



Research Article

A Study on Plication of Hemorrhoids without Intra-anal Packing

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ABSTRACT

Background: Hemorrhoids are one of the oldest disease known to mankind. Hemorrhoids surgeries are one of commonest surgeries being performed in general surgery operation theatres. There are multiple surgical treatment like conventional hemorrhoidectomy, plication of piles, MIPH, DGHAL are available. Various modifications are being done day by day. For an ideal procedure it should be cheap, cost-effective and with minimal hospital stay with minimal complications.

Introduction

Haemorrhoids are common clinical condition affecting half of the population. It is estimated that 58% of the people aged over 40yrs have the disease in the USA. About one third of the patients present to surgeon for treatment¹. Hemorrhoids can occur at any age and it affects both male and female. The Indian sushruta samhita an ancient Sanskrit text describes treatment procedures comparable to those in the Hippocratic treatise.² During 19th century another mode of treatment for hemorrhoids was anal stretching became popular. In the USA Mitchell first used carbolic acid for injecting hemorrhoids. In 1871 Fridrick Salmon expanded the surgical procedure for hemorrhoids a combination of excision and ligation^{2,3}. Internal hemorrhoids (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). Proposed etiological factors include constipation, prolong straining, pregnancy, hereditary derangement of internal anal sphincter, weak blood vessels and absent valve at portal vein. The erect posture of humans is also predisposing factor. Despite several studies the pathogenesis of hemorrhoids still remain unclear⁴.

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^{5,6}.

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 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.

The treatment of hemorrhoids is as old as the age of man and many different treatments have been described, none of which is entirely satisfactory. Prevention is the best treatment for hemorrhoids disease once established tends to worse over time. Medical application of cream and suppositories can relieve pain but rarely provide long term benefits⁷. A high fiber diet and laxative prevent constipation and worsening of the disease without achieving cure. The mainstay of treatment is therefore surgical but this is usually associated with significant post operative complications⁸. Treatment option contains diet modification, non operative (sclerotherapy, infrared coagulation rubber band ligation) and operative. Most commonly operative methods are conventional hemorrhoidectomy, stapled hemorrhoidectomy, DGHAL⁹. Open hemorrhoidectomy most commonly used technique and widely considered to be the most effective surgical technique for treating hemorrhoids⁷. Plication of hemorrhoids by absorbable sutures by continuous manner gives better results in terms of postoperative pain and bleeding than stapled hemorrhoidectomy and Doppler guided hemorrhoid ligation^{10,11}. Pile suture method by use of interrupted sutures without excision may cause recurrence of the disease¹².

DGHAL has been introduced in a surgical practice to cut off the blood supply to hemorrhoids without need for hemorrhoids removal. However recurrence rate is up to 60% in grade 4 hemorrhoids. So DGHAL is considered the effective operation only for 2/3 grade hemorrhoids with one year recurrence rate of 10%¹³.

Stapled hemorrhoidectomy is an alternative technique for advanced internal hemorrhoids. It is relatively expensive procedure which may cause serious post operative complications such as rectal perforations or strictures as well as severe chronic anal pain so it should be reserved for patient with circumferential prolapse hemorrhoids and it must be performed by a trained surgeon¹⁴.

The mainstay of treatment is there for surgical but unfortunately operative hemorrhoidectomy is usually associated with significant postoperative complications⁹.

This therefore stimulate continuing effort to develop new techniques with less painful postoperative period, less use of analgesics, less complications, faster recovery and cost effective procedures.

Methods

Patient population

A retrospective study was conducted on 50 patients referred to the department of Surgery, Govt. Medical College and Hospital, Kota, Rajasthan, India. Study conducted between Jan 2016 to Dec. 2016 with at least six months follow up.

Inclusion criteria

Patients with all age groups & either sex with hemorrhoids (2nd to 4th grade) were included in the study.

Exclusion criteria

Patients with thrombosed piles and piles secondary to portal hypertension were excluded from the study.

Preoperative preparation

Patients were allowed liquid diet day before surgery. PC enema was given at night before surgery and 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 (tilt around 25 to 30 degree Trendelenburg position) after saddle anesthesia anal stretching sequestration of pile mass by gauze piece was done and thereafter tissue forceps was applied to the skin tags corresponding to the three major piles.

Pile mass was held by plane forceps just distal to dentate line and plicated in continuous method with vicryl 2-0 RB needle suture in from distal to proximal as per requirement in order to occlude the superior haemorrhoidal vessel as they enter the internal haemorrhoids. Similar procedure was done to other two pile masses.

No intra-anal packing was done after the plication, only extra-anal dressing and T bandaging was done. All the patients were followed up for six months after the procedure.

Results

Age Incidence

Most of the patients were between 21-50 years of age (76%). Youngest patient in the series was 13 years old and the oldest was 72 years (Table 1).

Table 1: Age incidence

| Age | No. of patients | percentage |
|-------|-----------------|------------|
| 0-10 | 0 | 0 |
| 11-20 | 1 | 2 |
| 21-30 | 13 | 26 |
| 31-40 | 14 | 28 |
| 41-50 | 11 | 22 |
| 51-60 | 6 | 12 |
| 61-70 | 4 | 8 |
| >70 | 1 | 2 |

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

Table 2: Sex incidence

| Sex | No. of patients | percentage |
|--------|-----------------|------------|
| Male | 40 | 80 |
| Female | 10 | 20 |
| 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 | Male | Female |
|---------------------|------|--------|
| Bleeding per rectum | 40 | 10 |
| Pain | 9 | 4 |
| Prolapsed | 4 | 0 |

Duration of hospital stay

56% of the patient had hospital stay for less than 24 hrs. 28% patients had hospital stay of 24 to 48 hrs and 16% patients had stayed more than 48 hrs.

Table 4: Duration of hospital stay

| Duration | No. of patients | percentage |
|-----------|-----------------|------------|
| 0-24 | 28 | 56 |
| 24-48 hrs | 14 | 28 |
| >48hrs | 8 | 16 |

Degree of hemorrhoids

Out of 50 patients, 24% had 2st degree piles, 68% had 3rd degree piles and rest had 4rd degree piles (Table 5).

Table 5: Degree of hemorrhoids

| Degree of hemorrhoids | Male | Female |
|-----------------------|------|--------|
| II degree | 10 | 2 |
| III degree | 26 | 8 |
| IV degree | 4 | 0 |

Postoperative complications

In this study of plication of piles 4% case complain of soakage who were managed by packing and hemostatics and discharged safely after 48 hrs. no patient complain severe pain post operatively only 3 patient (6%) complain of slight agony due to retention of urine due to associated lower urinary tract obstruction for which catheterization was done. oedema was developed by 5 cases. they were managed by hot sits bath antibiotics and antiinflammatori drugs and discharged safely. 8 cases presented with delayed hemorrhage in 2nd week after discharge which were managed by hemostatics, ointments and stool softeners. No patient developed anal strictures or recurrence in follow up of 6 month duration. (Table 6).

| Post operative complication | No of patients | percentage |
|----------------------------------|----------------|------------|
| Early haemorrhage <48 hours | 2 | 4 |
| Delayed haemorrhage 16 7-14 days | 8 | 16 |
| Urinary retention | 3 | 6 |
| Oedema | 5 | 10 |
| infection | 3 | 6 |

Satisfaction score

72% patients were highly satisfied in follow up. 18% were less satisfied and without any post-operative complain. Only 10% patients were not satisfied after surgery because of minor complain of

oedema and itching who were well counselled for that advised lubricants stool softeners.

Discussion

During this study on plication of piles without intraanal packing of 50 patients were treated by plication of piles during Jan 2016 to Dec. 2016 at medical college Kota and followed up for 6 months. In the present series more than 90% of the patients were between 10-70 years of age and none below 10 years. Patients above 70 years of age were only 4%. These demographic picture of patient also simulates with the studies reported in the literature. The haemorrhoidal disease is more common in males. In the present study also there was male preponderance (M: F = 4:1).¹⁵

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 Patnaik 80%, Dowidar et al, 78% and Ezzeldeen 50%^{16,17,18}.

Operative procedures

Plication of piles without intraanal packing 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. There is no postoperative agony because of absence of intraanal packing (only extra anal dressing with T bandaging) and minimum requirement of analgesics and no postoperative retention of urine. There is hardly requirements of catheterization with comparison to plication with intraanal packing.

Simple and easy procedure

Plication of piles can be performed in, 2nd 3rd 4th degree piles. Even in the prolapsed piles (IV Degree) the need for hemorrhoidectomy can be obviated with better results by the above said procedure. Very short operative period of about 10 to 15 minutes is required to plicate piles once anesthesia is given. It is cost effective procedure too.

Postoperative pain

In almost all patients in the present study there was no postoperative pain. However few of them had pain since these patients had been treated simultaneously for removal of skin tags which are distal to dentate line (a pain sensitive area). Dowidar et al, observed that 8.7% of patients had pain in plication of piles whereas, 54.55% had pain in excision and ligation of piles.¹⁷

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. There was postoperative bleeding in only 2 cases (4%) which was managed by external packing and hemostatics. 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^{16,17,18,19}.

Postoperative retention of urine

No case of postoperative retention of urine was noted in our series because in this procedure there is no intraanal packing & minimal pain. So there is no disturbance of nerve supply to perianal area. In 3 cases there was requirements of catheterization because of associated lower urinary tract obstruction of old age. 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.^{16,17}

Postoperative Management

In this procedure minimum postoperative management was required. Once the effect of anesthesia was over they were allowed to take liquid diet on same day and full normal diet after next day. 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 and digital dilatation. Oral antibiotics (ofloxacin and ornidazole) were given prophylactically for 5 days to prevent abscess with lubricants and stool softeners. Routine analgesics were prescribed for 5

days. 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.^{17,18}

Early recovery

After plication of piles 56% patients were allowed to go home within 24 hrs. 28% discharged from 24 hrs to 48 hrs. Only 16 % cases kept in ward for more than 48hrs. 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.^{12,18}

Follow up

Our cases have been followed up for 6 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 plication of piles had bleeding in 0.5% patient on longterm follow-up for a year whereas; in haemorrhoidectomy it was in 33% of patients.^{12,17,18,20.}

Conclusion

There are multiple surgical options for hemorrhoid. With comparison to other procedures our procedure plication of hemorrhoids without intraanal packing (only extra anal dressing with T bandaging) is a simple procedure, cost effective, less postoperative discomfort, less chance of catheterization and their consequences with minimal postoperative complications and recurrence rate.

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