



“ANAL STRETCHING AND LIGATION TECHNIQUE FOR TREATMENT OF HEMORRHOIDS.”

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ABSTRACT

Introduction– Open hemorrhoidectomy described by Milligan and Morgan is one of the common procedures done for hemorrhoids till date. Now a day’s rubber band ligations, radiofrequency ablation with plication, stapled hemorrhoidectomy are also being used. But these methods are not available in all centers. Some are costly too. There is also another method known as anal stretching and ligation originally described by Farag in 1978 is a simple method used in our Medical institute with some modification. Methods – The study of 250 patients with hemorrhoids was done in R. D. Gardi medical college from March 2008 to September 2011. The patients were randomly divided into two groups- group A for patients undergoing anal stretching and ligation and group B for patients undergoing open hemorrhoidectomy [125 patients in each group]. Results – The time for first bowel clearance was less in group A [1 to 1.5 days] as compare to group B [2 to 2.5 days]. The post operative stay was shorter in group A [2-4 days] than group B [3-5 days]. In “group A”, the postoperative complications like incontinence, anal stenosis and anal fissures were less than “group B”. Conclusion– The procedures like open hemorrhoidectomy are more destructive and there is again a need of much easier procedures like Anal stretching and ligation of hemorrhoids.

Keywords : Hemorrhoidectomy, Incontinence, Fissure.



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INTRODUCTION

Hemorrhoids are one of the common diseases of anal region (1). Many people of both sexes suffer from hemorrhoids and even more perhaps have hemorrhoids in a symptomless form. 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. Ligation excision hemorrhoidectomy, as described by Milligan and Morgan (2) is considered as the gold standard for treatment of hemorrhoids. However, hemorrhoidectomy, although producing excellent results may be complicated by pain, urinary retention, anal stenosis, hemorrhage, incontinence, skin tags, fissures and anal abscesses (3,4,5). The surgical technique for hemorrhoidectomy has been modified in an attempt to lessen postoperative complications and allow earlier patient discharge. The widely used operation of ligation excision involves excision of the sensitive anal mucosa which leads to large areas of denuded anal wall causing spasm, post operative pain and painful bowel action. Because of this effect and of difficulty in re-establishing a normal bowel habit, the ligation excision operation has largely remained an inpatient procedure despite the popularity of day surgery (13) with other procedures. Park in 1956 devised the submucosal reconstructive hemorrhoidectomy (Parks operation) which had its own complications (6,7). This was followed by the development of numerous nonsurgical hemorrhoid therapies such as band ligation (9), injection sclerotherapy, radiofrequency ablation and staplers (10,11), however, none has proven to be consistently more efficient than surgical management. Also these methods are costly and not available in all centers. In 1978 Farag (8) introduced his pile suture technique for the treatment of hemorrhoids which he reported to give better clinical impact than the conventional ligation and excision technique. However, the functional outcome of this technique in

comparison to the standard ligation excision has not yet been established. This study aims at answering this issue by comparing the efficacy and effects of the anal stretching and ligation technique with that of the conventional ligation excision haemorrhoidectomy.

MATERIALS AND METHODS

Patients referred to the Department of Surgery, R. D Gardi medical college for surgical treatment of minor anal conditions formed the study population. Study was done from 2008 to 2011 in 250 patients with consent. That included the patients of hemorrhoids only and the patients with associated diseases like fissures, fistulas, benign or malignant masses were excluded. A detailed clinical history was obtained from each patient with special emphasis on anorectal complaints such as pain, bleeding per rectum, incontinence (minor and major), anal swelling, discomfort, pruritis and discharge. Anorectal examination was done for grading the haemorrhoids and exclusion of sentinel pile, fissure and fistula in ano and other anorectal pathologies e.g. benign or malignant masses or polyps. Then proctoscopy was done to inspect the anal canal and lower rectum for the presence of internal piles and to exclude presence of ulcers, fissures, etc. Then the patients were divided into group A and group B. Group A for those in which Anal stretching and ligation was done and group B for those in which Ligation and excision hemorrhoidectomy [Milligan & Morgan] was done. Each group contained 125 patients.

Operative technique

Anal stretching and ligation of hemorrhoids:

With the patient in the lithotomy position the dilatation of anal canal was done by stretching. The skin tags corresponding to the 3 major piles were held by tissue forceps. A curved

hemostat was applied to the right posterior hemorrhoid above the level of the pectinate line. Number 0 Vicryl suture was passed through the mucous membrane at the proximal end of the internal hemorrhoid in order to occlude the superior hemorrhoidal vessels as they enter the internal hemorrhoid, transfixed and ligated. The second suture was introduced into the distal end of the internal hemorrhoid above the level of the pectinate line, transfixed and ligated, thus interrupting the connection between the internal and external hemorrhoidal plexuses. A third suture was placed between the previous two. The right anterior and left lateral hemorrhoids were then ligated in the same manner.

Hemorrhoidectomy [Milligan and Morgan]

This is done by the conventional ligation and excision technique.

Post-operative observation

Postoperatively patients were assessed for postoperative pain, urinary retention, and time taken for first bowel clearance, bleeding, length of hospital stay and recorded.

Follow-up

After three months patients were interviewed for anal incontinence and recurrence of symptoms and examined for presence of skin tags and anal stenosis.

RESULTS

The clinical features of the patients in the group A and group B are shown in Table 1 and Table 2.

Table No. 01
Patient Characteristics

| Clinical presentation | Group A [n-125] | | Group B [n-125] | |
|------------------------------------|-----------------|------------|-----------------|------------|
| | Patients | Percentage | Patients | Percentage |
| Bleeding per rectum | 105 | 84% | 90 | 72% |
| Constipation | 125 | 100% | 125 | 100% |
| Prolapsed piles | 12 | 9.6% | 18 | 14.4% |
| Itching and anal Discomfort | 20 | 16% | 15 | 12% |
| Feeling of insufficient evacuation | 40 | 32% | 45 | 36% |

Table No. 02
Grades of hemorrhoids in patients

| Type | Group A [n-125] | | Group B [n-125] | |
|---------|-----------------|------------|-----------------|------------|
| | Patients | Percentage | Patients | Percentage |
| Grade 1 | 00 | 00 % | 00 | 00 % |
| Grade 2 | 43 | 34.4 % | 40 | 32 % |
| Grade 3 | 70 | 56% | 67 | 53.6 % |
| Grade 4 | 12 | 9.6% | 18 | 14.4% |

The chi square test was applied to the immediate postoperative complication data in which the null hypothesis was that the complications are independent of surgical techniques. In the test it was found that $X^2_{cal} > X^2_{tab}$ at 5% level of significance so we rejected the hypothesis and concluded that

complications were depended upon surgical methods. The immediate postoperative complications were less in group A patients (Table -3).

Table No. 03
Immediate post operative complications

| Complications | Group A [n-125] | | Group B [n-125] | |
|---|-----------------|------------|-----------------|------------|
| | Patients | Percentage | Patients | Percentage |
| Severe pain requiring medication | 18 | 14.4 % | 66 | 52.8 % |
| Bleeding[minor] | 12 | 9.6% | 18 | 14.4 % |
| Urinary retention | 14 | 11.2 % | 20 | 16 % |
| Time taken for first bowel clearance [days] | 1-1.5 | NA | 02 | NA |

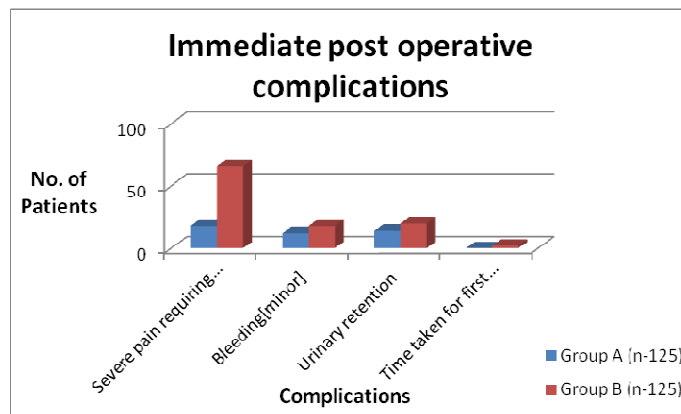
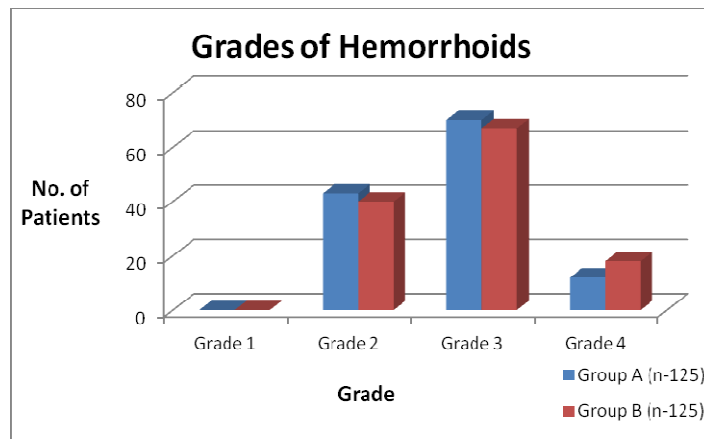
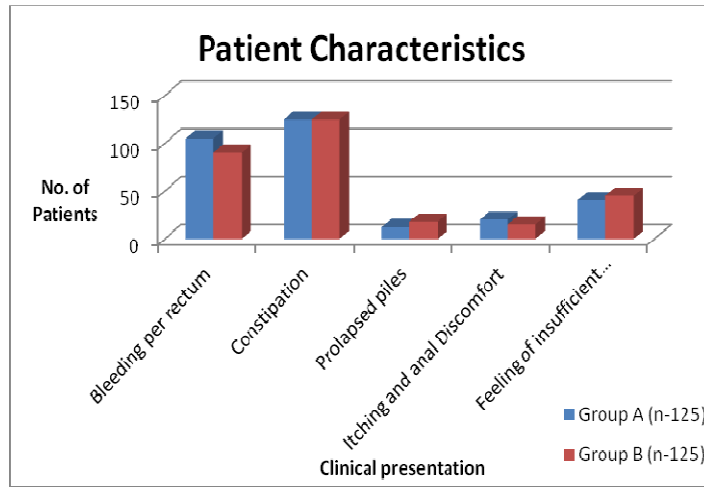
The hospital stay was shorter in the group A [between 2-4 days] as compared to group B [between 3-5 days] as shown in Table 4. Clinical follow up showed that fourteen patients [11.2%] in the group B suffered from incontinence which settled up to 3 months. Eight patients [6.4%] in the group A suffered from incontinence. Anal stenosis was found in six patients [4.8%] of group B after 3 months, but only two patients [1.6%] in group A while anal fissure was not found in group A (Table 5).

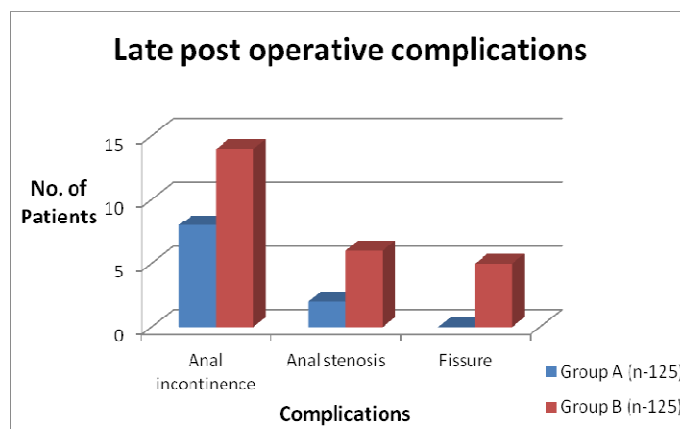
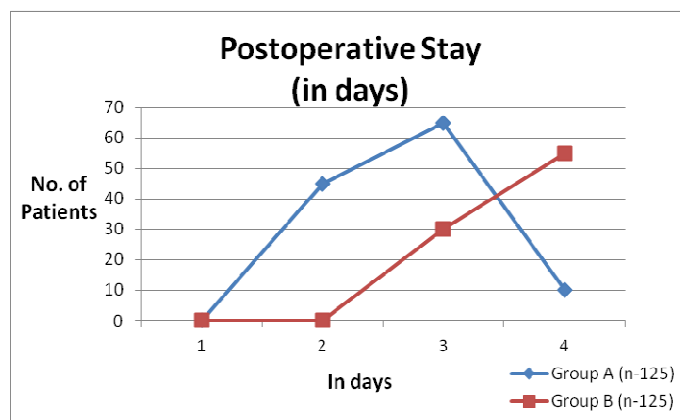
Table No. 04
Post operative hospital stay

| Postoperative Stay (in days) | Group A [n-125] | Group B [n-125] |
|------------------------------|-----------------|-----------------|
| 1 | 00 | 00 |
| 2 | 45 | 00 |
| 3 | 65 | 30 |
| 4 | 10 | 55 |
| 5 | 05 | 40 |

Table No. 05
Late post operative complications

| Complications | Group A [n-125] | | Group B [n-125] | |
|-------------------|-----------------|------------|-----------------|------------|
| | Patients | Percentage | Patients | Percentage |
| Anal incontinence | 8 | 6.4 % | 14 | 11.2 % |
| Anal stenosis | 2 | 1.6 % | 6 | 4.8 % |
| Fissure | 00 | 00 % | 5 | 04 % |





DISCUSSION

This study has clearly shown that ligation excision not only removes the mass of veins and overlying mucosa, but also a component of the external anal sphincter, most probably the subcutaneous fibers but it does not happens among the patients undergoing anal stretching and ligation. Clinical implications of the destructive nature of open [excision] hemorrhoidectomy (3,4,5) in comparison to anal stretching and ligation, are evident in the postoperative period. Patients, who have undergone hemorrhoidectomy, significantly suffered from more pain, required more narcotic analgesia, required more time to open their bowels and had a longer hospital stay. These findings are also supported by the study of Giuseppe (5). The other operations like Parks, have similar complications as stated by Rosa G (7) in his 20 year study of this operation. These findings can not be

considered minor as they present a considerable morbidity to the patients. These findings are not unique to our study or technique of hemorrhoidectomy as they have been previously reported from expert centers in some studies where minor problems with anal control have affected a quarter of the patients after discharge sustained in a percentage of patients in the postoperative period in the form of soiling and inability to control liquid stools from hospital. Not to mention, that the stormy postoperative period associated with ligation excision is avoidable when other less destructive and as efficient procedures such as anal stretching and ligation are offered to patients with hemorrhoidal disease. The anal stretching and ligation technique leaves the external sphincter intact. The anal stretching and ligation which is based on pile suture technique which was first introduced by Farag (8) offers an attractive alternative to pile ligation procedures which are currently considered by many authorities worldwide to

be the preferred method in the management of patients with hemorrhoidal disease. It is safe as there is no stripping or excision of the mucosa and sphincters, not to mention, that it is simple, easy to learn, cheap and does not require any special instruments. Newer methods are also not free of complications. Kombozozos V.A. (9) in his study of 500 cases of rubber band ligation of hemorrhoids had shown 94 patients (20%) with complications. In the study of Gupta (12), there were many late complications of use of radiofrequency ablation with placation in treatment of hemorrhoids. The

stapled hemorrhoidectomy also have many complications as stated by Ravo B (11) In view of the results of this study we would like to draw the attention of the destructive nature of the ligation excision operation and non availability & high cost of new procedures, we recommend the use of less traumatic operations such as anal stretching and ligation in the management of patients with hemorrhoidal disease and strongly recommend the inclusion of this technique in the training programmes of students of surgery in our institute.

CONCLUSION

Anal stretching and ligation is recommended here as it is less traumatic and less complications.as compared to hemorrhoidectomy.

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REFERENCES

- 1). Goligher JC. Haemorrhoids or piles. In: Goligher JC (ed.). Surgery of the Anus, Rectum and Colon, 4th Ed. London: Bailliere Tindall and Cox, 1981; 93-135.
- 2). Milligan ETC, Morgan CN, Jones LE, Officer R. Surgical anatomy of the anal canal, and operative treatment of haemorrhoids. Lancet. 1937; 2: 1119-24.
- 3). Holzhiemer R.G. Hemorrhoidectomy: Indications and risks .Eur. J. Med Res.2004Jan 26;9(1) :18-36.
- 4). di Miguel M. ,Oteiza F.,Ciga M.A.,Ortiz N: The surgical treatment of hemorrhoids. Cir Esp 2005 Dec; 78 suppl.3:15-23
- 5). Giuseppe Brisinda, IgnazioMassimo, Civello, Giorgio Mana.:Hemorrhoidectomy :Painful choice. Lancet Vol. 355, issue 9222,page 2253,24 June 2000.5-8.
- 6). Parks AG. The surgical treatment of haemorrhoids. Br J Surg. 1956; 43: 337-51.
- 7). Rosa G, Lolli P., Picinelli D.,Vicenzi L., Bullarin A. :Submucosal reconstructive hemorrhoidectomy (Parks operation) :20 years experience: Tech Coloproctol 2005 Dec;9(3) 209-14.
- 8). Farag A. Pile suture: a new technique for the treatment of haemorrhoids. Br J Surg. 1978; 65: 293-5.
- 9). Kombozozos V. A., Skrekas G.J., Pissiotics C.A.:Rubber band ligation of symptomatic hemorrhoids: results of 500 cases. Dig. Surg;17:71-76.
- 10). Altomare DF, Rinaldi M, Sallustio PL, De Fazio M, Memeo V. Long-term effects of stapled haemorrhoidectomy on internal anal function and sensitivity. Br J Surg. 2001;88:1487-91.

- 11) Ravo B., Amato A., Bianco V .Bocassanta P., Bottani C., Carriero A ; Complications after Stapled Hemorrhoidectomy ,can they be prevented; Tech Coloproctol 2002 sept;6(2): 83-88.
- 12) Gupta P J ;Comparative study between radiofrequency ablation with placation and Miligan & Morgan Hemorrhoidectomy for grade 3 Hemorrhoids.;Tech Coloproctol 2004 Nov, 8(3)163-8.
- 13) Hunt, Luck AJ, Rudkin and Hewett PJ. Day-case haemorrhoidectomy. Br J Surg. 1999; 86: 255-8.