RECTAL PROLAPSE IN CHILDREN: EXPERIENCE IN 67 CASES

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Abstract- Rectal prolapse is a relatively common disease of children and is defined as a rectal mucosa protrusion or a fullthickness protrusion (all layers) from anus. The purpose of this retrospective study is the review of different surgical techniques used in our centers and recommendations for optimal surgical management of rectal prolapse. This study was based on a 19 years experience in rectal prolapse management at Amir Kabir and Bahrami hospitals. In a total number of 67 cases sclerotherapy by 5% phenol in glycerin was the chosen procedure used. Since rectal prolapse is a self limiting disease and due to the fact of good results obtained from this technique with low morbidity, low cost and easy management, we recommend sclerotherapy for surgical treatment of rectal prolapse in pediatric age group.

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Key Words: Rectal prolapse children, surgical treatment, sclerotherapy

INTRODUCTION

Rectal prolapse is an extrusion of rectal mucosa or full thickness wall of rectum through anus. Peak incidence is in 1-3 years age group (1) because at this age group rectal mucosa is loosely attached to underneath muscular layer. It happens equally in both sexes. The etiology of rectal prolapse in children are as follow: Idiopathic, Neurologic (anal sphincter paralysis), Ectopiaviscera (bladder extrophy), after anorectoplasty for imperforate anus, nutritional and CF (2-3). The most common cause of rectal prolapse is idiopathic and predisposing factors are: Intestinal parasites (specially at endemic areas), malnutrition, acute diarrhea, ulcerative colitis, pertusis, Ehlers-Danlos syndrome, Myelomeningocele and chronic constipation (4-11). In Thapa's study, following chronic diarrhea 3% of patients developed rectal prolapse (5) and in the study by Fortuna and Caworkers after soave pull-through procedure for Hirschsprung's disease 2% of patients developed rectal prolapse (6). Occasionally some cases of rectal prolapse were seen after burn of perineal area (7). In children it is rarely due to wasting illnesses, traumatic injuries or alnutrition (1). An acute prolapse may be reduced easily before edema and swelling occurs. The tip of the herniated bowel can usually be gently pushed into the anus. If edema has developed, a gentle squeezing pressure may be required. Treatment of the precipitating causes and limitation of straining usually limit recurrence. Rectal prolapse in children is a self limited disorder and if it persists for several months even after an adequate trial of appropriate medical therapy is instituted, surgical intervention may be required (1,8,9,12,14). Many surgical techniques have been suggested and their variety and number suggest that no single approach is dramatically better than another. Surgical procedures for pediatric rectal prolapse are (1,3,8): injection treatment by sclerosant in the form of a 5% phenol in glycerin, hypertonic 30% saline or 50% glucose injected in four quadrants linearly into the rectal submucosa, the posterior sacral rectopexy (Ashcraft technique), Ripstein approach, Lockhart-Mummery procodure, Ekehorn's rectopexy, Thiersch suture circlage, transanal mucosal sleeve resection or linear electrocauterization (1). In up to 90% first injection treatments are successful and complications are few (1). In this study we reviewed retrospectively results of some types of treatments and recommend our procedure of choice.

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MATERIALS AND METHODS

In this study we retrospectively reviewed patients files from 1982 to 2000 at Amir-Kabir and Bahrami children hospitals. All patients operated upon were

included in this study. Cases with previous surgery such as anorectoplasty with rectal prolapse were excluded. Patients were followed by the OPD basis and documentations made on their files.

RESULTS

In a total of 67 patients, 75% (n=50) were male and 25% (n=17) were female. Patients' age range was from 15 months to 13 years, average age was 5.5 Yr (Table 1).

Table 1. Age prevalence of rectal prolapse

Age	No	Percent
Less than 2 years	5	7%
2-4 years	25	37%
4-6 years	15	23%
6-8 years	10	15%
Older than 8 years	12	18%
Total	67	100%

The major sign of the patients was protrusion of a mass from anus (100%). In all cases, the remaining symptoms and signs were rectal bleeding in 16%, constipation in 16%, diarrhea in 15% and dysentery in 4% (Table 2). Stool exam was performed in 47 patients and which revealed giardia in 20% of cases. Duration of symptoms was six month in 33 patients and between 6 to 12 months in 37 patients.

In 10 patients, rectal prolapse had relapsed after surgical treatment which showed that these patients needed a second operation. Overall in 67 patients 77 operations were performed.

Table 2. Signs and symptoms

Types	Percent
Protrusion of mass from Anus	100
Rectal bleeding	16
Constipation	16
Diarrhea	15
Dysentery	4

In thirty five patients (52%) sclerotherapy was done phenol in glycerin. Ten patients with Lockhart mummery approach, 8 patients with Ashcraft procedure, 10 patients with laparotomy and internal rectopexy, 10 patients with Theirsch circlage suture and 4 patients with Ekehorn's technique (Table 3). In 80% of circlage technique, rectal prolapse relapsed. But in 35 patients with sclerotherapy only 2 patients had relapsed. All relapse cases were treated success fully by sclerotherapy. The shortest duration of hospitalization belonged to sclerotherapy. Longest duration (10 days) belong to laparotmy.

Table 3. Types of operations

Types of operations	No.	Percent
Sclerotherapy	35	52
Lockhart mummery approach	10	15
Ashcraft procedure	8	12
Laparotomy-rectopexy	10	15
Theirsch circlage	10	15
Ekehorn's techniqe	4	6

DISCUSSION

Rectal prolapse is a relatively common, self limited problem in young children (1). With survey of patients file during the past 19 years at Amir-Kabir and Bahrami children hospitals, a total number of 67 children were operated, of those 75% were male. According to literature both sex involved equally (1). Most cases in this study were under six years of age. Average age of patients was 5.5 years. In younger age group medical treatment, obtaining parents trust and elimination of predisposing factors most often leads to spontaneous resolution of rectal prolapse, so medical treatment for six months prior to surgery is recommended (1). In this study, sclerotherapy was more successful and with less complications in comparison with the other techniques. Only one hematuria was observed with this technique. Duration of hospital stay in this approach was shorter in comparison to the other methods. Sclerotherapy is safe and easy to perform, successful and inexpensive technique for rectal prolapse; other techniques with longer duration of hospitalization are next choices. We recommend sclerotherapy for rectal prolapse as a first choice, other techniques that we suggest are: Ashcraft, Lockhart mummery and Ekehornes rectopexy. Use of these techniques are recommended according to the surgeon's experience and his preferences.

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