



## Complete Rectal Prolapse in Children: Case Report

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**Citation:** Emma P, Gennaro S, Rita L, Giovanni S, Pierluigi V, et al. (2021) Complete Rectal Prolapse in Children: Case Report. Ann Case Report 6: 753. DOI: 10.29011/2574-7754.100753.

**Received Date:** 12 April, 2021; **Accepted Date:** 26 August, 2021; **Published Date:** 31 August, 2021

### Abstract

A 3-years-old child presented to the department of pediatrics with a complaint of a red-coloured mass protruding from his anus. Child had difficulty sitting down, difficulty evacuating, anal itching, inconsolable crying, recurrence of prolapse several times in a day. Prolapse occurred with any occasion of increased abdominal pressure, such as coughing, hiccups, or excessive laughter. Given the negativity of the history, we studied the spinal nerve function which is normal. Laxative therapy gave good results 12 months later. At the follow-up of another 12 months, the prolapse occurred once. In our case, the rectal prolapse was complete and 1st degree. For the management of rectal prolapse, the conservative approach is a possibility. For cases that do not respond to the conservative approach, there are different surgical options than those suitable for the adult.

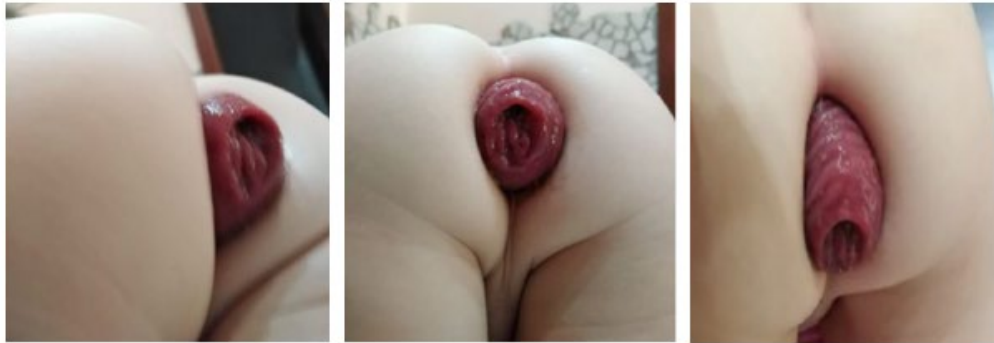
**Keywords:** Complete rectal prolapse; Children; Conservative management

### Case Report

Rectal prolapse could be partial or complete. In partial rectal prolapse, a part of the rectal wall or the anal mucosa protrudes out of the anal verge, whereas in complete rectal prolapse all the layers of rectal wall protrude out [1]. Depending on the length of the protruding rectum from the anal verge, complete rectal prolapse is classified as 1st, 2nd, and 3rd degree. A case of 1 degree complete rectal prolapse is the subject of this experience.

A 3-years-old child presented to the department of pediatrics with a complaint of a red-coloured mass protruding from his anus. The parents of the child had first observed this mass while the child was passing stools. No history of chronic constipation, chronic cough, weight loss, or presence of parasites in stools was present. The vitals of the child were normal. The weight of the patient was on the 75nd percentile, and the height was on the 82th percentile, using WHO data. Abdominal palpation showed no tenderness. On local examination, the length of the protruding

rectal wall was around 6 cm with circumferential folds and slight edema. No ulcerations were present (Figures 1-3). A diagnosis of complete rectal prolapse was reached based on the clinical features and examination. This problem had persisted for about 20 days. Child had difficulty sitting down, difficulty evacuating, anal itching, inconsolable crying, recurrence of prolapse several times in a day. Prolapse occurred with any occasion of increased abdominal pressure, such as coughing, hiccups, or excessive laughter. Given the negativity of the anamnesis, it was decided to carry out evoked potentials of the pudendal nerve, to evaluate the anal reflex; and to make magnetic resonance of the spinal cord. These tests are normal. We interview the parents and agree to do laxative therapy for a period of 8 weeks and evaluate the clinic. We scored each clinical symptom: difficulty sitting down, difficulty evacuating, anal itching, inconsolable crying and recurrence. At 1 week of therapy the prolapse occurred only at the time of bowel movements; at 4 weeks of therapy the prolapse had shrunk in size, at 8 weeks of therapy the prolapse had a once-weekly recurrence, and at 12 weeks of therapy the prolapse had 1 mean recurrence of 1 time every 15 days. At follow up of others 12 months the prolapse has occurred one time.



**Figures1-3:** The length of the protruding rectal wall was around 6 cm with circumferential folds and slight edema

In rectal prolapse the anatomical factors which have been found to play a role in the higher susceptibility of rectal prolapse in children include vertical configuration of the sacrum, greater mobility of the sigmoid colon, loose attachment of the rectal mucosa to the underlying muscular, and poorly developed Houston's valves. Predisposing factors contributing to rectal prolapse are chronic constipation, chronic cough, pertussis, cystic fibrosis, malnutrition, intestinal parasites, myiasis, diarrheal diseases, ulcerative colitis, CMV colitis, pseudomembranous colitis, rectal neoplasms, rectal polyps, ectopia vesicae, meningomyelocele, Ehlers-Danlos syndrome, Hirschsprung's disease, urinary obstruction, autism, and surgical procedures near the anus [2]. In our case the parents participated in the diagnostic - therapeutic process and every type of decision, in particular the wait, was shared. The diagnosis of rectal prolapse can be made on the basis of the results of the historical or physical examination. Examining the baby in the squatting position or asking to push can demonstrate prolapse. Palpation of the prolapsed mucosa between the thumb and forefinger allows the examiner to distinguish between mucosal (type I) or complete (type II) rectal prolapse. On the other hand, if the prolapse has not reduced spontaneously. if a spontaneous reduction has occurred, the description of the parents of such a mass that appeared during the effort may be sufficient to make the diagnosis. The prognosis of rectal prolapse, which depends on the underlying etiology, is usually good. About 90% of children who develop rectal prolapse between the ages of nine months and three years respond to medical treatment and do not require surgery. The remaining 10% of children with rectal prolapse have relapses that persist into adulthood

The procedure of choice for cases of persistent rectal prolapse unresponsive to conservative management is injection sclerotherapy, where in a sclerosant (dextranomer microspheres, 98 % ethyl alcohol, 5% phenol in almond oil, 50% dextrose, 15-30% saline, etc.) is injected in the submucosal plane in the perirectal area [2,3]. This leads to an inflammatory reaction which causes adhesions between the rectal mucosa and the underlying muscles. Injection sclerotherapy has a success rate of 90-100%.

For pediatric cases not responding to injection sclerotherapy, a wide variety of surgical procedures are mentioned in the literature. However, no consensus is present over the choice of the surgical procedure, the pediatric surgeon is faced with procedures that depend largely on individual surgeon experience. The disease is different in children and many adult techniques such as prosthetic slings are not often applicable. For children with persistent rectal prolapse, several surgical/procedural options exist. The most commonly cited include Thiersch's anal cerclage, Ekehorn's rectosacropexy, transabdominal sacral rectopexy with or without sigmoid resection, and sacral rectopexy through a posterior incision [4]. In conclusion, conservative management is the best approach for most cases of pediatric rectal prolapse. If unmanaged conservatively, injection sclerotherapy is the preferred procedure of choice but it's need to evaluate definitive corrective surgery in older children with persistent rectal prolapse, as they do not respond to conservative measures or injection sclerotherapy.

#### **Conflict of interests**

The authors declare that they have no conflicts of interest.

#### **Author Contribution**

Study conception and design: Petrone Emma, Santini Gennaro, Data acquisition: Petrone Emma, Lista Rita, Vuilleumier Pierluigi, Drafting of the manuscript: Petrone Emma, Santini Gennaro, Critical revision: Petrone Emma, Giovanni Gaglione, Saggiomo Giovanni. All authors read and approved the final version of the manuscript.

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