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CASE REPORT

Short-Term Successful Conservative Management of a Rare Full-Thickness Rectal Prolapse in an Adolescent from a Resource-Limited Setting: A Case Report

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Introduction: Full-thickness rectal prolapse is rarely seen in adolescents, and when it does occur, it often suggests a specific underlying trigger rather than the benign, self-limited cases typical in younger children. Constipation, infections, nutritional issues, and anatomic or functional disorders are among the common contributors, making a careful assessment important when older children present with prolapse.

Case Presentation: A 14-year-old boy arrived with a sudden rectal mass that appeared after marked straining during a bowel movement. He had experienced a week of constipation with hard stools and prolonged time on the toilet but had no history of illness, infection, or weight-related concerns. Examination showed a circumferential, full-thickness prolapse that remained healthy and viable. Laboratory tests were normal, and stool studies for parasites were negative. Gentle manual reduction was successfully performed, and he was started on stool softeners, hydration guidance, and a high-fiber diet. He recovered well, and no recurrence was observed during a four-week follow-up period.

Discussion: This case underscores the importance of recognizing that prolapse in adolescents often has a functional cause, even in settings where infections and malnutrition are more common. The patient's history of significant straining made functional constipation the most reasonable explanation. His rapid improvement also emphasizes how effective simple, conservative measures can be.

Conclusion: Although full-thickness rectal prolapse is unusual in adolescents, timely reduction combined with focused bowel management can lead to excellent outcomes. Early recognition and supportive care remain central to preventing recurrence. However, continued follow-up is essential to monitor for potential relapse, particularly in adolescent patients.

Keywords: rectal prolapse, functional constipation, pediatric surgery, manual reduction, bowel management

Introduction

Rectal prolapse is a rare condition in older children, characterized by the protrusion of the full thickness of the rectal wall through the anal canal, although commonly observed in children under four years of age, its incidence in adolescents is exceptionally uncommon and warrants further investigation to exclude underlying pathology, in children, rectal prolapse is typically self-limited and benign, resolving spontaneously or with conservative treatment. However, in older pediatric patients, it often signals the presence of chronic or secondary conditions, including gastrointestinal infections, malnutrition, chronic constipation, or neurologic and anatomic anomalies.[1,2]

The epidemiology of pediatric rectal prolapse shows global variation, with higher incidence in low-income regions such as sub-Saharan Africa. In these areas, factors such as protein-energy malnutrition, recurrent diarrhea, and parasitic infections like Trichuris trichiura and Giardia lamblia are common contributing factors. In contrast, in high-income settings, the condition is more frequently associated with chronic constipation and less commonly with infections or

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malnutrition.[1–3] A study from Nigeria reported that most children with prolapse were under three years of age and had a history of diarrheal illness or poor nutritional status. Similarly, Somali surgical reports have noted rectal prolapse in up to 1.8% of pediatric surgical admissions.[3–5]

Diagnosis relies on a clear history and physical examination, with further investigations indicated in older children or those with persistent symptoms. Evaluation for underlying causes such as cystic fibrosis, Hirschsprung disease, or anatomical defects should be performed using sweat chloride tests, imaging, and anorectal manometry as appropriate.[2,6]

Initial treatment is conservative, including dietary management, bowel regulation, infection treatment, and caregiver education on manual reduction techniques. The majority of idiopathic cases resolve with these measures. For refractory or recurrent cases, sclerotherapy, Thiersch anal encirclement, or abdominal rectopexy may be necessary, particularly in older children with identifiable predisposing conditions.[2,7,8] Surgical series from both high-income and resource-limited settings confirm favorable outcomes following stepwise escalation from conservative to operative measures.[9,10] Here, we present a case of full-thickness rectal prolapse in a 14-year-old boy, highlighting the diagnostic considerations and management approach in an age group where such presentations are uncommon, particularly within a resource-limited setting.

Case Presentation

A 14-year-old boy with no chronic medical conditions presented to the emergency department with an acute onset of a protruding rectal mass that occurred immediately after a strained bowel movement. He reported a one-week history of progressive constipation with increasingly firm stools and prolonged time spent on the toilet. On the morning of presentation, he strained significantly to evacuate stool and immediately noticed a soft, round mass protruding from the anus, which enlarged over several minutes and could not be manually reduced at home.

He denied rectal bleeding, mucus discharge, abdominal pain, vomiting, weight loss, fever, diarrhea, or urinary symptoms. There was no history of previous similar episodes, anorectal trauma, chronic cough, heavy lifting, or neurologic disease. His dietary history revealed low daily fiber intake and inadequate hydration, often due to avoidance of school restrooms. Family and developmental histories were unremarkable. On arrival, the patient was hemodynamically stable with a blood pressure of 116/72 mmHg, heart rate 87 bpm, respiratory rate 18/min, temperature 37.0°C, and oxygen saturation 99% on room air. He appeared uncomfortable but nontoxic. Abdominal examination revealed a soft, non-distended abdomen with normal bowel sounds and no tenderness or palpable masses.

Perineal examination demonstrated a circumferential, full-thickness rectal prolapse measuring approximately 4–6 cm beyond the anal verge (Figure 1). The prolapsed mucosa was edematous and congested yet remained uniformly pink and viable, with visible concentric folds characteristic of full-thickness eversion. There were no ulcerations, necrotic changes,

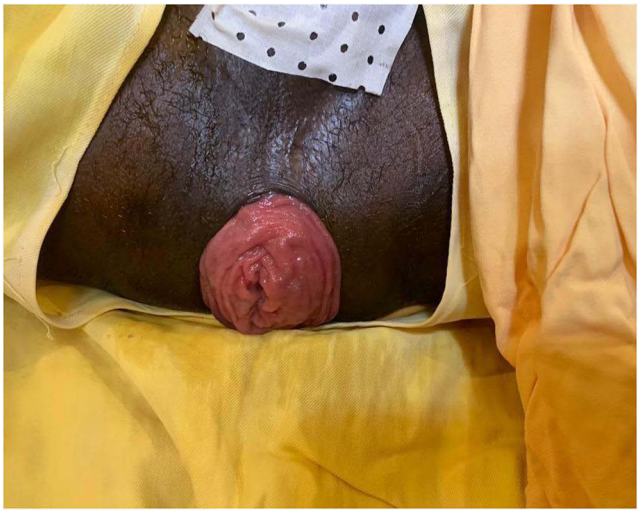

Figure 1 Full-thickness rectal prolapse showing edematous, circumferential mucosa protruding through the anal canal.

Figure 2 Post-reduction appearance of the perineal region after correction of rectal prolapse.

active bleeding, or fissures. The anal sphincter was patulous but intact. Laboratory investigations, including complete blood count, electrolytes, renal function, and C-reactive protein were within normal limits. Stool samples were obtained for ova and parasite testing due to the patient's age and history of constipation. No imaging studies were performed, as the diagnosis was clinically evident and the prolapsed segment remained viable.

Manual reduction was performed under sterile conditions. The patient was positioned supine with hips flexed, and the prolapsed segment was irrigated with warm saline and lubricated. Gradual circumferential compression was applied to reduce mucosal edema, followed by continuous inward pressure from the distal end of the prolapse. After several minutes of steady manipulation, the rectal tissue returned fully into the anal canal. Post-reduction inspection showed an anatomically normal anal verge with no mucosal injury. Digital rectal examination revealed mildly decreased but present sphincter tone and no intraluminal masses (Figure 2).

The patient was monitored for three hours' post-reduction, during which no recurrence occurred. He was started on polyethylene glycol for stool softening and instructed to increase fiber intake, hydration, and avoid straining or prolonged toilet sitting. Warm sitz baths were recommended for perianal discomfort. At follow-up three days later, he reported no further prolapse episodes. He was subsequently monitored for four weeks, during which he remained symptom-free with no evidence of recurrence. Mild perianal tenderness persisted but improved with conservative care. Stool softening therapy resulted in painless, non-strained bowel movements. Ova and parasite testing later returned negative. Subsequent evaluation by pediatric gastroenterology identified functional constipation as the likely etiology, and a long-term bowel regimen was initiated. Pediatric surgery follow-up recommended continued observation due to the higher recurrence risk in adolescence.

Discussion

Rectal prolapse in older children and adolescents is uncommon, and its appearance often prompts clinicians to investigate for underlying medical, nutritional, or functional contributors. While younger children frequently experience self-limited, idiopathic prolapse, presentations during adolescence, such as in this 14-year-old boy, are rare and usually indicate secondary causes including constipation, gastrointestinal infections, malnutrition, or congenital and neurologic abnormalities.[1–3] In this case, the absence of infection, normal nutritional status, and the patient's history of prolonged straining strongly support functional constipation as the driving mechanism.[3]

Global literature consistently shows that the burden of pediatric rectal prolapse varies by geographical region. In low-resource settings across sub-Saharan Africa, environmental and socioeconomic factors such as protein–energy

malnutrition, recurrent diarrheal illnesses, and parasitic infections play dominant roles in disease etiology.[1,3,4] In Congo and Nigeria, for example, most pediatric cases involve children under three years, many of whom present with malnutrition or diarrheal disease.[3,4] Somali data similarly demonstrate that rectal prolapse accounts for up to 1.8% of pediatric surgical admissions, highlighting the relevance of this condition in local practice.[5] In contrast, high-income countries report chronic constipation as the principal precipitating factor, with infections and malnutrition being far less common.[1,2]

Adolescents represent a distinctive diagnostic group because prolapse in this age bracket warrants evaluation for conditions that may not be considered in younger children. Standard recommendations include assessment for cystic fibrosis using sweat chloride testing, exclusion of Hirschsprung disease, and investigations for anatomic or functional anorectal disorders through imaging or manometry.[2,6] In this patient, a detailed clinical evaluation did not reveal red flags such as delayed growth, recurrent pulmonary infections, or significant abdominal symptoms, and his stool studies were negative for parasitic infections commonly implicated in similar cases in low-resource settings.[3,4] Thus, functional constipation emerged as the most plausible explanation.[4]

Management strategies for rectal prolapse in children follow a stepwise approach, beginning with conservative methods aimed at addressing the underlying cause. Dietary fiber optimization, stool-softening regimens, hydration, and behavioral modifications, such as limiting prolonged toilet sitting, constitute the first line of therapy and have high success rates, particularly in idiopathic or constipation-related cases.[1,8] Such measures have been shown to resolve prolapse in most pediatric patients without the need for invasive intervention.[8] The successful manual reduction and prompt symptomatic improvement in this case align well with these findings.[8]

When conservative management fails, several minimally invasive or surgical options may be considered. Sclerotherapy, Thiersch anal encirclement, posterior rectopexy, and abdominal approaches are among the most frequently reported techniques, each demonstrating varying degrees of success depending on patient age, etiology, and institutional expertise.[7–11] Outcomes from large surgical series emphasize that escalation should be individualized and generally reserved for refractory or recurrent prolapse.[9,10] Studies have shown that sclerotherapy is effective for persistent cases in younger children, while rectopexy may be required in older children and adolescents who have identifiable predisposing conditions.[7,11] In resource-limited settings, creative, low-cost strategies have historically been utilized for irreducible prolapse, such as the method described by Aboulola et al. However, these are used infrequently today and typically only when standard interventions are unavailable.[12]

Clinical guidelines also highlight that full-thickness prolapse in adolescents should be carefully monitored for recurrence, as recurrence rates tend to be higher in this age group compared with young children.[13–15] Our patient's favorable early recovery, marked by absence of recurrent prolapse at short-term follow-up, supports the efficacy of targeted bowel management in cases where constipation is the primary driver. Continued follow-up is important, however, given the known risk of relapse, especially when behavioral factors such as stool withholding or inadequate hydration persist. This case adds to the limited literature describing full-thickness rectal prolapse in adolescents from low-resource contexts. It underscores the importance of comprehensive assessment while also illustrating that even in this older age group, conservative management remains effective when an underlying functional cause is identified. More broadly, the report highlights the need to strengthen awareness of constipation-related complications in adolescents, particularly in environments where infections and malnutrition receive more clinical attention.

It is important to acknowledge that the outcome described reflects short-term follow-up. Although the patient remained symptom-free during the four-week monitoring period, longer-term surveillance is necessary to definitively exclude recurrence, particularly in adolescents, who are known to have higher relapse rates compared with younger children.

Although rectal prolapse itself is a well-recognized condition in pediatric practice, its occurrence in adolescents is relatively uncommon. The value of this case does not lie in introducing a novel pathology, but rather in illustrating how age-specific evaluation and structured conservative management can lead to favorable short-term outcomes, even in resource-constrained environments. By contextualizing this presentation within a low-resource setting, this report reinforces the importance of careful clinical assessment and individualized management strategies.

This report has several limitations that should be acknowledged. First, the follow-up period was relatively short, which limits our ability to assess long-term recurrence risk. Although the patient remained symptom-free during the documented follow-up interval, rectal prolapse in adolescents is associated with a higher likelihood of recurrence compared with younger children, and longer monitoring would provide more definitive outcome data. Second, as this is a single-case report, the findings cannot be generalized to all adolescent patients with rectal prolapse. Finally, while clinical evaluation did not reveal features suggestive of secondary pathology, advanced diagnostic investigations such as anorectal manometry or imaging were not performed, primarily due to the clear clinical presentation and resource considerations. These factors should be taken into account when interpreting the conclusions of this report.

Conclusion

This case illustrates that full-thickness rectal prolapse in adolescents, although uncommon, can be effectively managed with timely manual reduction and focused treatment of contributing factors such as functional constipation. Careful and structured clinical evaluation remains essential in this age group to exclude secondary or underlying causes, which are more frequently encountered in older children.

While the patient achieved a favorable short-term outcome, the relatively limited follow-up period requires cautious interpretation of long-term success. Recurrence rates in adolescents may be higher than in younger children, underscoring the importance of continued clinical surveillance. Ongoing follow-up is recommended to assess long-term outcomes and enable early detection should recurrence occur. Although the condition itself is not novel, this case emphasizes the value of thoughtful, context-aware clinical decision-making and carefully implemented conservative management, particularly in resource-limited settings where access to advanced diagnostic and surgical interventions may be constrained.

Abbreviations

RP, Rectal Prolapse; FT, Full-Thickness.

Ethics and Consent

The patient's parent provided written consent for the publication of this case report and its images, as the patient is a minor. Ethical approval was not required for this type of case report at our institution.

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Author Contributions

All authors contributed substantially to the development of this work, including its conception, study design, data collection, analysis, and interpretation. Each author was actively involved in drafting the manuscript and critically revising it to ensure the accuracy and integrity of its intellectual content. All authors reviewed and approved the final version prior to submission, agreed on the selected journal for publication, and take full responsibility for the accuracy and integrity of the work as a whole.

Disclosure

The authors declare no conflicts of interest in this study.

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