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Ksharsutra versus Snuhi Ksheera Ksharsutra in Management of Bhagandara

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ABSTRACT

Bhagandara (Fisiula-in-ano) is the communication between anal canal, rectum and external surface, this occurs as a peri-anal boil or ischiorenal abscess, which on suppuration discharges pus. Later on when comnutnication occurs with rectum, feces and flatus are discharged. In modern surgery though most of the the surgeons depend on operative management for Fistula-in-ano, but due to its uncertainty in operative technique and so many post operative hazards, the recurrence otherwise the success rate is low. To alter such problems in the management of Fistula-in-ano it was thought to undertake a clinical trial with the Ksharasutra, which is a well known and established therapy in Ayurveda and can be carried out at out door clinics with minimum and simple instruments and material.

Material and Method

A total number of 100 cases of Bhagandara (Fistula-in-ano) were selected randomly divided into two groups viz. Control (Group-I) and Treated (Group-II) having 50 cases each. In control group, the Standard Ksharasutra (Apamarga Ksharat+ Snuhi Ksheera + Haridra) was applied and in Treated group, the Ksharsutra prepared by Apmarga Ksharat+Snuhi Ksheera+ Arka Ksheera Haridra was applied.

Observations and result

The observations were made under various perameters and the most important is the Unit Cutting Time (UCT) in days/cm to Assess the exact duration of treatment. The average UCT in Treated group was just 5.33 days/cm in comparison to 6.60 days/ cm found in control.

KEYWORDS: *Bhagandara, Fistula-in-Ano, Ksharasutra Therapy, Snuhi Ksheera, Haridra, Perianal Abscess, Ayurvedic Surgery, Parasurgical Procedure, Recurrence Prevention, Outpatient Management*

INTRODUCTION

Anal Fistula is a condition, which has been described virtually from the beginning of medical history. Fistula is which denotes a pipe. It is an abnormal tube like communication between two internal organs or an organ or a cavity to the body surface. Fistula can occur in any part of the body but a Fistula occurring in Ano rectal region is called Fistula-in-Ano.

Sushmita (500 BC), the father of ancient surgery has paid great attention towards Bhagandara and dealt it systematically. Sushruta while dealing the management of the disease employed surgical, parasurgical measures and proclaimed that Bahgandara is most difficult task for treatment.

In modem surgery the use of ligation and some irritant chemical like Urithane and silver nitrate has been advised but most of surgeons dependent on operative management for Fistula-in-ano.

In spite of many modifications in surgical procedure, Fistula-in-ano still remains challenge even for a meticulous and skillful surgeon. It is obvious from the data available from different sources, different operative techniques are uncertain and the recurrence is inevitable. Apart from this, the operative management has certain hazards like incontinence to stool, loss of gluteal cushion, post-operative stenosis. To alleviate such problems in the management of Fistula-in-ano it was thought to find out technique to treat these cases without postoperative complications.

Standardized a thread prepared with repeated coatings of Snuhi Ksheera, Apamarga Kshara and Haridra powder. Most of the scholars have used Snuhi Ksheera as a base of adhesive media for other two ingredients. The collection of Snuhi ksheera is a practical problem. Even the collected latex gets solidifies within hours of collection and on too summer and winter 30 - 40% of total latex gets solidifies. If it is kept for 24 Hours it usually separates into solid and water portions and so it looses its sticky propetty. The clotted or separated latex is discarded from further use of processing the ksharasutra. Modified thread has been prepared by using Arka Ksheera along with Snuhi Ksheera thereby reducing the number of coatings of Snuhi Ksheera.

Thus a study was planned may be more useful in the management of Fistula-in-ano in comparison to any other Ksharasutra and also simpler to use. Thus modified Ksharasutra was put on trial in treated group (Gr.Il) and the results were compared and correlated with Standard Ksharsutra.

MATERIAL AND METHODS

1. Preparation of Kshara

The dried Panchanga of Apamarga (Achyranthus aspera) was burnt with limestones and the ash was collected and was mixed with water in 1:6 ratios, The mixture was filtered through a cloth for 21 times ina big vessel. The filtrate was taken out and the residue was discarded. Then the filtrate was taken Separately in a big vessel, kept it on Mandagni i.e. moderate heat and continuously stirred. After 6-8 hours of this process, an ash colored dry powder was obtained. This is the Apamarga Kshara, which was used in the Preparation of both type of Ksharasutra.

2. Preparation of Ksharsutra

a) Standard Ksharasutra:

The thread was prepared with the repeated coatings of Snuhi Ksheera+ Apamarga Kshara+ Haridra powder as shown below.

Ingredients	No. of Coating
Snuhi Ksheera	11
Snuhi Ksheera+ Apamarga Kshara	7

Snuhi Ksheera+ Haridra Powder	3
Total	21

b) Medified Ksharasutra:

The thread with the repeated treatment of Snuhi. Ksheera + Arka ksheera + Apamarga Ksharat+Haridra powder as shown below:

Ingredients	**No. of Coating**
Snuhi Ksheera	5
Arka Ksheera	6
Snuhi Ksheera+ Apamarga Kshara	3
Arka ksheera + Apamarga Kshara	4
Snuhi Ksheera+ Haridra Powder	1
Arka ksheera + Haridra Powder	2
Total	21

In both the cases Barbors surgical Linen thread no. 20 was used.

3. Selection of patients

Total number of 50 cases were selected from the Ano-rectal clinic in respective of Age, sex, occupation, occurrence and other signs and symptoms and modified Ksharsutra was applied. Cases associated with systemic diseases like malignancy, Ulcerative colitis, crppj's disease etc. were excluded from the study. Specific investigations like Mantoux test, Pus culture and sensitivity test; Tissue Biopsy and Fistulogram along with the routine investigations were carried out.

4. Preparation of Patients

The following precautions were taken before application of Ksharasutra.

i) Administration of a laxative for bowel preparation

ii) The patients were asked to clean and shave the part

iii) Administration of Tetanus toxide injection.

5. Application of Ksharasutra

i) Application through external opening:

After keeping the patient in lithotomy position, good assessment of the tract was made by using the probe. The technique used in the present study followed the concepts of Sushruta with improved aseptic precautions. The extent of the tract is assessed by probe by introducing it from the external opening. Then Ksharsutra is applied at its distal end's eye and probe is taken out through anal canal, which ultimately draws thread in the tract. Then the probe is discarded and the two ends of the thread are tied. Some times in some cases the internal opening of the tract will be so high that the probing and application of thread like previous method will become difficult due to inadequate length and grip of the simple probe. To overcome this problem, sickle shaped, special probe is being used, which possess usually an eye or ridge at its proximal end. This type of probe is usually used in case where there is no internal opening. This procedure was done under local anaesthesia.

ii) Change of Ksharasutra:

This is done by Rail -track technique. Ksharasutra is applied lateral to the knot of previous thread. Then an artery forceps is applied medial to the same knot. Then the old thread is cut between the artery forceps and the knot. Pulling of the artery forceps along with thread ultimately replaces the old thread by new Ksharsutra. The two ends are ligated and bandaging is done. The same procedure is followed for successive changes of Ksharasuitra at an interval of one week.

6. Additional medical treatment

i) Analgesics: On the day of primary threading, to alleviate pain mild analgesic was advised.

ii) Anu taila Basti: Patients were advised to take Anu Taila Basti (by pushing of 5 ml. of Anu Taila into anal canal with & help of syringe and rubber catheter no. before defecation.

iii) Ushnodaka Avagaha (Hot sitz bath) Patients were also instructed to take the sitz bath after defecation to keep the wound clean and to reduce the pain in inflammation.

iv) Satsakara churna : It was advice daily at bed time.

v) Ambulation of the Patient: The patients were allowed for all routine wounds.

7. Follow up:

All the patients were instructed to attend the O.P.D. at every 7th day of cut through of the fistulous tract. Then the patients were treated on the line of wound management till the wound heal completely.

8. Criteria of assessment:

Unit Cutting Time (UCT): It is a important parameter to assess the efficacy of the Ksharasutra, which indicates the average time in days taken to cut and heal 1 cm. of Fistulous tract. The UCT calculated by the following formula.

UCT = Total number of days taken to cut through the tract

The Initial length of the Ksharsutra in Cm

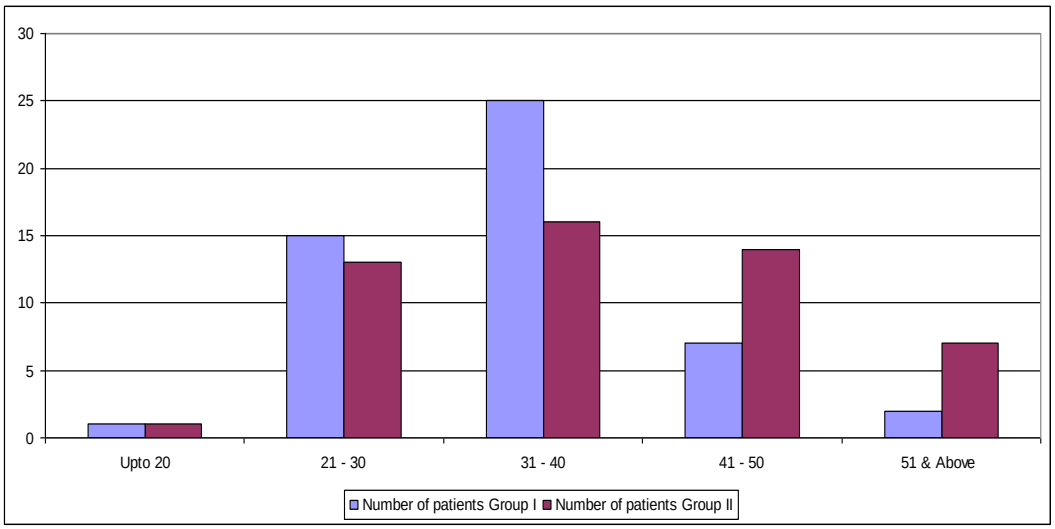
= Time taken (in days) to cut 1 cm. of Fistulous tact with simultaneous healing.

OBSERVATIONS

A total number of 50 cases were kept in treated group (Gr. II) and modified Ksharsutra was applied. In control group (Gr I) Standard Ksharsutra was applied.

1. Incidence of Age

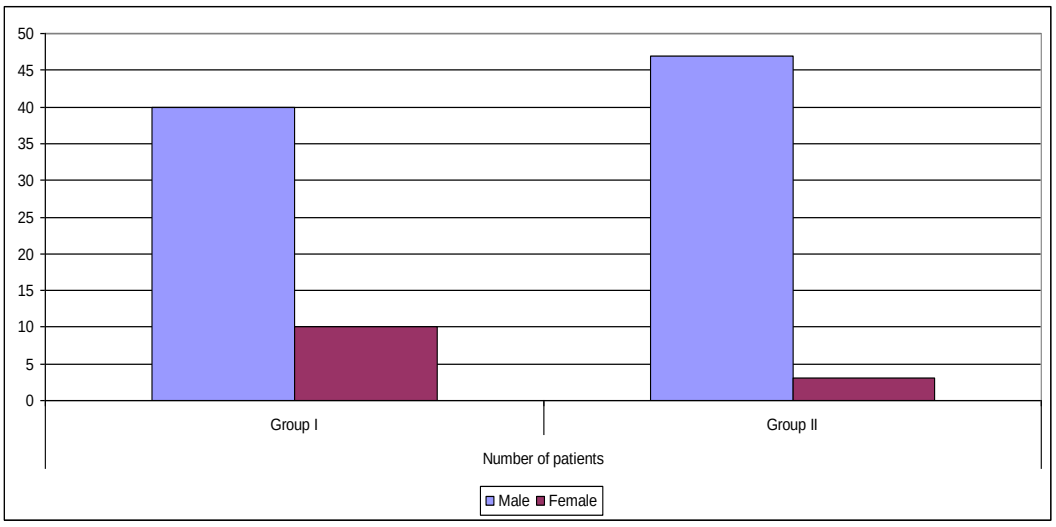
Age group (in years)	Number of patients		Total
	Group I	Group II	
Upto 20	1	1	2
21 - 30	15	13	28
31 - 40	25	16	40
41 - 50	7	14	21
51 & Above	2	7	9
Total	**50**	**50**	**100**



The above table shows that the incidence of Bhagandara is maximum (40 cases) in the age group of 31-40 yrs. and is min. 2 cases in the age group tup to 20 yrs.

2. Incidence of Sex

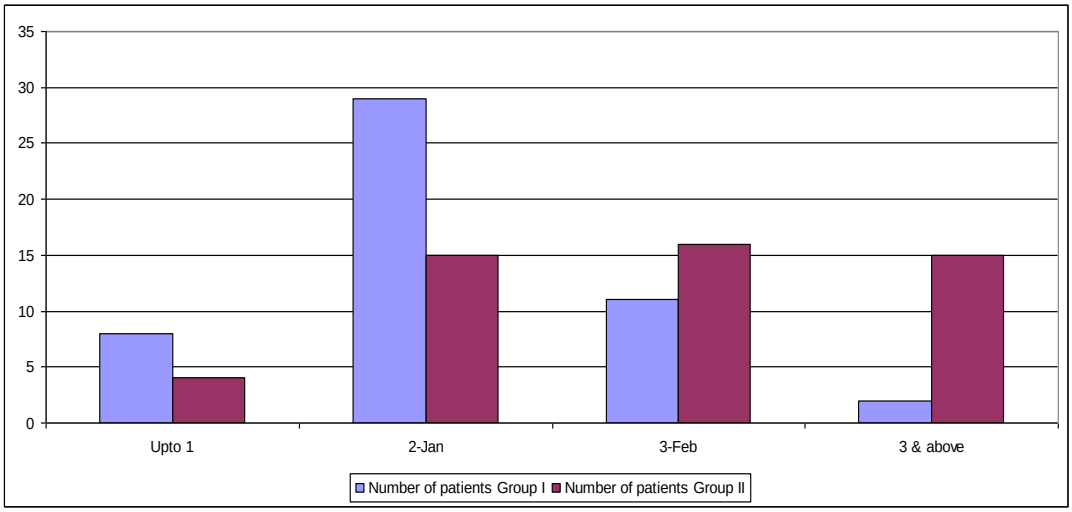
Sex	Number of patients		Total
	Group I	Group II	
Male	40	47	87
Female	10	3	13
Total	**50**	**50**	**100**



The above table shows that the males are to female more prone to this disease in comparison.

3. Incidence of Chronicity

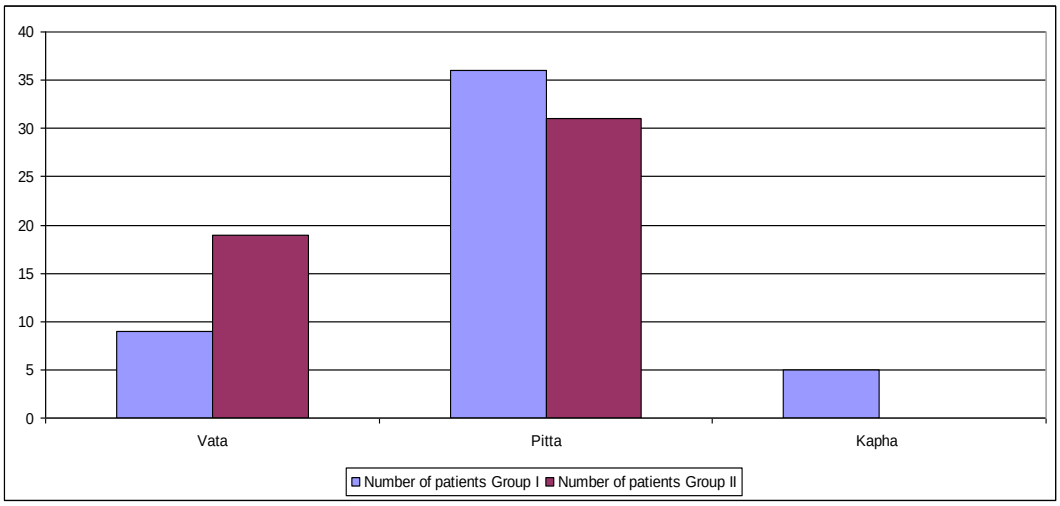
Chronicity (in yrs)	Number of patients		Total
	Group I	Group II	
Upto 1	8	4	12
1 - 2	29	15	44
2 - 3	11	16	27
3 & above	2	15	17
Total	**50**	**50**	**100**



The chronicity indicates the duration of illness and is calculated from the time the patient first noticed the onset of the symptom either in the form of a peri-anal abscess or a discharging sinus or a wond situated around the anal orifiuce. Highest no.of 44 cases were reported with the chronicity of 1-2 years of duration.

4. Incidence of Prakriti

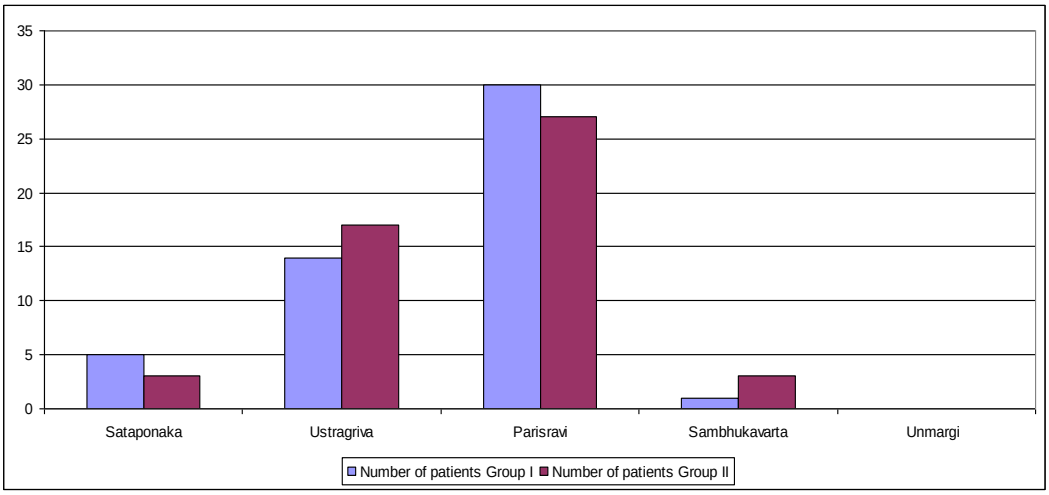
Prakriti	Number of patients		Total
	Group I	Group II	
Vata	9	19	28
Pitta	36	31	67
Kapha	5	0	5
Total	**50**	**50**	**100**



The above table shows that the disease is more prevalent in pitta prakriti patients in comparison to Vata and Kapha prakriti patients.

5. Incidence of Bhagandara

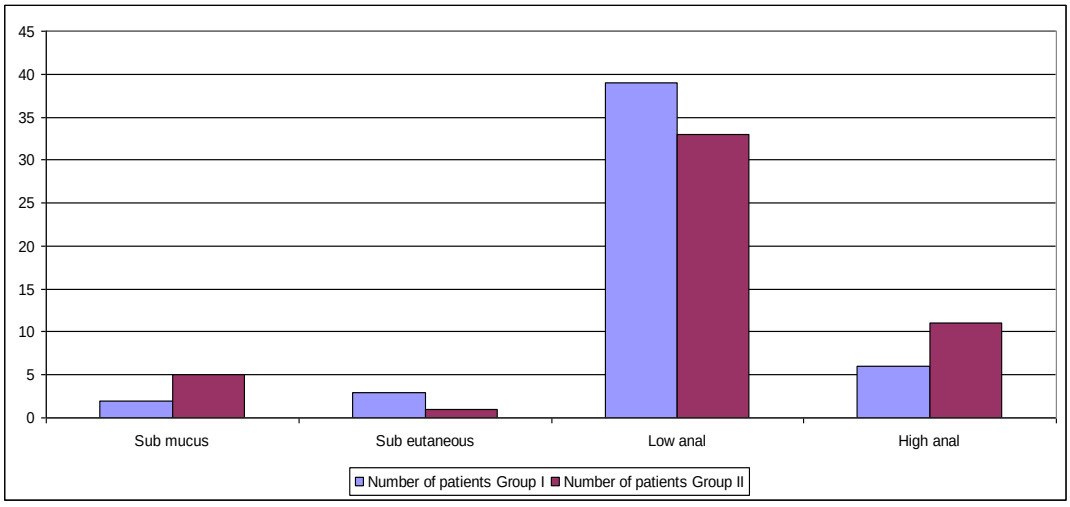
Type of Bhagandara	Number of patients		Total
	Group I	Group II	
Sataponaka	5	3	8
Ustragriva	14	17	31
Parisravi	30	27	57
Sambhukavarta	1	3	4
Unmargi	0	0	0
Total	**50**	**50**	**100**



Type of Bhagandara was considered on the basis of description of Sushruta. Out of 100 cases. maximum no. of patients (57 cases) were observed under Parisravi variety of Bhagandara, the Ustragriva came next with incidence of 31% and the minimum cases (4 cases) were observed under Sambhukavarta variety. Incidentally no case was found under Unmargi type of Bhagandara.

6. Incidence type of Fistula in ano

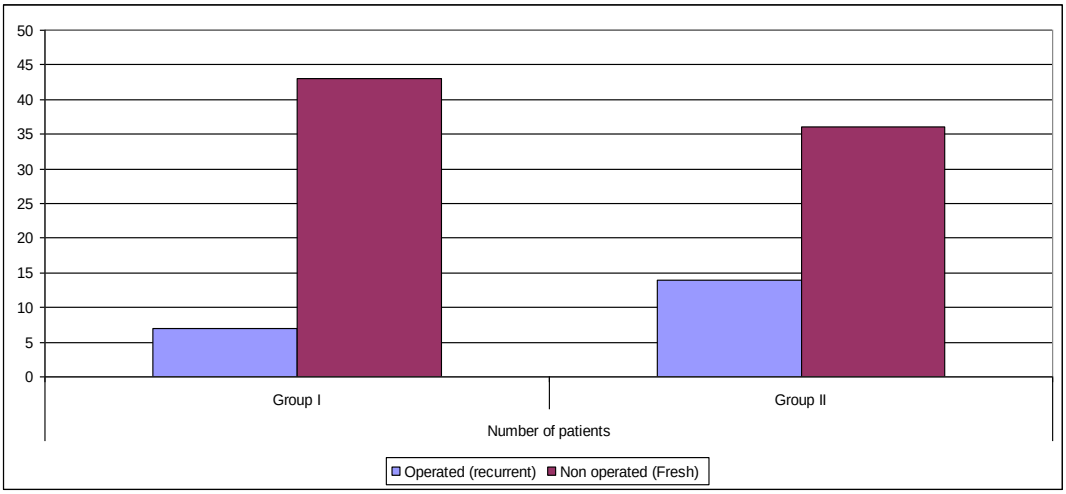
Fistula in Ano	Number of patients		Total
	Group I	Group II	
Sub mucus	2	5	7
Sub eutaneous	3	1	4
Low anal	39	33	72
High anal	6	11	17
Total	**50**	**50**	**100**



Analysis of 100 patients of Fistula in ano in terms of Milligan and Morgan's classification was made. The maximum 72 patients were observed under Low anal variety followed by High anal with the incidence of 17 cases.

7. Incidence of Recurrent and fresh cases

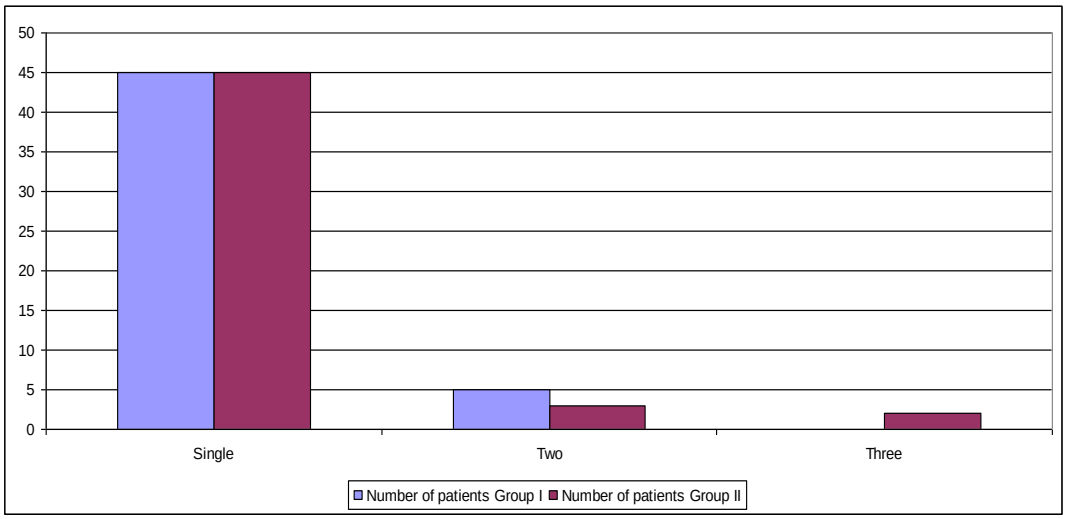
Type of case	Number of patients		Total
	Group I	Group II	
Operated (recurrent)	7	14	21
Non operated (Fresh)	43	36	79
Total	**50**	**50**	**100**



Cases were analyzed in view of previously operated (Recurrent) and non operated (Fresh) cases in fistula in ano. Out of 100 cases 79 cases were reported as fresh while only 21 cases were operated previously.

8. Incidence of number of external openings

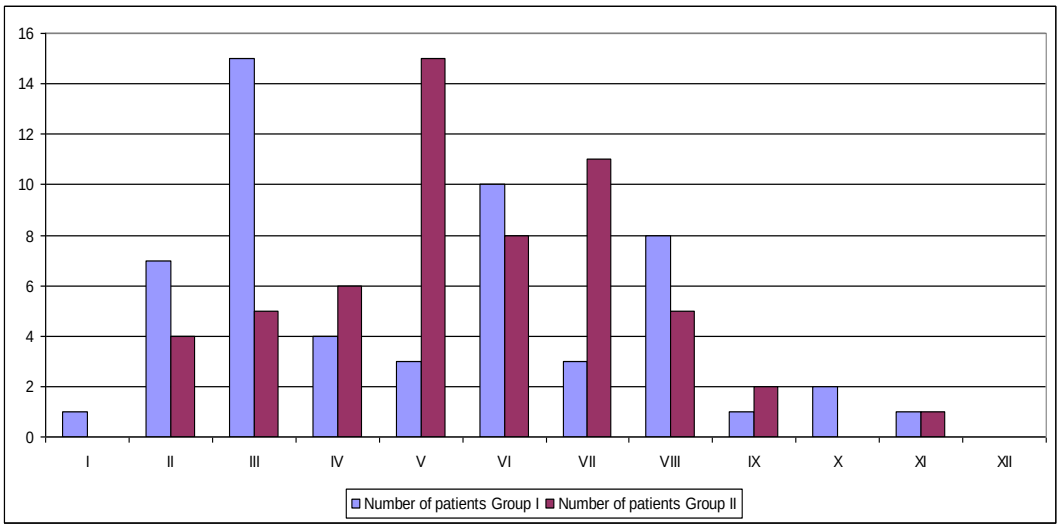
Number of openings	Number of patients		Total
	Group I	Group II	
Single	45	45	90
Two	5	3	8
Three	0	2	2
Total	**50**	**50**	**100**



The above table shows that 90 cases were having single opening while 8 cases were having two opening and 2 cases were having three external openings.

9. Incidence of clockwise position of fistulous opening

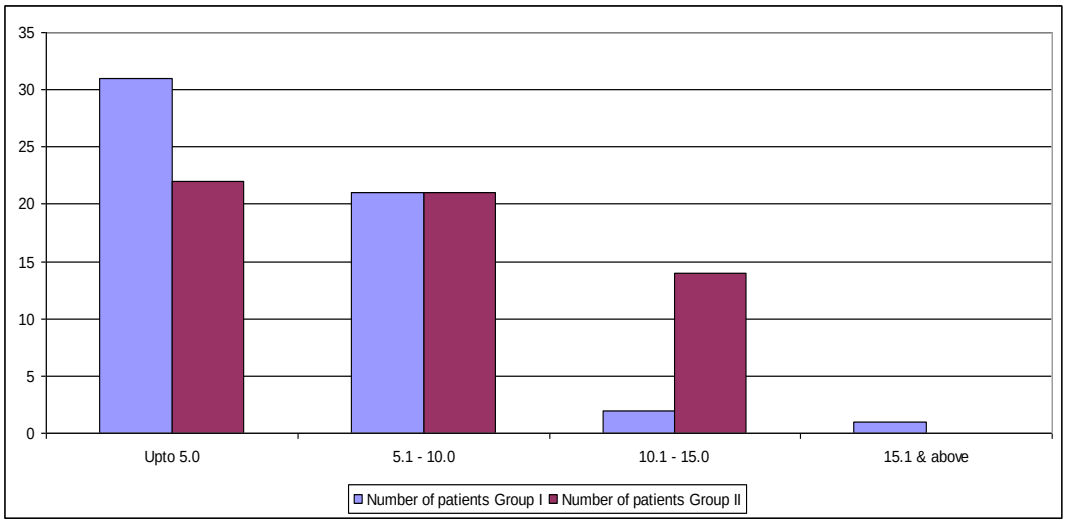
0' clock position	Number of patients		Total
	Group I	Group II	
I	1	0	1
II	7	4	11
III	15	5	20
IV	4	6	10
V	3	15	18
VI	10	8	18
VII	3	11	14
VIII	8	5	13
IX	1	2	3
X	2	0	2
XI	1	1	2
XII	0	0	0
Total	**55**	**57**	**112**



Analysis shows that the commonest 7, 8 and 5'o clock positions. Position of external opening are at 3, 5, 6

10. Incidence of Initial length of tract

Length (in cm)	Number of patients		Total
	Group I	Group II	
Upto 5.0	31	22	53
5.1 - 10.0	21	21	42
10.1 - 15.0	2	14	16
15.1 & above	1	0	1
Total	**55**	**57**	**112**

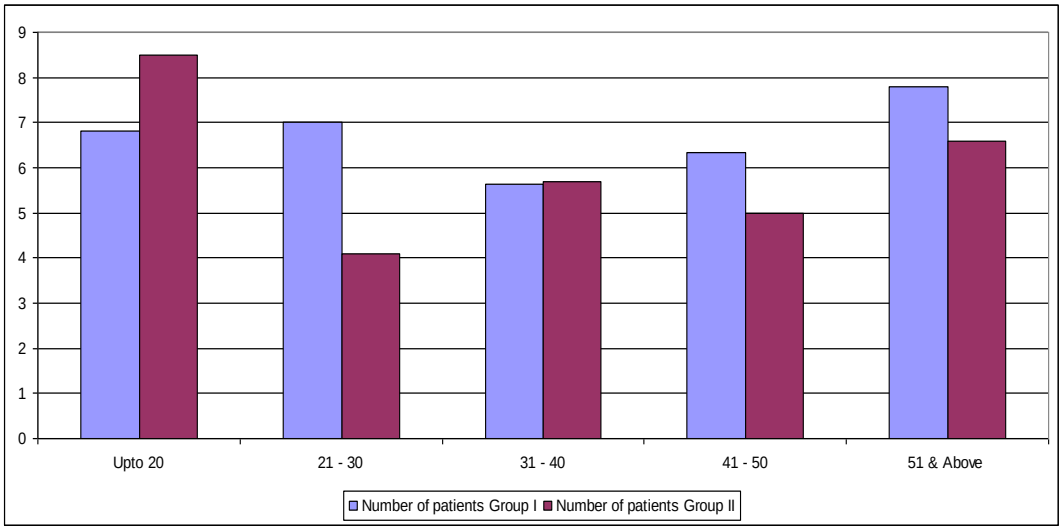


Analysis was made to find out the number of tracts in relation to their total length. The majority of the patients in total fall under the group of upto 5 cm. length of tract.

RESULTS

1. Unit cutting time in relation to age group

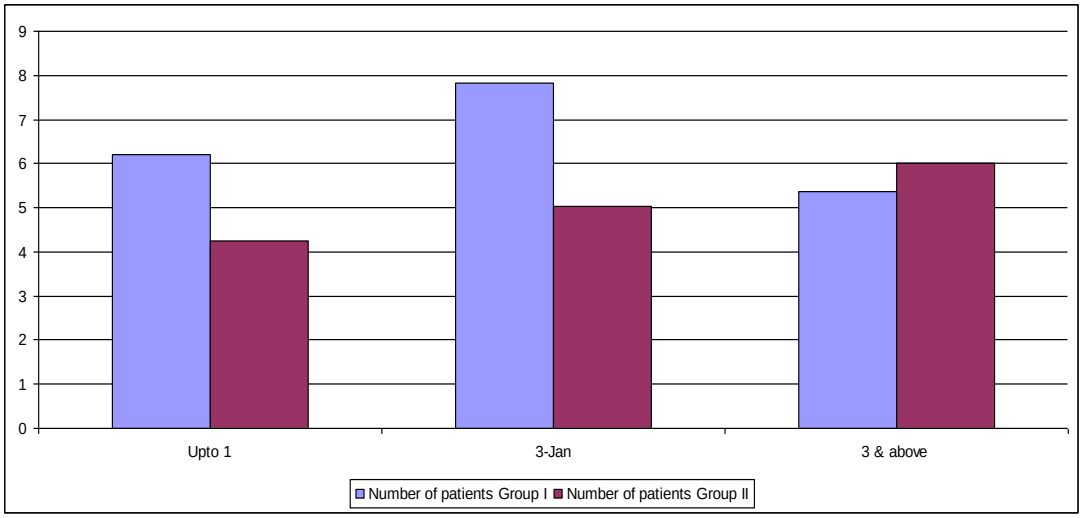
Age group (in years)	Number of patients	
	Group I	Group II
Upto 20	6.80	8.50
21 - 30	7.00	4.08
31 - 40	5.64	5.70
41 - 50	6.35	5.00
51 & Above	7.80	6.60



- The Minimum average UCT was 5.64 days/ cm in control group under age group of 31-40 years while minimum UCT was 4.08 days/cm in treated group under the age group of 21-30 years
- The Maximum average UCT was 7.8 days/ cm in control group under age group of above 50 years while it was 8.50 days/ cm in treated group under age group of up to 20 yrs.

2. Unit cutting time in relation to chronicity of the disease

Chronicity (in years)	Number of patients	
	Group I	Group II
Upto 1	6.20	4.26
1-3	7.83	5.03
3 & above	5.37	6.01

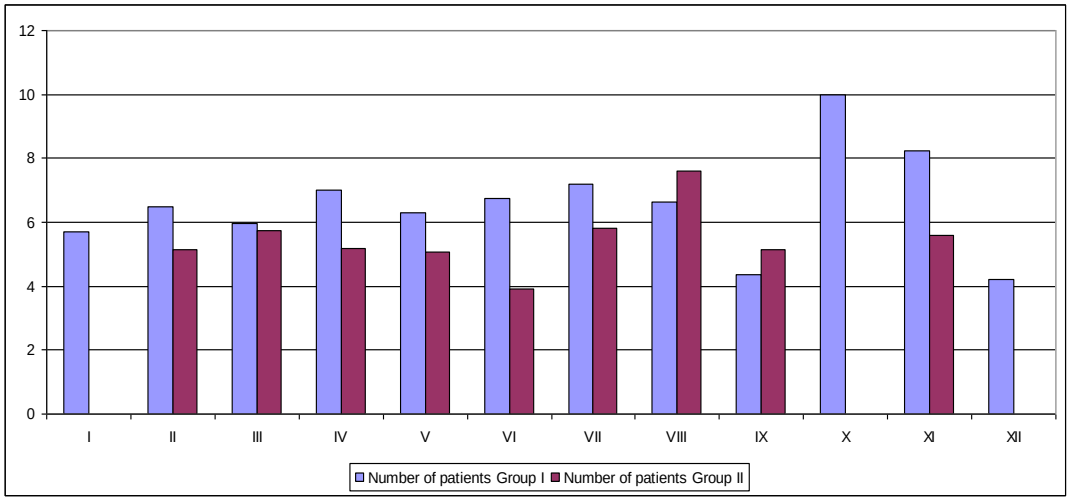


In control group the minimum average UCT was 5.37 days/cm under the duration of above 3 years of illness while it was maximum 7.83 days/cm. under the duration of 1-3 years in treated group the minimum average UCT was 4.26 days/cm in up to 1 year of chronicity while it was maximum 6.01 days/ cm in above 3 years of duration of illness.

3. Unit cutting time in relation to different 0' clock positions

O' clock position	Number of patients	
	Group I	Group II
I	5.70	0
II	6.50	5.14
III	5.97	5.74
IV	7.00	5.18

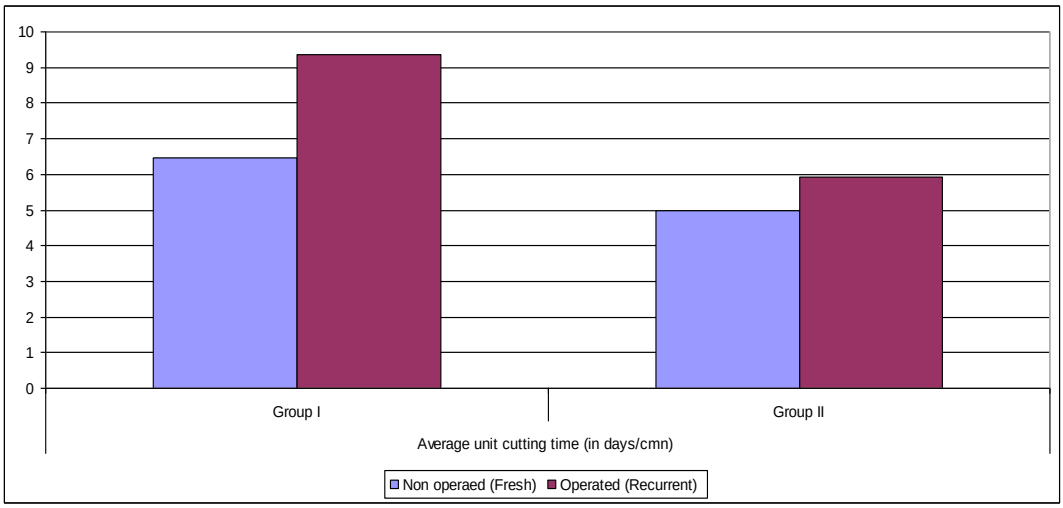
V	6.30	5.08
VI	6.75	3.90
VII	7.18	5.80
VIII	6.64	7.60
IX	4.35	5.15
X	10.00	0
XI	8.25	5.60
XII	4.20	0



The above analysis shows that the min. average UCT was 4.2 days/ cm at 12 O' clock position and the max. UCT was 10 days/ cm at 10 O' clock position in control group. In treated group it was min. (3.90 days/ cm) at 6 O' clock and was max. (7.60 days/ cm) at 8 O' clock positions.

4. Unit cutting time in previously operated and non-operated cases

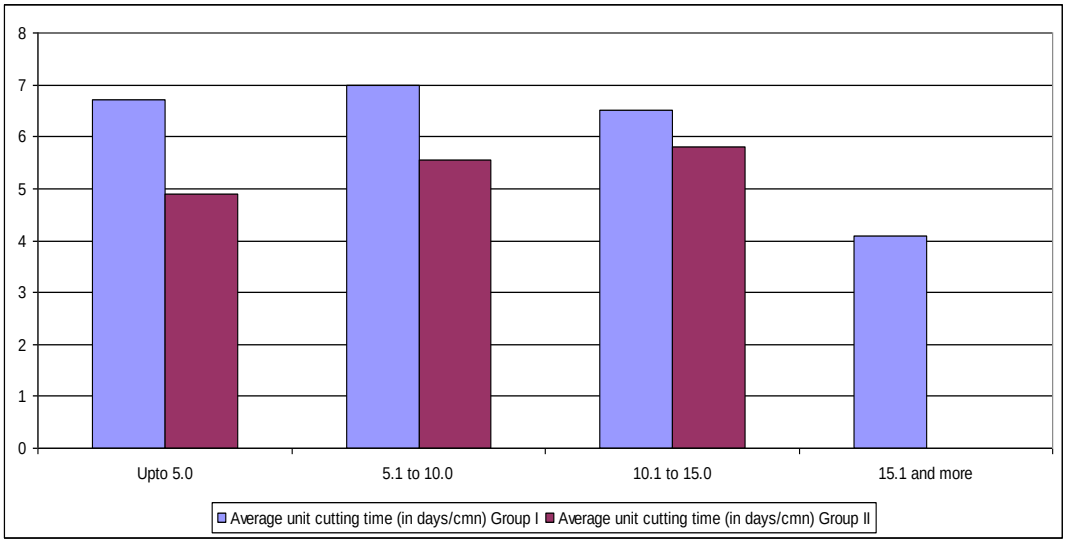
Type of case	**Average unit cutting time (in days/cmn)**	
	Group I	**Group II**
Non operaed (Fresh)	6.48	4.99
Operated (Recurrent)	9.37	5.93



Analysis shows that the UCT was more in previously operated cases than in fresh in both the groups.

5. Unit cutting time in relation to Initial length of tracts

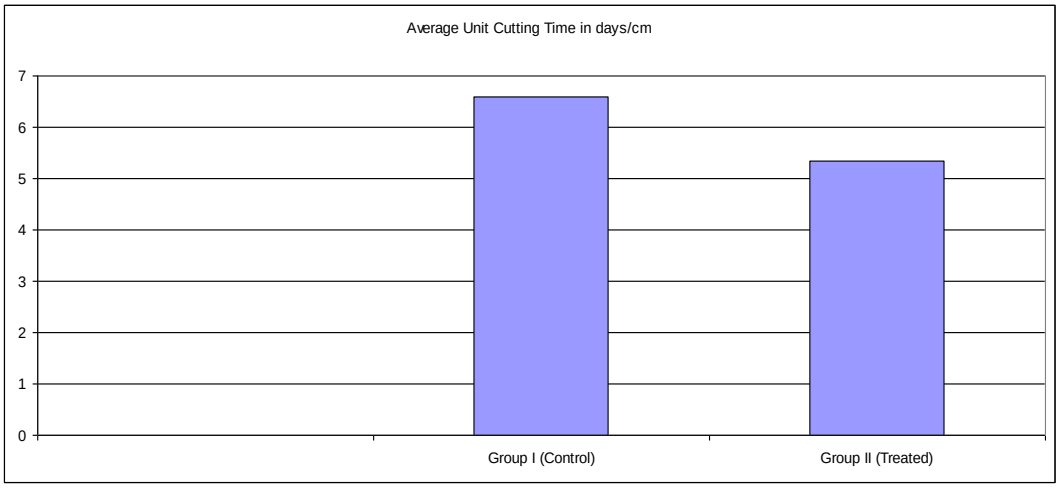
Initial length of tract in cm.	Average unit cutting time (in days/cmn)	
	Group I	Group II
Upto 5.0	6.71	4.89
5.1 to 10.0	6.98	5.54
10.1 to 15.0	6.52	5.80
15.1 and more	4.10	0



The above table shows that in control group, min. UCT was 4.1 days/ cm between 15.1 - 20.0 cm tract length and max. average UCT was 6.98 days/ cm between 5.1 to 10 cm of tract length. In treated group the average UCT was 4.89 days/ cm in upto 5 cm of tract length and it was max. 5.80 days/ cm between 10.1 to 15.0 cm tract length.

6. Comparative result of Average Unit Cutting Time

Group	Average Unit Cutting Time in days/cm
Group I (Control)	6.60
Group II (Treated)	5.33



After all, a comparative study was done to find out average unit cutting time in Gr.I (Control) and Gr.ll (Treated) and result shows that the average UCT was 5.33 days/cm. in treated group, which is much lesser comparison to that of control group (6.6 days/cm.)

CONCLUSION

1. The incidence of Fistula-in-ano is more common between 31-40 years of age group.
2. Males were more prone to this disease in comparison to females.
3. Maximum numbers of cases were reported having the chronicity of 1-2 years of duration.
4. In this study, number of patients of Pitta Prakriti was more in comparison to Vata and Kapha Parkriti.
5. Maximum patients were reported having the Parisravi type of Bhagandra in comparison to others.

6. Inpresent study the Bhagandara was classified according to Sushruta and no case was registered under Unmargi type of Bhagandara.
7. As per modem classification Low anal type of Fistula-in-ano were found maximum in number in comparison to sub mucus, sub cutaneous and high anal Fistula.
8. Fresh cases, Non-operated were more in number than previously operated cases.
9. Cases having single external opening were more than multiple openings.
10. Maximum numbers of fistulous openings were found at 3, 5, 6 and 7 O' clock positions.
11. Average UCT in relation to age group had shown the maximum 7.8 days/cm. in control group above the age of 50 years while in group-II it was maximum 8.50 days/cm. in up to 20 years of age group.
12. It was observed that the average UCT was less in treated group up to 1 year and 2-3 years of duration of illness, while it was maximum in control group in the same duration of illness.
13. The UCT was minimum 4.2 days/cm. at 12 O' clock in group-I while it was minimum 3.90 days/cm. at 6 O'clock in treated group.
14. The UCT was more in previously operated cases than in fresh in both the groups.
15. It was observed that lesser the length of the tract slower the cutting and longer the tract faster the culling in control group while it was contrary in treated group.
16. Comparison of average UCT in both groups had shown almost similar results with slight tendency towards better results by modified Ksharasutra. The UCT in Group I was 6.6 days/cm. while in Group I it was 5.33 days/cm.
17. Using modified Ksharasutra in comparison to standard Ksharasutra reduced the total duration of treatment.
18. Out of 50 cases treated with modified Ksharasutra no recurrence has been reported even alter a long-term follow up.
19. Thus, it is concluded that although the action of modified Ksharasutra appears to be slightly better than that of original Ksharasutra (Standard), but the difference is minimal and not highly significant.

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