Original Research Article

New Indian Journal of Surgery
Volume 11 Number 2 / April – June 2020
DOI: https://dx.doi.org/10.21088/nijs.0976.4747.11220.19

A study on Altemeier's Perineal Procedure for Rectal Prolapse in Adults

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How to cite this article:
Dinesh Babu MV, Mohamed Sajid, Sreekanth, et al. A study on Altemeier's Perineal Procedure for Rectal Prolapse in Adults. New Indian J Surg. 2020;11(2):203–206.

Abstract:

Rectal prolapse is a condition in which protrusion of full thickness of rectum of 4 cm or more occurs through the anal canal. Though worldwide literature shows that it is more common in females with a weak pelvic floor, incidence of this condition is seen more in males in India. This report is a retrospective study of cases who underwent perineal proctosigmoidectomy (Altemeier's procedure) for the rectal prolapse presented as an emergency irreducible rectal prolpse as well as recurrent reducible rectal prolapse during the period of two and half yrs. (January 2016 to June 2018). The study was done on 12 operated patients. The procedure was done in 4 patients as an emergency. The patients were followed up for immediate complications like bleeding, suture dehiscence, infections or abscess. They were also periodically assessed for delayed complications like constipation and recurrence. None of the complications were reported during the Follow-up period, except in one patient. He was having recurrent prolapse.

Keywords: Rectal prolapse; Perineal proctosigmoidectomy; Altemeier's procedure; Perineal procedures; Defaecation pressure; Obstructive defaecation.

Introduction

Rectal prolapse was even described as early as 4000–5000 BC in Egyptian mummies. Hippocrates had described about rectal prolapse and the treatment was hanging the patient upside down and chemical cauterisation or touching a burning stick to prolapsed rectal mucosa.

Full thickness rectal prolapse is a formidable condition to the patient. The various modes of presentation are mass coming per rectum, incontinence, mucosal discharge, bleeding, incomplete evacuation and constipation. It is diagnosed with a detailed history and clinical examination. The only curative treatment is surgery. The aim of treatment is not only to correct rectal prolapse, but also to restore continence and defecation function.

Though more than 100 surgical procedures have been described to correct rectal prolapse, there was no convincing controlled trial ever done to demonstrate the superiority of one procedure over the other. Precise aetiology and treatment for rectal prolapse have not been established till now. Most of the studies is based on case series and no single procedure is found to be superior or give better results. Abdominal and perineal procedures are described. Abdominal procedures are done in young patients with a theoretical advantage of lesser recurrence. But sexual function may be affected by retrorectal dissection and injury to the presacral nerves. Laparoscopic abdominal procedures are described to have lesser complications. In 1971 Altemeier popularised the perineal proctosigmoidectomy even though it was described earlier by Mickulics and Miles. Perineal procedures were suggested in old debilitated patients who are unfit for major abdominal procedures under general Anesthesia. But it is said that there is an increased chance of recurrence with

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Received on 19.01.2020, **Accepted on** 02.03.2020

the perineal procedure. Thiersch wiring is not at all advisable in rectal prolapse. The other perineal surgery is Delorme's procedure. The investigations advised are pudendal nerve conduction study, anal manometry and defaecography. The role of these studies in diagnosing the aetiology of rectal prolapse is debated. A colonoscopy can be done to exclude other causes of rectal prolapse.

Here we are reporting a study of patients who were operated with Altemeier's procedure over a period of 2.5 yrs in our unit. There were two categories of patients. One presented as emergency non reducible rectal prolapse and the other category belonged to the patients came to OPD with history of recurrent prolapse. They were having complaints of mass coming per rectum and mucosal discharge with occasional bleeding. None of them had incontinence. We followed up the patients to see any described complications. Aim of the study was to see the results of Altemeier's procedure and to establish its effectiveness even in elective cases and young patients without much complication.

Materials and Methods

The patients with history of full thickness rectal prolapse presented with acute irreducible prolapse (Fig. 3) and the outpatient caseswho came to our unit is included in this study over a period of 2.5 yrs. 4 cases presented with a/c irreducible rectal prolapse. 8 cases presented to the outpatient department with history of rectal prolapse which was manually reducible by the patients themselves. One patient presented with h/o rectal prolapse for which he was operated with sigmoid resection alone 3 yrs. back. Oldest patient we operated on was 88 yrs. and the youngest was 30 yrs. History was of a mass coming per rectum, mucosal discharge with soiling of inner wear and constipation. One RP patient was presented with h/o fall and rectal tear through which small bowel were prolapsed out (Fig. 1). This case is not included in the study as this is managed by laparotomy. None of them gave history of incontinence. The symptoms were affecting their personal life and one of the patients was having hypothyroidism which was corrected with thyroxine supplementation. There were 8 males and 4 females. Other than the emergency cases all were investigated with limited colonoscopy after taking detailed history. Sphincter tone was assessed by doing per rectal examination. RP was assessed by feigning defaecation at toilet (Fig. 2). Dyssenergic (obstructive) defaecation was not present in our elective cases which was established by doing a clinical test using a Foleys catheter, condom and a sphygmomanometer. The Condom is tied to the Foleys catheter proximal to the bulb after breaking it. The Condom is inserted into the rectum through the anal canal. The Urinary channel is connected to the sphygmomanometer for reading pressure. Pressure is raised in the bulb i.e. in the condom and the condom is inflated by connecting inflating bulb of sphygmomanometer to water channel. In the study the inflated condom is expelled when the pressure is raised between 80–90 mm of Hg and found that no obstructive defaecation was present in our series (Fig. 4). Detailed evaluation of the patient was done before surgery.

Fig. 1:

Fig. 2:

Fig. 3:

Fig. 4:

The Surgery was done under spinal Anesthesia except one case where GA was given. The patients were positioned in lithotomy position and catheterised. An encircling incision was put 1.5 to 2 cm proximally to the dentate line up to the serosa of outer rectum. Then the rectum and sigmoid colon were gradually pulled down ligating and dividing the mesorectum and mesocolon sequentially till no redundant colon could be pulled out. Harmonic scalpel and electro cautery were used to divide meso rectum and mesocolon and tied with 1 o vicryl. The peritoneum was opened anteriorly and sutured to the sigmoid above the line of resection of the inner tube. After making sure no more colon is redundant, the inner tube of the rectal prolapse i.e. the sigmoid colon is resected and the distal part is removed.

Now, the proximal end of the inner tube of bowel is anastomosed to the lower end of outer tube of anus i.e. close to the dentate line with 1 o vicryl in interrupted sutures. The length of the resected recto-sigmoid colon varied in different cases and it does not affect the post-operative outcome[1]. In cases where we found weak pelvic floor, an anterior levataroplasty was done with 2 o vicryl by putting interrupted sutures between levator ani. Patients were kept 10 degree head down position for 2 days after surgery. Clear fluids were given orally on the next day with supplementing IVF. None of them complained of pain in the postoperative period but we gave injection voveran on the first post-operative day.

The post-operative period was uneventful. Liquid diet was started on the 3rd day. Patients were discharged within 5–6 days after passing the motion. Advice was given to take high fibre diets and use only European toilet without straining to pass motion. They were also advised not to do any sternous work which will increase intra-abdominal pressure. Follow-up of patients were done at 2 weeks, 6 weeks, 3 months and 6 months. The data is depicted in Table 1.

Table 1:

Period of Study	January 2016 to June 2018
Total Number of Cases	12
Male Patients	8
Female Patients	4
Emergency Surgery	4
Complication (Recurrence)	1

Results and Discussion

Earlier perineal procedures were reserved for old debilitated patients who are unfit for GA and had less life expectancy as it was believed that there is a high chance of recurrence in perineal procedures. Later on many case series have shown that morbidity and recurrence are less even with perineal procedures[1,4,10] So, people are doing Altemeier procedure not only in emergency cases but also as an elective treatment of rectal prolapse in young patients. There were no immediate complications like bleeding, infection or abscess formation in our study. All cases were done under SAB, except one. Hence economically better in comparison to an abdominal surgery. Incidence of rectal prolapse is more in male as per Indian statistics contradictory to western literature.[6,7] Males are common in our case series also. Perineal procedure will not disturb the sexual function unlike an abdominal surgery.[10] On detailed evaluation, 2 patients opined that they have a better sexual life after the surgery. Post-operative period is painless as we are not putting any skin incision and there are no respiratory complications as seen in abdominal surgeries. There is no mass or mucosal discharge per anum in the operated cases and that itself is a great relief for the patients. The two old female patients are leading a better quality of life after surgery. One of the patients was having incontinence and recurrence. The patient complained of incontinence probably because his sigmoid colon was not dilated to accommodate large volumes of faecal matter. And on taking history it was understood that he used to strain for complete evacuation of bowel that explains the recurrence. We repeated the Altemeier's procedure and anterior levatoroplasty in that patient after 7 months of the 1st surgery and he is doing fine till date. Anal manometry and pudental nerve conduction study was not done in our series. We tried to exclude obstructive defaecation by assessing defaecation pressure by the technique described above.

Conclusion

Though various procedures are described for rectal prolapse, we found that Altemeier's procedure is associated with less morbidity and complications. This procedure was done not only in emergency irreducible rectal prolapse but also in recurrent cases of rectal prolapse. And it is done even in young males without any fear of sexual dysfunction as a complication. Incidence is more in males in our

region. Levatoroplasty has some role in preventing recurrence after perineal procedure for RP. Even though this is a short period of Follow-up, we could categorically say that there is no complication in patients who have good compliance.

We do not hesitate to admit that Altemeier's procedure is an acceptable procedure for rectal prolapse with minimal morbidity and without much complication.

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