

MANAGEMENT OF RECTAL PROLAPSE IN CHILDREN: OUR EXPERIENCE OF THIERSCH STITCH PROCEDURE

Arshad Kamal, Kifayat Khan, Mohammad Ayub Khan, Younis Khan, Mohammad Uzair, Mohammad Tariq, Mamoon, Saddam Rahim

Mardan Medical Complex, Mardan, Pakistan

ABSTRACT

Background: Rectal prolapse is a common pediatric surgical problem with many treatment options. This study was conducted to assess the outcome of Thiersch stitch in the management of rectal prolapse in children.

Methodology: It was a descriptive study conducted at Department of Pediatric Surgery, Lady Reading Hospital Peshawar from January 2003 to December 2008. Patients with complete rectal prolapse for more than 3 months were included. Patients were admitted 24 hours before the procedure. Kleen enema was given in the morning of operation. The procedure was performed under general anaesthesia. Vicryl size 1 was wrapped around the lower part of anal canal subcutaneously. Patients were discharged home on same day on oral analgesics for a week and laxatives for a month. They were followed in outpatient department for 3 months and any complication was recorded.

Results: Sixty-five patients, 37 males and 28 females, with complete rectal prolapse were operated. Age range was 2-8 years. No complication was seen during operation. Post-operatively painful defecation was observed in all patients, wound infection in 36, scanty bleeding and diaper staining in 25, constipation in 20 and recurrent rectal prolapse in 6 patients.

Conclusion: Surgical treatment of rectal prolapse by Thiersch stitch is simple to perform and has less complications.

KEY WORDS: Rectal prolapse, Thiersch stitch, Children.

INTRODUCTION

Rectal prolapse is defined as the herniation of rectum through the anus.¹ It is subdivided into partial and complete prolapse. The term Proctodentia refers to the complete variety.² Rectal prolapse usually occurs at extremes of age. It is most common at 3 to 5 years of age.³ Parents often provide history of a dark red mass protruding from the child's anus and the child usually is pain free.⁴

Idiopathic rectal prolapse is seen in otherwise normal children.⁵ In our part of the world children with malnourishment and diarrhea frequently present with rectal prolapse of various intensity.⁶ This sequel of events can be explained by the fact that in early age the child tries to learn the balanced act of defecation. It is perceived that the condition will improve over the period of time as the child is taught how to defecate.⁷

Children with conditions such as rectal polyps, worm infestation, proctitis, ulcerative colitis,

Ehlers Danlos syndrome and cystic fibrosis may also develop rectal prolapse.^{8,9} Rectal prolapse is common in children with extrophy of bladder and myelomenigocele, which are associated with weakness of pelvic floor muscles or its innervations.¹⁰

Prolapse usually occurs during defecation or crying. Failure to reduce the prolapse leads to venous stasis, edema and ulceration. If it persists for long time the bowel becomes edematous and firm steady pressure for several minutes may be necessary to reduce the swelling and allow reduction.¹¹

If rectal prolapse recurs immediately reduction is again necessary and the buttocks strapped together with a single band of adhesive tape for several minutes.¹²

Most children with rectal prolapse do not require any specific treatment. Treatment should be directed at proper toilet training, treating constipation and eliminating any underlying cause

such as gut worm infestation, diarrhea and rectal polyp. Prolonged toilet sessions and straining at stools should be discouraged.^{13,14}

Historically, the correction of rectal prolapse has evolved from simple perineal procedures like Thiersh’s anal encirment to more complex perineal procedures like Delorme, Altemer, perineal rectosigmoidectomy with levatoplasty and abdominal approaches ranging from suspension options with or without bowel resection and use of slings and prosthetic material to restore rectal anatomy and function. In the last decade, laparoscopic repair has been successfully introduced and used in surgical treatment of rectal prolapse. Surgical intervention is reserved for children in whom conservative measures fail. Children with recurrence of rectal prolapse after injection sclerotherapy also require any other surgical treatment.¹⁵

This study was conducted to assess the outcome of Thiersch stitch in the management of rectal prolapse in children.

MATERIAL AND METHODS

It was a descriptive study conducted at Pediatric Surgery Unit, Lady Reading Hospital Peshawar, from January 2003 to December 2008. All patients having history of complete rectal prolapse for more than 3 months were included in this study. Patients with sphincter paralysis, cystic fibrosis and partial rectal prolapse were excluded.

Patients were admitted 24 hours before the procedure. Patients underwent routine investigations like blood complete and screening for hepatitis. They were put on fluid oral diet 24 hours prior to surgery. They received klean enemas to mechanically washout the rectum. Vicryl size 1 was the material used for applying Thiersch stitch in all patients.

RESULTS

A total of 65 patients with complete rectal prolapse were operated during the study period. Out of these 37 were males and 28 females. Age range was 2 to 8 years.

Table 1: Age of patients at the time of presentation.

S. No	Age of patients	Number of patients
1	2-4 years	36
2	5-8 years	29

All the patients included in the study were otherwise normal. Most of patients had history of recurrent diarrhea or constipation. More than half of the patients were malnourished.

All patients underwent surgery on elective list. The hospital stay was one day. No anesthesia related complications occurred during this study. All patients were followed periodically for 3 months at outpatient department. No major complications like myonecrosis were noted. However a few minor side effects like painful defecation was observed in all patients, 36 patients had wound infection, scanty bleeding and diaper staining was observed in 25 patients. Twenty patients complained of constipation post-operatively while recurrent rectal prolapse occurred in 6 patients.

Table 2: Complications encountered during study.

S. No.	Complication	Number of patients
1	Painful defecation	65
2	Wound infection	36
3	Diaper staining	25
4	Constipation	20
5	Recurrence of rectal prolapse	6

DISCUSSION

Rectal prolapse is a common problem in children. It is usually self-limiting.¹⁶ Different options of treatment are available but none of them are optimal or standard in pediatric age group.¹⁷ Management of rectal prolapse starts with conservative measures like treating constipation, avoiding excessive straining at defecation, avoiding squatting position during defecation, proper toilet training and eliminating any precipitating factors like malnourishment, diarrhea, rectal polyp, etc.¹⁸ There is no consensus regarding the most effective surgical procedure for rectal prolapse.^{18,19} The ideal surgical procedure for correction of rectal prolapse remain unknown despite more than a hundred procedures described so far.¹⁰⁻²¹ These procedures include abdominal procedures, trans-sacral fixation, injection sclerotherapy using different substances and perennial procedures. The selection of surgical procedure depends upon many factors like age, fitness for general anesthesia and the presence of any other associated problem. In adults the most commonly used procedures used are trans-abdominal approach or resection and or fixation of rectum to the sacrum.²² In children

injection sclerotherapy is commonly employed besides fixation of rectum to the sacrum, laproscopic fixation of rectum and perineal procedure like Thiersch stitch procedure.²³

In our study we used Thiersch stitch as the surgical procedure for rectal prolapse in children. This procedure was selected due to the fact that rectal prolapse is common in our part of the world. Thiersch procedure was described for the first time in 1912. This study was conducted to emphasize that this procedure is still effective in the management of rectal prolapse in children. No study has been conducted in this part of the world to assess its effectiveness regarding the management of rectal prolapse.

Thiersch stitch is recommended as a better surgical option because it is technically simple to perform, hospital stay is short, rapid healing and less side effects. In our study there were no major side effects like myonecrosis, etc.²⁴

Thiersch is a better option than sclerotherapy as it is cost effective and the patient is exposed to general anesthesia only once, unlike injection sclerotherapy which may need more than one session to get the desired result. Secondly if recurrence of rectal prolapsed occurs it can again be managed by the same procedure.

In our study the rate of recurrence of rectal prolapsed was 6/65. In comparison to other studies done by Daulat Khan¹⁸ and Bashir Ahmad²⁷ regarding surgical management of rectal prolapse through injection sclerotherapy the recurrence rate had nearly same ratio. In another study done by Sobaro CW regarding treatment of rectal prolapse performing sacral rectopexy as the surgical procedure had recurrence rate of 2/28 and also creating a rectovaginal fistula in 1/28 patients during the study

CONCLUSION

In conclusion Thiersch stitch is still a valid and effective surgical option for the management of rectal prolapse in children. It is simple to perform, inexpensive and safe in children.

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Corresponding author:

Dr. Arshad Kamal
District Pediatric Surgeon
Mardan Medical Complex
Mardan, KPK, Pakistan
E-mail: arshad_kamal007@yahoo.com