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Original Research Article

Single sitting multimodality management of hemorrhoid

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ABSTRACT

Background: It is usual to face clinical complexity in piles patients. They usually present with variable number of pile masses and in different grades of progression. This led to the idea of offering concomitant single stage management in our hemorrhoid patients matching to our criteria. We conducted hospital based descriptive study among the patients coming to my clinical practice falling in grade-1-3.
Methods: All the patients falling in grade-1-3 and matching to our criteria were included. The study was conducted from January 2012 to December 2020. Place of study was basically at two centres: Karamdeep medical centre, Kanpur and Mayo health care, Mohali. Total number of patients were 581. Patients having grade-4 piles and with local co-morbidities were excluded from the study. Modalities of treatment used were sclerotherapy, band ligation and hemorrhoidectomy.
Results: Patients managed were divided into four groups – group 1 included patients with piles in grade-1; group-2 included patients having piles in grade-1 and 2; group-3 included patients having piles in grade-1 and 3; and group-4 included patients having piles in grade-1, 2 and 3. Total 952 pile masses were treated in 581 patients. Sclerotherapy was required in 732 (77%) masses, banding in 99 (10.3%) masses and surgery in 122 (12.7%) masses.
Conclusions: Concomitant treatment policy proved to be comprehensive way to tackle pile patients of grade-1-3. Mixed and matched method using surgical and non-surgical modalities in a single sitting proved to be beneficial. 86.4% cases were cured this way. Cost of the treatment was economical with lesser complications including local mutilation and better quality of life.

Keywords: Hemorrhoid management, Injection sclerotherapy, Rubber band ligation, Hemorrhoidectomy, Grading in piles

INTRODUCTION

Piles are dilated sinusoidal masses in the anorectal area, benign in nature. Initial vascular congestion develops in primary vascular sites at 3, 7, 11 o'clock positions. Persistence of causative factors leads to gradual increase in the size of vascular cushions leading to prolapsing mass. Destruction of supporting connective tissue is the widely accepted theory behind the progression. Grading of pile masses is done on the basis of protrusion and reducibility. Presence of external piles are not graded yet its presence is important in deciding treatment policy in our study.[1,3]

We can find pile masses in an individual patient with variable grades. That is why we decided to use multimodality treatment in our study. This was found to be a practical approach to the problem. Results were encouraging and satisfying with minimal complications resulting in better quality of life. We had different non-surgical methods to be used, like injection sclerotherapy, rubber band ligation (RBL), Infrared coagulation, laser photocoagulation and cryotherapy, keeping in view the different aspects like acceptability, rate of complications, safety and cost factors, we finally selected selerotherapy, RBL and hemorrhoidectomy in our study.[1,2]

Table 1: Grading based on prolapse and reducibility.

Grades	Vascular bulging	Prolapsing mass	Spontaneous reduction	Digital reduction	Remain outside
Grade 1	+ve	-ve	-ve	-ve	-ve
Grade 2	+ve	+ve	+ve	-ve	-ve
Grade 3	+ve	+ve	-ve	+ve	-ve
Grade 4	+ve	+ve	-ve	-ve	+ve

METHODS

Total number of 581 patients of hemorrhoids from grade-1-3 were included in our hospital based descriptive study. It was conducted from January 2012 to December 2020.

Inclusion criteria

All the patients with grade-1-3 piles were included without discrimination of age and sex, as and when they presented for treatment. Patients having pile mass with or without bleeding were also taken. Grading was the main criteria.

Exclusion criteria

Grade-4 pile patients were excluded from the study. Patients having associated anorectal diseases like fissure, fistula, perianal abscess and local malignant disease were excluded.

Sample size

Total number of patients were 581 with 952 pile masses. These patients were treated mainly at two private centres: Karamdeep medical centre, Kanpur and Mayo health care, Mohali. They were assigned into four groups: group 1 (145 cases) all the pile masses in grade-1, group-2 (98 cases) having pile masses in grade-1 and 2, group-3 (139 cases) having pile masses in grade-1 and 3, and group-4 (199 cases) having masses in grade-1, 2 and 3.

All the patients underwent clinical assessment by having history, digital rectal examination and proctoscopy. History included age, sex, duration of illness, procusion of mass, irreducibility and history of bleeding. Any history of hospitalization in the past was noted.

Treatment policy

Four finger gradual and guarded anal dialatation (Lord's procedures) was under taken prior to definitive treatment in order to reduce anal tone and reduction in post procedure pain.

Selected modalities were injection sclerotherapy, RBL and hemorrhoidectomy used as per the grade of pile mass. Presence of external pile is taken into consideration. Treatment policy is depicted in Table 4.

Table 2: Usual symptoms encountered.

Symptoms	Constipation	Bleeding	Prolapse	Pruritus	Perianal soggyness	Fullness of bowel even after defication
No. of patients	361	432	176	86	93	156

Table 3: Grouping of 581 patients on the basis of treatment.

Groups	Grade's	Treatment given	No. of patients
Group 1	All in grade 1	Sclerotherapy	145
Group 2	In grade 1 and 2	Sclero and banding	98
Group 3	In grade 1 and 3	Sclero and hemorrhoidectomy	139
Group 4	In grade 1, 2 and 3	Sclero, banding and hemorrhoidectomy	199

Table 4: Treatment policy followed.

Grades	Sclerotherapy	RBL	Hemorrhoidectomy
Grade 1	Yes	No	No
Grade 2 without external piles	No	Yes	No
Grade 2 with external piles	No	No	Yes
Grade 3 with or without external piles	No	No	Yes

Treatment in grade 1

Injection polydocanol 1% infiltration was used for sclerotherapy in grade 1 piles. 2-3 ml solution was injected submucously at the base of the pile mass, Amount is decided on the basis of local blanching (striation sign).

Treatment in grade 2

RBL was used for grade 2 without external piles mass. Barron band ligator was used. Distilled water was infiltrated into banded mass to reduce chances of band to slip out. Sclerosant in not used for this purpose. Distill water infiltration is not widely reported (Chol et al) yet we found this useful in our study.

Treatment in grade 2 with external pile mass was hemorrhoidectomy. Treatment in grade 3 with or without external pile was hemorrhoidectomy.

Patients in post-operative phase were followed weekly till all the masses got obliterated, shrunk or the wound got healed. Following that patients were followed monthly for 6 months. Obliteration was defined as the absence of hemorrhoid projecting into the lumen.

RESULTS

Finally all four groups were analyzed. Number of treatment modalities used in different groups were calculated on the basis of no. of pile masses, their grade and treatment used as shown in Table 5.

Response to the treatment was divided into three categories: no response or worsening of the symptoms; patient responded but not completely relieved; and relieved/cured patient became asymptomatic.

The groups were comparable for distribution of different grades of hemorrhoids (p=ns).

Results were analyzed again in above four groups as shown in Table 6.

86.4% got relieved or cured; 77% masses needed sclerotherapy; 10.3% masses needed RBL; and 12.07% masses needed hemorrhoidectomy.

Table 5: Analysis treatment modalities of four groups.

Groups	No. of patients	No. of masses	Sclero	Banding	Surgery
Group 1	145	206	206	X	X
Group 2	98	151	128	23	X
Group 3	139	203	169	X	34
Group 4	199	391	229	76	87
Total	581	952	732	99	121
Percentage of procedures			77	10.3	12.7

Table 6: Result analysis of four groups.

Groups	No. change	Better	Relieved/cured	Relief/cure in percentage
1 (n=145) sclerotherapy	Nil	20	125	86
2 (n=98) and banding sclerotherapy	Nil	18	80	81.6
3 (n=139) sclero, and surgery	Nil	17	122	87.77
4 (n=199) sclero banding and surgery	Nil	24	175	87.90
Overall response	Nil	79	502	86.4

Early side effects were pain and bleeding in all the four groups. Five patients developed retention of urine in early post-operative period; they were catheterized for short period and got relieved. Follow up was pursued for six months in all the 581 patients. We lost 251 patients in the physical follow up. They were reluctant to come due to relief in the symptoms. They were followed telephonically.

DISCUSSION

Injection sclerotherapy was found appropriate and effective in grade 1 hemorrhoids.[10,16-18] 77% pile masses just required sclerotherapy thus proved to be most commonly used modality in our series of patients.

RBL was performed in 10.3% masses of grade 2 without associated external pile mass. It was found to be more effective than sclerotherapy in long term outcome.[5-7] Recurrence rate was found to be low in concurrence with the literature.[10]

In our study hemmorhoidectomy was performed in 12.7% masses. Comparative study for RBL and hemmorhoidectomy for second and third grade has revealed a clear cut edge for surgery. Author has found

definite confirmation for this fact in the literature as well.[12,16,17,21]

A met analysis compared 18 randomized trials that studied various methods of hemorrhoid therapy. Overall patients undergoing surgery had a significantly better response than those undergoing RBL (odds ratio 0.17 for no response, favoring surgical hemorrhoidectomy, (p=0.001).[12,16-18] However a significantly greater risk of complications and pain was noted with surgical therapy (p=0.02)

Our study corresponds to the above met analysis in grade-3 hemmorhoids. No significant difference was noted for grade-2 pile masses between RBL and surgery.[4,12,16,20,22]

Patients with bleeding hemmorhoids responded better with sclerotherapy than RBL. This also corresponds well with the literature.[15]

Limitations

In this study author found it difficult to differentiate between early and late stages of grade-2 hemmorhoidal masses. That is why sub-classification in grade-2 was not attempted. Since it was difficult to differentiate such progression so at times author found difficulty in choosing the mode of treatment between sclerotherapy and banding. In such situations wisdom was the final court of appeal to choose the right mode of treatment.

CONCLUSION

Non-surgical procedures are safe for grade 1 and 2, still not commonly performed by gastroenterologists. Research is needed to examine the barriers which discourage them to perform. Further prospective trials comparing non-surgical and surgical treatment are warranted.

Mixed and matched procedures were found beneficial and logical. Amalgamation of procedures was less traumatic and mutilating to the anorectal area. Acceptance among the patients was great. Presences of external pile masses were taken into account in deciding the treatment policy. This resulted in better cosmetic results and greater post procedure satisfaction to the patient. Single sitting treatment policy avoided repeated admissions and OPD visits. Financial burden over the patients could be minimized. Patients could resume their duties early and save their working hours.

Author found sclerotherapy the most suitable mode of treatment for grade-1 piles. 77% masses were found in grade-1 and they are treated by sclerotherapy. Banding was found to be the right choice for grade-2 masses. Surgical treatment emerged as the best treatment in grade-3 piles and preferred mode of treatment in grade-2 cases associated with external piles. Author recommends mixed and matched treatment policy in patients having piles of grade-1-3. This recommendation is based on the fact that we could cure 86.4% patients successfully in our series using this concomitant comprehensive policy. Thus quality of life in Hemorrhoid patients got improved due to better treatment protocol. Their physical recovery was great and high level of mental satisfaction could be achieved.

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