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Research Article

A study on plication of piles

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ABSTRACT

Background: Haemorrhoids are specialized, highly vascularized 'cushions' forming discrete masses of thick sub-mucosa containing blood vessels, smooth muscles and elastic and connective tissues limited to the anal canal and perianal area. The cause of haemorrhoids remains unknown. Numerous factors contribute to haemorrhoidal diseases such as constipation, prolonged squatting, pregnancy, aging, hereditary, portal hypertension, abdominal tumor and defecation habits.
Methods: This prospective study was carried out in the department of surgery, GMCH, Udaipur, Rajasthan, India from June 2014 to December 2015 after taking the permission from institutional ethics committee. Patients from both sexes of various age groups having haemorrhoids and associated anorectal pathology such as fissure were included. Patients with prolapsed piles, thrombosed piles and piles secondary to anorectal tumor were excluded from the study. Preoperative Bisacodyl 2 tablets at night before operation and Sodium picosulphate enema was given early morning on the day of surgery to ensure a clear visualization of anal canal. Operative technique: With the patient in lithotomy position after appropriate anesthesia anal stretching was done and thereafter tissue forceps was applied to the skin tags corresponding to the three major piles. A Babcock forceps was then applied to the pile mass above the level of pectinate line. Then the held pile mass was transfixed and ligated with silk 1-0 atraumatic needle suture at the proximal end of the internal haemorrhoids in order to occlude the superior haemorrhoidal vessel as they enter the internal haemorrhoids. If there were any small secondary pile the same procedure would be done. A small piece of gauge soaked with 2% xylocaine jelly would be left in anus as dressing.
Results: Total 50 patients of piles were examined and most of the patients were between 31-50 years of age (60%) with males preponderance. All the patients in this study had bleeding per rectum as the main symptom. Among all patients 60% received some form of conservative treatment and partially relieved. Out of 50 patients, 38% had 1st degree piles, 58% had 2nd degree piles and rest had 3rd degree piles. In this study of plication of piles 94% of cases had no pain, 6% of cases who had pain were also suffering from fissure. The results of plication of piles are satisfactory and only 2% of the patients had pain for which long term analgesics were given.
Conclusions: The treatment of haemorrhoids has been widely discussed and various methods are being employed by majority of surgeons throughout the world. In the plication of piles one should appreciate the fulfilment of above mentioned requirements.

Keywords: Piles, Haemorrhoids, Plication of piles

INTRODUCTION

Haemorrhoids have been an affliction of mankind from the dawn of the history affecting young and old, rich and poor alike. The subject is as old as medical history and is among the first condition mentioned in the medical history as contributing to human discomfort. There is an interesting note in the history of haemorrhoids.

Historians say that a severe case of prolapsed haemorrhoids kept Napoleon off his horse at Waterloo, delaying the battle and lose him the war. Haemorrhoids have figured in another war, doctors have fought for years over exactly what they and how they are caused. Internal haemorrhoids (Greek: haima = blood, rhoos = flowing; synonym: piles, Latin: pila = a ball) are symptomatic anal cushions and characteristically lie in the 3, 7 and 11 o'clock positions (with the patient in the lithotomy position).The prevalence of haemorrhoids when patients are assessed proctoscopically far outweighs the prevalence of symptoms, and the term should only be used when patients have symptoms referable to them.[1,2]

It is difficult to obtain idea of incidence of haemorrhoids. Turell, stated that 70% population suffers from haemorrhoids and 40% needs surgical treatment. Over the age of 50 year 50% patients have some degree of haemorrhoidal problem. The incidence of haemorrhoids increases with age. However the disease is by no means confined to older individual and haemorrhoids are encountered in people of all ages including young children. Males seem to be affected 2-3 times as frequently as females. Thus in normal people it would be acceptable to say that everyone has piles at some stage. The cause of haemorrhoids remains unknown. Numerous factors contribute to haemorrhoidal diseases such as heredity, anatomical features, nutrition, occupation, climate, psychic factors, and senility, endocrine changes, irritation from drugs or food, infection, increased intra-abdominal pressure, constipation and prolonged squatting. Basic of all these factors is the engorgement and subsequent prolapse of the enlarged anal cushion.[3,4]

There are various classifications of haemorrhoids according to anatomical position and severity of disease and symptoms. In great majority of cases there are three main piles which occupy well-defined position. Two are present on the right side in anal canal and are termed as right anterior and right posterior and the third on the left side is the left lateral pile. Additional haemorrhoids may be present between these piles termed as secondary piles. Haemorrhoids may be also considered external or internal; the diagnosis is based on the history, physical examination and proctoscopy.

External haemorrhoids are covered with anoderm and are distal to the pectinate line; they may swell causing discomfort and difficult hygiene, but causes severe pain only if actually thrombosed. Internal haemorrhoids cause painless, bright red bleeding or prolapse associated with defecation. The treatment of haemorrhoids is as old as the age of man and many different treatments have been described, none of which is entirely satisfactory.

The treatment modalities are

(A) Non-operative or conservative management

- Improve defecation habits
- Local hygiene improvement
- High fibre diet
- Hot sitz bath and warm soaks
- Ice packs
- Topical agents

(B) Minor surgical procedure

- Sclerosant therapy
- Infra-red coagulation
- Rubber band ligation
- Plication
- Cryosurgery

(C) *Haemorrhoidectomy*

- Stapler assisted
- Surgical
- Laser

The treatment of haemorrhoids depends upon the severity of symptoms, skill and expertise of surgeon, availability of instrument and affordability of patient. The first and second degree haemorrhoids can be treated by conservative or minor surgical procedure whereas the third and fourth degree always requires surgical treatment like haemorrhoidectomy.

Plication of piles aims at answering a simple, safe but an effective method of surgical treatment of haemorrhoidal disease that suits first, second and third degree of symptomatic haemorrhoids; in addition to establish a non-expensive method.

METHODS

Patient population

50 Patients referred to the department of surgery, Geetanjali Medical College and Hospital, Udaipur, Rajasthan, India.

Inclusion criteria

Patients presenting with haemorrhoids and associated anorectal pathology such as fissure.

Exclusion criteria

Patients with prolapsed piles, thrombosed piles and piles secondary to anorectal tumor.

Preoperative preparation

Laxative (Bisacodyl 2 tablet) at night before operation. Sodium picosulphate enema was given early morning on the day of surgery to ensure a clear visualization of anal canal. Tetanus prophylaxis was given as a routine.

Operative techniques

With the patient in lithotomy position after appropriate anesthesia anal stretching was done and thereafter tissue forceps was applied to the skin tags corresponding to the three major piles. A Babcock forceps was then applied to the pile mass above the level of pectinate line.

Then the held pile mass was transfixed and ligated with silk 1-0 atraumatic needle suture at the proximal end of the internal haemorrhoids in order to occlude the superior haemorrhoidal vessel as they enter the internal haemorrhoids. Similar procedure was done to other two pile masses.

If there were any small secondary pile the same procedure would be done. A small piece of gauge soaked with 2% xylocaine jelly would be left in anus as dressing. All the patients were followed up for two months after the procedure.

RESULTS

Age incidence

Most of the patients were between 31-50 years of age (60%). Youngest patient in the series was 21 years old and the oldest was 72 years (Table 1).

Table 1: Age incidence.

Age (years)	No. of patients	Percentage
0-20	0	0
21-30	10	20
31-40	14	28
41-50	16	32
51-60	8	16
>60	2	4

Sex incidence

Males were predominantly affected as compared to females (Table 2).

Table 2: Sex incidence.

Sex	No. of patients	Percentage
Male	39	78
Female	11	22
Total	50	100

Symptoms

All the patients in this study had bleeding per rectum that was mild to moderate in severity, bright red in colour and appeared in drops or as stream after the act of defecation or during defecation. Constipation was the second most common symptom (Table 3).

Table 3: Symptoms.

Symptoms	No. of patients	Percentage
Bleeding per rectum	50	100
Prolapse	0	0
Painful Defecation	8	16
Discharge	13	26
Constipation	38	76
Cough	12	24

Duration of symptoms

54% of the patient had symptoms of duration of less than 6 months. Longest duration of symptoms in this series was 7 years while shortest duration was 15 days (Table 4).

Table 4: Duration of symptoms.

Duration of Symptoms	No. of patients	Percentage
< 1 Month	7	14
1-6 months	20	40
6 months-1 year	17	34
1-6 years	4	8
> 6 years	2	4

Previous treatment taken

60% patients received some form of conservative treatment in the form of ointments and laxatives and felt partially relieved.

These were the patients having symptoms of longer duration due to intermittent relief they got from conservative treatment (Table 5).

Table 5: Previous treatment taken.

Previous treatment	No. of patients	Percentage
Ointments/laxative	30	60
None	20	40
Total	50	100

Family history

In 7 patients, one or more relatives in their family had suffered from haemorrhoids (Table 6).

Table 6: Family history.

Family History	No. of patients	Percentage
Positive	7	14
Negative	43	86
Total	50	100

Number of primary haemorrhoids

Out of 50 patients, about 82% had all the three primary piles while in 18% patients two piles were present (Table 7).

Table 7: Number of primary haemorrhoids.

No. of haemorrhoids	No. of patients	Percentage
Three	41	82
Two	9	18
One	0	0

Position of haemorrhoids

Most common position of pile is 3 o'clock followed by 7 o'clock (Table 8).

Table 8: Position of haemorrhoids.

Position of haemorrhoids	No. of patients	Percentage
3'O Clock	50	100
7'O Clock	48	96
11'O Clock	43	86
Secondary	15	30

Degree of haemorrhoids

Out of 50 patients, 38% had 1st degree piles, 58% had 2nd degree piles and rest had 3rd degree piles (Table 9).

Table 9: Degree of haemorrhoids.

Degree of haemorrhoids	No. of patients	Percentage
I Degree	19	38
II Degree	29	58
III Degree	2	4

Additional findings

6% patients had fissure and 2% patients had fistula as an additional findings at anorectal junction (Table 10).

Table 10: Additional findings.

Additional Findings	No. of patients	Percentage
Fissure	3	6
Fistula	1	2

Postoperative complications

In this study of plication of piles 94% of cases had no pain, 6% of cases who had pain and were also suffering from fissure.These patients had pain during defecation which also continued afterwards requiring analgesics. The pain resolved with analgesic after a week (Table 11).

Table 11: Postoperative complications.

Postoperative Complications	No. of patients	Percentage
Slight discomfort	6	12
Pain	3	6
Insignificant bleeding PR	2	4
Prolapse	0	0
Retention of urine	0	0
Constipation	0	0
Discharge	2	4

Long term results

The results of plication of piles are satisfactory. Only 2% of the patients had pain for which long term analgesics were given (Table 12).

Table 12: Long term results.

Complains	Plication	
	No. of patients	Percentage
Pain	1	2
Re-bleeding	0	0
Constipation	0	0
Diarrhea	0	0

DISCUSSION

During This study on plication of piles consisting of 50 patients of haemorrhoids were treated by plication of piles during June 2015 to December 2015 has been evaluated on personal examination and questionnaire.

In the present series more than 90% of the patients were between 20-60 years of age and none below 20 years. Patients above 60 years of age were only 4%. Similar age incidence had been observed by Awojobi, Dowidar, Ezzeldeen.[5-7]

The haemorrhoidal disease is more common in males as reported by Vyas, Dowidar et al, Ezzeldeen. In the present study also there was male preponderance (M: F = 3.55:1).[6-8]

All the patients who were included in the present study complained mainly of bleeding per rectum. Similar high incidence of complaint of bleeding had also been observed by other workers Awojobi 100%, Patnaik 80%, Dowidar et al, 78% and Ezzeldeen 50%.[5-7,9]

Operative procedures

Plication of piles is simple and effective procedure in the treatment of haemorrhoids. The advantages are that it's simple and easy procedure, can be done as a day care surgery, no postoperative pain, no postoperative retention of urine, no significant bleeding during and after operation, early recovery, immediate control of

symptoms, no anal stenosis and ideal for patients having portal hypertension and bleeding disorders.

Simple and easy procedure

Plication of piles can be performed in 1st, 2nd and 3rd degree piles. Very short period of about 5-7 minutes is required to plicate piles once anesthesia is given. It does not require costly equipment's. Expenditure by the patient on the operation is almost negligible.

Postoperative pain

In 94% of patients in the present study there was no postoperative pain and 6% had pain but these patients had been treated simultaneously for fissure-in-ano. Dowidar et al, observed that 8.7% of patients had pain in placation of piles whereas, 54.55% had pain in excision and ligation of piles.[6]

Pre-operative and postoperative bleeding

The amount of blood loss during the procedure was almost nil except for mild bleeding at the needle prick site in one case (2%) having chronic liver disease with altered prothrombin time. There was no postoperative bleeding. Nag KH, observed postoperative bleeding in 4.3% cases. Similar finding as that of present study was observed by Awojobi, Patnaik and Ezzeldeen, in the study of plication.[5,7,9,10]

Postoperative retention of urine

No case of postoperative retention of urine was noted in our series because in this procedure there is no incision or excision of piles. So there is no disturbance of nerve supply to perineal area. Dowidar et al, reported 4% postoperative urinary retention in plication of piles and 23% in excision and ligation of piles. After plication of piles Ezzeldeen, reported 9.37% patients had urinary retention.[6,7]

Postoperative management

In this procedure no postoperative management was required. Once the effect of anesthesia was over they were allowed to take full diet. All patients were given lactulose 2 teaspoon in the night and first bowel action usually followed on the first postoperative day. There was no need of postoperative dressing, hot sitz bath, enema and digital dilatation. Oral antibiotics (ofloxacin and ornidazole) were given prophylactically for 5 days to prevent abscess. Routine analgesics were not prescribed. In Patnaik's, study 88% patients had painless first bowel action whereas, only 2% patients who had undertaken classical hemorrhoidectomy. Dowidar et al observed first bowel action in plication of piles on first postoperative day whereas on 2nd postoperative day in excision and ligation of piles in most of the patients.[6,9]

Early recovery

The procedure is performed as a day-care procedure. After plication of piles patients were allowed to go home on the same day and were allowed to join office work from next day. But due to (inconvenience) poor transport system many patients had gone home the next day. In Farag's, study on plication of piles, he observed that the mean stay in the hospital was 3.6 days against 7.2 days who had undergone classical haemorrhoidectomy. In Patnaik's, study all patients were allowed to go home on the same day and time off work was 1 day.[9,11]

Follow up

Our cases have been followed up for 2 months in the present study. The results were satisfactory. No long term complication/ recurrence were noted. In Farag's, study and Dowidar et al, study on plication of piles no long term complication was observed for a year. Patnaik, in his study on plicaton of piles had bleeding in 0.5% patient on long-term follow-up for a year whereas; in haemorhoidectomy it was in 33% of patients.[6,9,11]

CONCLUSION

The treatment of haemorrhoids has been widely discussed in the various literatures. The various methods are being employed by majority of surgeons throughout the world. However, optimal choice of surgical method for treating such a wide disease require that the approach should be so simple so as to suit caliber of all surgeons with varying experience and be so convenient so as to be readily acceptable to all patients and yet be effective in a large number of patients and should be cost effective also.

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