiced by the surgeon at various time. Even the ancient texts in medical literature are full of various surgical measures employed at the some time or other for treating the disease.

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Modern and precisely the western method or treatment of anal fistula involve extensive excision of fistula tract (Fistulectomy) and wherever possible its ramification includes greater part of surrounding healthy tissue as well. Such a wide open wound refuses to heal spontaneously and might take months together to produce desired results of healing and painful postoperative dressing(2). Along with this procedure of lying open the tract (Fistulotomy) also use which have comparatively less trauma to tissue with small wound.

The complications like sphincter incontinence, stenosis, proctitis, fissure, rectal prolapse and recurrence have a difficult course and make the life of patient worse than it was before the operation. No doubt some fistulae respond to surgery satisfactory, but the overall picture of response is highly disappointing. Hence it leaves a scope to devise a technique which would ideally offer the cure of this disease in reasonably short time, avoid recurrences and extensive mutilating surgery and would prove economically better.

The method involves the application of medicated thread which has been termed as *Ksharsutra*. In this method the tract or anal fistula is threaded through and through by *ksharsutra* which is brought out at external surface of anal canal aperture and tied with knots. The thread cuts through the fistulous tract in due course of time to lay open the wound which exhibits spontaneous healing. The biggest advantage with the technique is that the patient can be treated at the level of outpatient department, obviating the necessity of hospitalization. The patient remains ambulatory throughout the treatment period and continues with his work unhindered. The merits of the *Ksharsutra* treatment are minimal trauma to the anal region thereby avoiding the sphincter trauma and avoiding the anal incontinence, negligible recurrence, its ambulatory method and also needs short

general anaesthesia. Due to all merits, this technique besides being Para surgical procedure is equally effective like surgery(3).

In *Ksharsutra* treatment also there are some demerits like long duration of treatment and pain while changing the thread during every sitting, burning, perianal haematoma, irritation, secondary bleeding and patient also gets psychological discomfort that sometimes and tightness in the anal region.

It is duty of research scholar to modify the treatment to overcome the above said dimensions to increase efficiency of *Ksharsutra* for which we have referred ancient text and we found that *Bhagandara* were managed by various local treatment. Along with this *Aacharya Charka* also advocated the local application of *Siddha Tail*. By use of *Ksharsutra* followed by local application of *Siddha Tail* in fistulous tract we can avoid the trauma to a great extent as well as to keep the patient away from complications such as injury to sphincters, bleeding, long duration, pain will be comparatively less, less discharge and cutting and healing of fistula track will be faster than *ksharsutra* itself.

Also the drug used in *Siddha Tail* are the properties of *Tikshna*, *Lekhan*, *Shodhan*, *Ropan* etc. and the work expected at the fistulous tract are debridement of tract along with healing of tract spontaneously. *Siddha Tail* can fulfill these all expectations by working as debridement of fistulous tract with *Shodhan and Lekhan Karma*, and spontaneous healing of tract with effect. So, the management according to *Sushrutacharya* of *Ksharsutra* followed by local application can be add a new aspect and direction in the management of fistula in Ano.

Aims and Objectives

To compare the Efficacy of *Swarnkshiri Taila Pichu* and *Ksharsutra* in

the management of *Bhagandara*

Drug Review

Sushruta has emphasized on the local treatment along with operative procedure in the management of *Bhagandara* and he has given various preparations for the local treatment in various forms.

The ingredients in the oil are as follows.

- 1) *Svarnakshiri*
- 2) *Til oil*
- 3) Water

also the *Ksharsutra* treatment is indicated in the *Bhagandara* management which is taken as controlled group. The ingredients of are

- 1) *Snuhi Kshir*
- 2) *Apamarga Kshar*
- 3) *Haridra Churna*

the detail description of all above mentioned drugs are given below:

Preparation of *siddha taila*:

Siddha Taila(4) has been mentioned by *Sushruta* in *Bhagandara Chikitsa Aadhaya* eight in the management of *Bhagandara* as a local application. But *Sushruta* has not mentioned the particular method of preparation of oil. *Sharangdhar Samhita*, has guided to prepare this oil.

Ingredients:

- 1) *Svarnakshiri Beej*
- 2) *Til oil*
- 3) Water

Procedure(5): *Svarnakshiri Beej* are collected in dried form, fine powder of drug is made earlier. According to *Sneha Siddhi Kalpana* this was taken in pot and was stuck on the base of pot. Then proposed (four parts of the drug) quantity of *Til oil* is dropped in the same pot. Then proposed quantity of water (sixteen parts of the drugs) was added in the mixture. The constant and low heat was given till all quantity of water was evaporated and froth appeared (*Fenodbhav*). Then *Sneha Siddhi Lakshanas* were examined. The oil is filtered with cloth into another pot.

When it comes to room temperature oil is stored in an air tight container. The whole procedure is done at Department of Ras Shastra, S.V.N.H.T. *Ayurved* college, rahuri, under the supervision of experts in *Ras Shastra*.

Pichu:- According to *Charak Samhita Pichu* means it is a small size cotton roll.

Dharan Kala:- 2-3 hrs

- Types: 1) *Lambokar*
2) *Golakar*

Probable action of *Siddha Taila*:

Among the ingredients of *Siddha Taila* drugs are having *Katu, Tikta, Kashya Rasa, Ruksha, Tikshna Guna* and *Ushna Veerya*, so these drugs are very effective to break the pathogenesis of *Bhagandara* as well by virtue of these properties.

Action on the basis of Veerya: Due to *Ushna Veerya* of oil it has properties of *Chedana and Bhedana*. It separates the vitiated substances from *Dhatu* and reaches to minute cell level. It plays important role to perform the *Doshpak* of vitiated *Doshas*, which fascinates to separate and eliminate the vitiated *Doshas* along with debris from *Dhatu*. It also works as *Kledpachaka*.

Action on the basis of Rasa: the oil has property of *Katu, Tikta* and *Kashaya Rasa*. *Katu Rasa* is well known *Kaphaghna* and *Kledpachaka*. It takes part in *Doshpachak* and *Kledpachan*. It separates *Mala* from *Dhatu*. So oil works as *Kledpachaka* and *Doshpachaka*. The *Tikta Rasa* is having have property to penetrate the *Dhatu* and enter in deep. The oil is processed by such drugs will act on deep level and act as *Pachaka* and *Dhatvagnivardhaka*. The *Kashaya Rasa* has astringent effect, which cleans and removes the debris. It absorbs *kleda* and oozing. So oil works as removing sloughs and absorbs discharge and enhances the process of healing.

Preparation of *Ksharsutra*(6):

Ksharsutra is a medicated thread, which is coated with latex of different plant, *Kshara*, and *Haridra* powder as mentioned in ancient texts. *Ksharsutra* has been advocated by *Bhavprakasha* first time. It is only in 12th century *Chakrapani*, the commentator of *Charak Samhita* has given the reference of *Ksharsutra* preparation in the *Chakradatta*. In *Ras Chikitsa Mimansa* a 20th century treatise a reference of *ksharsutra* similar to that of *Bhavprakasha*. In *Rastarngini* there is good description about the preparation of *Ksharsutra*. The use of *Kshar* in *Ksharsutra* preparation was first found in *Raskamdhenu*. But, how many coating should not clearly mentioned. After many years reserches *Ksharsutra*, it is now routine that 11 coatings of *Snuhikshir*, 7 coating of *Apamarga Kshar*, and 3 coatings of *Haridra* should be given.

Ingredients:

- 1) *Snuhi Kshir*
- 2) *Apamarga Kshar*
- 3) *Haridra Churna*
- 4) Surgical linen thread no 20.
- 5) *Kshatsutra* Cabinet

Thread: surgical No. 20 which was proved by the best by previous study. The tensile strength was maintained properly after passing through the process of coatings.

Procedure:

Procedure done according to P.J.Deshpande procedure as follows. A linen thread No. 20 is taken and attached it to an alluminium made frame, then *Snuhikshir* coating is applied on thread and kept under sunlight. On second day again coating of *Snuhikshir* on thread is applied and the procedure is continued up to 11 days daily. On 12th day after drying the thread *Apamarga Kshar* coating is applied on it for next 7 days. On 19th day *Haridra Churna* is applied on the thread & kept under sunlight. The same procedure is repeated for 3 days that is from 19th to

21th day. In this way *Kshar Sutra* is prepared.

Properties of *Ksharsutra*(7):

The cutting of the track is due to the pressure necrosis of the tissue. It can be achieved by tying any type of thread. The *Kshara* helps in cleaning debris from track, sterilization of track, remove fibrosis, helps in granulation and it results in quick healing and good healing of the wound. The slow cutting and healing results in almost nil recurrence and minimal sphincter mechanism disturbances.

Materials and Methods:

Place of Study: IPD and OPD of *Shalya Tantra* Department S.V.N.H.T *Ayurved* college Rahuri.

Patients: The patient of *Bhagandara* attending the IPD and OPD of *Shalya Tantra* Department were the main clinical material. Total numbers of patients were 60, which was divided in to two groups each comprising of 30 patients

- 1) First group was treated with *ksharsutra* with local application of *Swarnkshiri Tail Pichu*.
- 2) Second group was treated with *Ksharsutra* only as controlled group.

Inclusive Criteria:

- a) Low level Fistula.
- b) Fistula with in 3.75 cm from anal canal.
- c) Age- 20-50 yrs. Of age group.
- d) Sex- both male and female.
- e) Patient belonging to all socioeconomic group.

Exclusive Criteria:

- a) Multiple tract fistula.
- b) High level fistula.
- c) Rectal polyp.
- d) Proctitis, Colitis.
- e) CA Anus and Rectum.
- f) HIV/DM/HTN.

- g) Gangrenous fistula.
- h) Crohn's disease.
- i) Tuberculosis .

Investigations: Prior to *Ksharsutra* and *Swarnkshiri Tail Pichu* application following investigations were carried out.

- 1) Haematological- TLC, DLC, Hb%, ESR, Blood Urea, Serum creatinine , Blood Sugar.
- 2) Routine urine examination.
- 3) Pus for Culture and Sensitivity.
- 4) Proctoscopy.
- 5) Colonoscopy (wherever needed).
- 6) Fistulogram. In selected cases.

Examination of patient:

Each case should be examine and investigated thoroughly. The findings are recorded in given proforma. After complete history taking general and local examination of patient was done and type of fistula is decided. All the above mentioned data is recorded in specially prepared case form.

Pre-Operative Procedure:

- A day prior to operation, the soap water enema is given to the patient in night for evacuation of bowel.
- Local shaving of the part was done and clean area with local antiseptic solutions.
- Light food was given in the night and kept NBM after 10 pm.
- Inj. T.T. 0.5 ml IM given & Inj.Xylocaine sensitivity test.
- Inj. Atropine 0.6 mg was given half hour prior to operation.

Position: All patients were kept in lithotomy position.

Anaesthesia: All this procedure were carried out in Spinal Anaesthesia with Inj.Xylocaine 5% heavy.

Procedure (Primary Threading):

Painting and Drapping done. The fistulous track is first examined by the palpation. After that the malleable probe of silver or copper with an eye and *Ksharsutra* is introduced in to the fistulous

track through the external opening of the anal fistula. The index finger of the other hand is lubricated with jelly and gently introduced into the anal canal while the probe gently but firmly progressing into the fistulous track, the finger in the anal canal is simultaneously strives to established contact with the tip of probe at the point of internal opening. The internal opening once identified the finger in the anal canal is kept in constant contact with the tip of probe to avoid injury to the anal canal. Finally the finger in the anal canal keeps on processing on the tip of probe keep on bending while probe is gently pushed into the track all the time. In this manner the probe gently comes out through the anal verge and thread is then applied in complete fistulous track comes out through internal opening of the anal fistula and eventually out through the anal canal. The two ends of the thread a) coming out of the external opening and b) coming out of the anal canal are gently approximated at the external opening and three knots are tied and the wound is dressed with *Anu Taila*.

Post-operative management:

- Patient is keep in Lying down or Head low position for 24 hrs.
- NBM for 6-8 hrs.
- Antibiotics, analgesics given.
- Daily sitz bath with warm water.

Changing of Thread:-

Preop- Bowel Evacuation given by soap water enema

- Sitz Bath with warm water
- Local application of Xylocaine jelly (if required)
- Inj.Xylocaine 2% with Adrenaline (if required)
- Local shaving and clean area with antiseptic solutions.

Procedure:- Changing of thread is done after 7 days of primary threading. A fresh *Ksharsutra* is tied around the thread on the lateral side of the knots. The thread is

grasped by an artery forceps medial to the knots and cut in between. Traction on the artery forceps pull the plain thread out and *Ksharsutra* replaces in it entirely. It is approximated at the external opening as earlier, dressing done with *Anu Taila*. The *Ksharsutra* is thus changed every week till it cuts through the fistulous track.

Cut through and Unit cutting time(8):-

After subsequent changing of thread in few weeks *Kshara Sutra* comes out with the knot intact from the track. This stage is known as cut through. Cut through indicates complete division of track. Unit cutting time means the time taken by thread to cut one centimeter of track in days.

$$U.C.T = \frac{\text{Total number of days taken for cut through}}{\text{Initial length of thread in cm}}$$

U.C.T depends on several criteria like tightness of thread, infection, fibrosis in track, skin, type of fistula, age, sex, etc.

Problems encounter during *Ksharsutra* therapy:

Although the *Ksharsutra* therapy is an ideal tool for the treatment of fistula in ano, In spite of that few problems are encountered in this therapy. These problems are categorized in groups:-

1) Problems during the application of thread:

- i) Pain: ii) Vasovagal Syncope
- iii) Slipage of Thread iv) Haemorrhage

2) Problems encountered during therapy:

- i) Duration of treatment. ii) Allergic Reaction:
- iii) Haemorrhage: iv)

Assessment of Parameters:

Parameters were kept for the weekly assessment of the observations.

Gudasrava (Perianal Discharge)	0- Absent
	1- Moist Filling
	2- Changing Cloth Once in a day

- Discharge: v) Incontinence: vi)
- Foregin Body sensation vii) Passage of flatus through fistulous opening: viii)
- Skin tags: ix) Anal Stenosis.

Excellence of *Ksharsutra* therapy over surgical management(9):

- a. Minimal trauma and no tissue loss as compared to surgical excision.
- b. Less bleeding in *ksharsutra* application as compared to huge bleeding in fistulectomy.
- c. Anaesthesia is seldom requires.
- d. The patient is fully ambulatory and can perform his daily activities.
- e. Minimal Hospital stay- in most of cases not even a day.
- f. No dressing as in huge wound of fistulectomy.
- g. No incontinence.
- h. Therapy costing is very less.
- i. Very narrow and fine scar in comparison to ugly scar of surgery.
- j. No anal stricture if properly treated.
- k. The recurrence rate is practically nil.

Application of *Svarnkshiri Tail Pichu*:

After *Ksharsutra* threading, application of *Svarnkshiri Tail Pichu* starts on post-operative 2nd day. a cotton swab is taken, rolled it (*Pichu*) and then immersed it into 10 ml of *Svarnkshiri Tail* till it soaks all 10 ml. After that application of this *pichu* is done on external opening of fistula for about 2-3 hrs. After the oil is absorbed into the tract it is removed. The same procedure is repeated till the fistulous track heals. The findings or observations were noted on the same case record form and duration for cutting and healing, pain & discharge were observed.

	3- Changing cloth twice a Day or more			
Gudashula (Pain)	0- No Pain			
	1- Mild			
	2- Moderate			
	3- Severe			
Gandha (Discharge Smell)	0- No smell			
	1- Smell Present			
	2- Foul Smell			
	3- Unbearable Foul Smell			
Gudashotha (Swelling with induration)	0- No Swelling			
	1- Mild			
	2- Moderate			
	3- Severe			
Length of Thread obtained at every sittings	No. Of sittings	Date of svarnakshiri application	Ksharsutra with Tail pichu	Length of Thread in cm
Unit Cutting Time(time taken by thread to cut 1 cm of tract in days) = Total no. of days/initial length(cm)				
Duration of treatment (Total no. of days)				

Observations:

Observations of U.C.T. for 1 cm. in groups:-

U.C.T:- Unit cutting time means the time taken by thread to cut 1 centimeter of tract in days.

Table 1: Observations according to unit cutting time per centimeter.

Group	Group I	Group II
U.C.T. for 1 cms.	10.43 days/cms	13.33 days/cms

In the present study group I has unit cutting time per centimeter is 10.34 days and that of Group II is 13.33 days.

RESULT:

Table 2: Result according to disease relief: Result of 60 patients according to disease relief.

Sr.no	Disease relief	No. of patient in gr. I	Percentage	No. of patient in gr. II	Percentage
1	Cured	28	93.33%	27	90%
2	Markedly Improved	02	6.66%	02	6.66%
3	Moderately Improved	00	0%	01	3.33%
4	Not improved	00	0%	00	0%

Table 3: Result according to U.C.T (unit cutting time):

Group	Group I	Group II
U.C.T. for 1 cms.	10.43 days/cms	13.33 days/cms

Statistical Analysis

Table 4: Statistical Analysis of Symptoms according to t-test in Group I:

Sr. No.	Symptoms	N	B.T Avg.	A.T Avg.	B.T SD	A.T. SD	't' cal.	P value	Result
1	Pain	30	2.63	0.33	0.49	0.47	18.37	P<0.001	Highly significant
2	Discharge	25	2.63	0.07	0.55	0.25	23	P<0.001	Highly significant
3	Swelling	25	2.13	0.03	0.97	0.18	11.61	P<0.001	Highly significant
4	Discharge smell	25	2.16	0.04	0.37	0.2	24.62	P<0.001	Highly significant

Table 5: Statistical Analysis of Symptoms according to t-test in Group II:

Sr. No.	Symptoms	N	B.T Avg.	A.T Avg.	B.T SD	A.T. SD	't' cal.	P value	Result
1	Pain	30	2.20	0.47	0.46	0.50	17.54	P<0.001	Highly significant
2	Discharge	25	2.07	0.10	1.08	0.30	9.59	P<0.001	Highly significant
3	Swelling	25	2.06	0.01	0.94	0.16	11.34	P<0.001	Highly significant
4	Discharge smell	25	2.12	0.08	0.33	0.27	23.48	P<0.001	Highly significant

Table 6: Relief in % of Cardinal Symptoms because of the Therapy:-

Symptoms	Group I	Group II
Pain	85%	82%
Discharge	97 %	95%
Swelling	100%	100%
Discharge Smell	98%	96%

Discussion:

Fistula in ano is a disease of ano rectum, which is one of the *Astomahagada Vyadhi*, which is difficult to treat. In the modern surgery, still it is burning problem regarding its management. In *Ayurveda*, there are some parasurgical measures are described out of which *Ksharsutra* procedure is one of the best treatment for the fistula in ano, which is become a breakthrough in the management of fistula in ano. Other than the surgery is also described in the *Sushrut Samhita* followed by local application of various preparations. In the modern surgery also there are various types of surgical management for fistula in ano. But there

are demerits in modern surgical management. In the *Kshar Sutra* management also some demerits observed like long duration treatment and pain.

The pain was found comparatively less in the *Kshar Sutra* with local application of *Siddha Taila*. The pain was observed for the first few days and was almost absent in the last week of treatment. In the *Kshar Sutra* management the pain was found almost all the duration and comparatively more than *Ksharsutra* with local application of *Siddha Taila*. Also the discharge in the *Ksharsutra* with local application of *Siddha Taila* was found less and for the less duration as compared to *Ksharsutra* management which was

more and for long duration. The discharge in the *Ksharsutra* treatment was less in first one to one half day and from second day discharge quantity increased for the three to four days and again decreased. As the *Ksharsutra* was changed the discharge decreased in further setting but it was presents almost end of the treatment.

Conclusion

From the above study it can be concluded that *Ksharsutra* is effective in the management of *Bhagandhara*. Local application of the *siddha taila* along with *Ksharsutra* has shown much more effective result as evidenced by the unit cutting time.

Thus from the above it can be concluded that a combination therapy of *Ksharsutra* and application of *Siddha taila* is more effective in the management of *Fistula-in-Ano*.

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