

MANAGEMENT OF RECTAL PROLAPSE IN CHILDREN

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ABSTRACT

- Objective* To find out results of injection sclerotherapy with 5% phenol in almond oil in the treatment of rectal prolapse in children.
- Study design* Descriptive study.
- Place & Duration of study* Department of Paediatric surgery, Peoples Medical College Hospital Nawabshah, from September 2008 to August 2009.
- Patients and Methods* All patients presenting with rectal prolapse were entered into the study. Injection sclerotherapy with 5% phenol in almond oil was used as mode of treatment. Under general anaesthesia injection was given in the submucosa of rectum. Maximum amount of 8-10 of 5% phenol in almond oil was injected at 3-4 sites in linear fashion. All patients were followed for a month to note any recurrence.
- Results* Total number of patients was 32. Twenty four patients were males and 8 females. The age ranged from 2-5 years. Duration of prolapse ranged from one day to 4 years. Twenty six patients had history of recurrent diarrhoea. A total 26 patients received injection sclerotherapy. No anaesthesia or procedure related complication was seen. No recurrence occurred at one month follow up.
- Conclusion* Injection sclerotherapy with 5% phenol in almond oil is effective, safe, inexpensive and readily available treatment.
- Key words* Rectal prolapse, Sclerotherapy, Children.

INTRODUCTION:

Rectal prolapse is defined as the protrusion of rectum through anus. This may be partial, involving only small ring of mucosa or complete, involving all layers of the rectum.^{1,2} Latter condition is also referred as procidentia.³ Rectal prolapse involving only the mucosa is the least serious form and is most common in the paediatric population.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 most common form of rectal prolapse is idiopathic, where no definite cause for prolapse could be found.⁷ This condition has a chance to resolve spontaneously as the child grows. The time duration for spontaneous resolution is variable and it may persists for months to years.² Other conditions that predispose to prolapse are myelomeningocele, exstrophy of bladder, parasitic infestation, malnutrition etc.⁵ In western countries cystic fibrosis is the common cause of rectal prolapse, while in developing countries it usually

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follows diarrhoeal illnesses and malnutrition.^{8,9}

Rectal prolapse is common in our part of world. Though it is a benign condition, its persistence is frightening for parents and child. Parents thus demand some sort of early intervention. Presence of prolapsed rectum at times leads to edema, ulceration and sometimes necrosis of gut leading to perforation.¹⁰

The management of rectal prolapse is controversial and no definite protocol is available. Various modes of treatment from minimally invasive to abdomino-perineal surgeries are described. This study was conducted to find out the results of injection sclerotherapy with 5% phenol in almond oil in the treatment of rectal prolapse in children.

PATIENTS AND METHODS:

This was a descriptive study conducted from September 2008 to August 2009 at the Department of Paediatric Surgery of Peoples Medical College Hospital Nawabshah. All patients of paediatric age treated during this period were included. Patients were admitted in the ward and subjected to investigations like complete blood picture and detailed stool examination. All patients were put on oral metronidazole. In patients who presented with prolapsed rectum in emergency, prolapse was reduced manually under sedation and then treated electively.

In almost all the patients injection sclerotherapy was done. 5% phenol in almond oil was used as sclerosant. Bowel was evacuated with phosphate enema a night prior to the procedure. The procedure was done under general anaesthesia. With the patient in lithotomy or left lateral position, the sclerosant was injected in rectal sub mucosa through mucocutaneous junction under guidance of finger inserted into anal canal with wide bore needle. About 8-10 ml of 5% phenol in almond oil was injected at 3-4 sites in linear fashion in one sitting. Patients were discharged on the same day in the evening. All patients were followed for one month for recurrence or complications.

RESULTS:

A total of 32 patients were registered including 24 males and 8 females. Age ranged from 2 to 5 years. All patients presented with some thing coming out of anus (100%). Seventeen patients (53.12%) also had bleeding per rectum. Duration of symptoms ranged from 1 day to 4 years. Twenty three patients had complaints of prolapse of rectum for 3 or >3 months duration. Only 9 patients presented with prolapse of

less than 3 months duration. Seven out of those 9 patients presented with prolapsed rectum which was difficult to reduce and hold. History of recurrent diarrhoea was present in 26 (81.25%) patients. Fifteen had haemoglobin of < 9 gm%. Stool DR was done in 21 patients. In majority it was reported as insignificant. Eight patients had ova / cysts of protozoa or helminths.

Three patients were treated medically because they had acute episode of dysentery and were sent home on oral metronidazole. They did not return back while 3 patients left against medical advice. Twenty six patients received injection sclerotherapy using 5% phenol in almond oil. All these 26 patients were followed up to 1 month. No anaesthesia or procedure related complication occurred. At one month follow up no recurrence was noted, however we do not have long term follow up.

DISCUSSION:

Rectal prolapse is a common problem in children and usually a self limiting condition. No optimal or standard procedure for treatment of rectal prolapse in children exists.¹¹ It is usually managed conservatively by avoiding excessive straining at defaecation, avoidance of squatting position, proper bowel training and eliminating precipitating factors like diarrhoea, polyps, constipation etc.^{1,2} Surgery has occasional role in the treatment of rectal prolapse and no consensus exists as to which of the various procedures previously described in literature is most satisfactory.¹¹⁻¹³ The time taken for spontaneous resolution is variable. Very presence of rectal prolapse is annoying and horrifying to the parents and at times it is very difficult to reduce. Some sort of intervention is always demanded by most of the families.¹⁴

The type of intervention for the treatment of rectal prolapse is not agreed upon. It varies from sclerotherapy to variety of surgical procedures.¹⁵⁻¹⁷ Usually sclerotherapy with or without combination of Thiersch's ligature is recommended due to its technical simplicity, short hospital stay, rapid healing with no complications.^{2,14,18-20} In our study we have used sclerotherapy as primary mode of treatment for rectal prolapse in children.

Different types of sclerosing agents used by various researchers are cow milk, 50% dextrose water (D/W), 15%, 25%, 30% saline solutions and 5% phenol in almond oil.^{1,2,14,18-24} Each has got a similar mechanism of action as they cause aseptic chemical inflammation. We have used 5% phenol in almond oil as a

sclerosant, an agent that is easily available, economical with well documented sclerosant effect.²

Batool et al have conducted a study on the management of idiopathic rectal prolapse in children in two phases. In phase 1 of study, patients were followed conservatively and they have found that more than 50% prolapse disappeared in 3 months. Thus they recommend waiting for at least 3 months before embarking upon any sort of intervention. In phase 2 of study, patients were subjected to intervention in the form injection sclerotherapy. Fifty eight per cent of patients were cured in 2 weeks following single injection and at the end of three months all patients were cured. This observation was highly significant.² We have not followed patients till spontaneous resolution of prolapse, as majority of our patients had prolapse of more than 3 months duration at the time of presentation. Moreover most of our patients came from far off areas of interior of Sindh so could not afford traveling. However the results of our study coincide with the results of their phase 2 study.

Khan D has treated 130 patients with injection sclerotherapy. He has added Thiersch's stitch with chromic catgut as a part of the procedure. Explanation put forward was that it prevented prolapse from occurring. The sterile inflammation as a result of phenol injection thus acts while rectum remains inside anus. Recurrence in 3 cases was found in his study at the end of one month follow up.¹⁴ We have not added Thiersch's ligature with injection sclerotherapy as a part of procedure. We did not find recurrence in our patients at the end of one month follow up. However we did not have long term follow up and number of cases was small, so conclusion could not be made.

Response rate to injection sclerotherapy is variable. Majority of patients are cured with first injection. Up to 3 sessions of injection sclerotherapy are described in literature.^{1,2,18-20} In our series we had one session of injection. No procedure related complication occurred in our patients although peri anal abscesses have been reported.¹⁴

CONCLUSIONS:

Injection sclerotherapy with 5% phenol in almond oil is effective, safe, inexpensive and easily available treatment. It should be instituted early to reduce anxiety and annoyance of parents.

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