

Injection Sclerotherapy with 5% Phenol in Almond Oil in the Treatment of Rectal Prolapse in Children: Our Experience

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Abstract

Background: Rectal prolapse is a relatively common condition in children. A wide variety of sclerosing agents have been used in the treatment of rectal prolapse in children. We have used 5 % phenol in almond oil in the treatment of rectal prolapse in our children. The aim of this study was to find out the outcome of injection sclerotherapy with 5% phenol in almond oil in the treatment of rectal prolapse in children. **Methods:** From May 2009 to December 2016 a total of 186 patients with rectal prolapse were treated by injection sclerotherapy with 5% phenol in almond oil. Of which males were 112 and females 74. Age ranged from 1.5 years to 7 years. Initial management included assessment and correction of predisposing factors. If the rectal prolapse persisted or if the prolapse required repeated reduction, injection sclerotherapy was performed. Number of injections, recurrences, and complications were reviewed. **Results:** Out of 186 patients recurrence occurred in 12 patients, cured after second injection in 10 patients and 2 children needs Thiersch's stitch. Excessive oozing at the injection site was in 5 patients. **Conclusion:** Injection sclerotherapy with 5% phenol in almond oil is simple, safe and effective treatment of recurrent rectal prolapse after failure to conservative measures.

Key words: Rectal prolapse; Injection sclerotherapy; 5% phenol in almond oil.

INTRODUCTION

Rectal prolapse is defined as the protrusion of rectum through anus. There are two types of paediatric rectal prolapse. One is the intermittent self-limiting variety, which is more common, less pronounced, and responsive to conservative measures. The other variety recurs with every defaecation or straining and may require injection sclerotherapy or surgical treatment¹⁻⁴. Rectal prolapse usually affects children between 1-3 years of age, a time during which rectal mucosa is loosely attached to the underlying muscularis, and flattening of sacrum which predispose to prolapse. It is also the time of learning to develop continence^{5,6}. The etiology of rectal prolapse in children are as follow: Idiopathic, Neurologic (Anal sphincter paralysis) Ectopiaviscerae (Bladder extrophy) after anorectoplasty for imperforate anus, nutritional and cystic fibrosis⁷. Idiopathic rectal prolapse is usually seen in otherwise healthy children⁸. In our country it is not uncommon to see patients suffering from diarrhea having rectal prolapse. Malnourished children also frequently present with rectal prolapse of various intensity⁸. Many treatments have been used for persistent rectal prolapse. Treatment includes resection and fixation, abdominal posterior rectopexy, abdominal or perineal bowel resection, transanal suture rectopexy, posterior sagittal procedure, Thiersch suture and injection sclerotherapy. The trend in managing pediatric rectal prolapse has been moving away from extensive surgery. Injection sclerotherapy using various agents has been recommended by various investigators⁹⁻¹².

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MATERIALS AND METHODS

From May 2009 to December 2016 a total of 186 patients with rectal prolapse were treated by Injection sclerotherapy with 5% phenol in almond oil in the department of pediatric surgery, Chattagram Maa-O-Shishu Hospital Medical College. Of which males were 112 and females 74. Age ranged from 1.5 years to 7 years. Initial management included assessment and correction of predisposing factors. If the rectal prolapse persisted or if the prolapse required repeated reduction, injection sclerotherapy was performed. Number of injections, recurrences, and complications were reviewed.

Technique of Injection Sclerotherapy

The preparation for this day care surgery procedure usually consisted of a fleet enema administered before arrival to the hospital. The operation is performed under general anesthesia with the patient in lithotomy position. The buttocks and perineal area were prepared with povidone iodine solution. A blood set needle was mounted on 10 ml disposable syringe. The sclerosant was injected in rectal submucosa through mucocutaneous junction under guidance of finger inserted into anal canal with this blood set needle. About 10 ml of 5% phenol in almond oil (3ml in each site) was injected at 3 sites (2, 6, 10 O'clock position) to avoid haemorrhoidal vessels. The procedure was carried out as a day case. Children were discharged home to continue their stool softeners, diet in high fibre and fluids, oral metronidazole and analgesics. All children were followed-up in outpatient department 2 weeks after sclerotherapy. Subsequent follow-up was arranged after 3-6 months depending on symptoms.

RESULTS

Out of total 186 selected patients the male : female ratio is 1.5:1. Age ranged from 1.5 years to 7 years. The presenting symptoms were prolapsing mass in all, per rectal bleeding in 4, rectal prolapse with prolapsed rectal polyp in 4 patients. Possible predisposing factors identified including Constipation 86 (46%) Diarrhea 74 (39%) Malnutrition with failure to thrive 18 (10%) Spina bifida 5 (2%) Post operative patients of high variety anorectal malformations in 5 (2%) patients and Bladder exstrophy in 3 (1%) patients. The sclerosing agents that is 5% phenol in almond oil was injected in all 186 patients along with rectal polypectomy in 4 patients. Out of them 174 (93.5%) patients cured with one injection and recurrence occur in 12 (6.50%) patients. Ten patients were cured in 2nd injection and 2 patients required Theirsch's suture. Excessive oozing at the injection site was seen in 5 patients which improved conservatively.



Figure 1 : Complete rectal prolapse.



Figure 2 : Complete rectal prolapse.



Figure 3: 5% phenol in almond oil is injected submucosally through mucocutaneous junction.

DISCUSSION

Rectal prolapse is a common problem in children in our country as well as in other developing countries. The majority of these cases are self limiting. Functional defaecation disorder and prolonged straining during defaecation in idiopathic constipation are noted to be frequent causes of prolapse rectum in children. It can also occur in diarrhea and in children with malnutrition. Mechanical factor such as sacral hypoplasia in bladder exstrophy and high anorectal anomaly may play a role¹². Although there is no optimal or standard procedure for treatment of rectal prolapse, initial treatment typically includes stool softeners, prevents straining during defaecation, treatment of diarrhoea and correction of malnutrition. If conservative treatment was not effective, various injection sclerosent agents such as 30% saline, cows milk, ethanolamine oleate, 30 % ethylalcohol and 5% phenol in almond oil should be considered as the first line treatment. In reviewing previous studies on injection sclerotherapy, it is apparent that many different agents can be used successfully and safely to treat rectal prolapsed.

We use only 5% phenol in almond oil as sclerosing agent in our patients. These initiates an inflammatory reaction resulting in fibrosis that gives support to the tissue thus prevents recurrence of the prolapsed. About 93.5% of our patients cured after one injection and 99% cured after two injections. Only 2 patients needs Thiersch stitch. Wyllie using 5% phenol in almond oil as sclerosing agent, reported 91% cure rate after one injection, and 100% cure rate after two injections, almost similar to our results¹³. Only 5 patients had procedure related oozing at the injection site which improved conservatively.

CONCLUSION

Injection sclerotherapy with 5% phenol in almond oil is inexpensive, easily available in our country. It is very safe and effective treatment for recurrent rectal prolapse after failure to conservative measures.

DISCLOSURE

All the authors declared no competing interest.

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