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EVALUATION OF BOWEL HABITS, CLINICAL SYMPTOMS, AND TREATMENT OUTCOMES IN PATIENTS WITH RECTAL PROLAPSE: A RETROSPECTIVE STUDY

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ABSTRACT

Background: Rectal prolapse (RP) is defined as the protrusion of the rectum through the anal orifice. The present retrospective study was conducted to determine bowel habits, clinical manifestations, and treatment outcomes in patients with rectal prolapse. **Methods**: This retrospective study was conducted on pediatric patients with a surgical diagnosis of rectal prolapse (RP) who underwent operative treatment in Ilam, Iran. A convenience sampling method was used, and all medical records of patients who had RP surgery between 2016 and 2025 were reviewed. Data were collected using a researcher-designed checklist, which included demographic characteristics, bowel habits, clinical symptoms, and treatment outcomes in children with rectal prolapse. The checklist was completed based on information documented in the patients' medical records. Data analysis was performed using SPSS software, version 16. **Result**: The results indicated a male predominance (61.8%) and a high prevalence of constipation (92.1%) and difficult defecation (98.7%) among the patients. Surgical intervention was highly effective, with 67.1% achieving complete recovery after a single procedure and a short hospital stay of one day. These findings highlight the efficacy of surgical management in children with rectal prolapse, yielding favorable outcomes with minimal morbidity. **Conclusion**: The findings of this retrospective study indicate that most children with rectal prolapse in Ilam presented with prominent symptoms of constipation and difficult defecation and were treated with a single surgical procedure and short hospitalization. Given the high rate of complete recovery and absence of mortality, surgical intervention appears to be an effective and relatively low-risk approach for managing these patients.

KEYWORDS: Bowel habits, clinical symptoms, rectal prolapse.

INTRODUCTION

Rectal prolapse (RP) is defined as the protrusion of the rectum through the anal orifice and is classified into two types: partial and complete. In the partial type, only the rectal mucosa is involved, whereas in the complete type the entire rectal wall protrudes through the anal canal. RP is a relatively common condition in childhood, with an incidence ranging from 0.25% to 0.45%.[1,2] Weakness of the pelvic floor and levator muscles in infants and children, prolonged sitting on the toilet, and excessive straining during defecation are considered important predisposing factors for the development of RP.[3]

RP can be categorized into mucosal or complete types, with mucosal prolapse being the most common and least severe form in children.[4] Although RP is frequently observed during childhood, it can also occur in adulthood. In elderly women, it is often associated with chronic constipation, pelvic floor dysfunction, or excessive straining during defecation.[5,6] Before the age of four years, RP is usually related to anatomical factors, whereas in children older than four years recurrent RP may occur. In fact, patients older than four years have a higher risk of RP, and some studies have reported a mean age of approximately 4.97 years among affected patients.[4,7]

Several conditions have been reported to be associated with RP, including diarrhea, parasitic infections accompanied by malnutrition, constipation, increased intra-abdominal pressure, Hirschsprung's disease, anorectal anomalies, infectious gastroenteritis, and whooping cough.[8,9] The management of RP depends on several factors, including underlying pathology and patient age, and there is no universal consensus regarding the optimal treatment strategy.[10] Medical management of RP usually lasts for at least 3–6 months and involves lifestyle modification, parental education, and treatment of underlying causes.[11]

In early childhood, RP often resolves spontaneously, whereas spontaneous recovery is rare in adults and surgical treatment is usually required.[12] The management of RP is generally conservative, aiming to correct the underlying predisposing factors. Initial treatment is typically non-surgical, with reported success rates ranging from 28% to 50%.

Conservative management includes a high-fiber diet, avoidance of prolonged toilet sitting, and the use of stool softeners. Secondary management involves surgical interventions that are recommended to prevent recurrent rectal prolapse.[2,10,13,14]

The present retrospective study was conducted to determine bowel habits, clinical manifestations, and treatment outcomes in patients with rectal prolapse.

MATERIALS AND METHODS

This retrospective study was conducted on pediatric patients with a surgical diagnosis of rectal prolapse (RP) who underwent operative treatment in Ilam, Iran. A convenience sampling method was used, and all medical records of patients who had RP surgery between 2016 and 2025 (1395–1404 in the Iranian calendar) were reviewed. The study was approved by the Ethics Committee of Ilam University of Medical Sciences (Ethics code: IR.MEDILAM.REC.1404.172).

The inclusion criteria were all hospitalized children with a final diagnosis of RP who underwent surgery. Exclusion criteria were incomplete medical records, age above 18 years, and the presence of chronic comorbid conditions such as malignancies, endocrine disorders, rheumatologic diseases, genetic disorders, Hirschsprung disease, and other chronic

systemic illnesses.

Data were collected using a researcher-designed checklist, which included demographic characteristics, bowel habits, clinical symptoms, and treatment outcomes in children with rectal prolapse. The checklist was completed based on information documented in the patients' medical records. Data analysis was performed using SPSS software, version 16.

RESULT

According to Table 1, the majority of children with rectal prolapse in this study were boys (about two-thirds of the sample), suggesting a male predominance. Most patients were treated with a single surgical intervention (approximately 78%), and the length of hospital stay was only one day for the majority, indicating a relatively minimally invasive procedure with short hospitalization. In terms of treatment outcomes, more than two-thirds of the patients achieved complete recovery and about one-third showed partial improvement, while only a very small proportion had no improvement and no mortality was observed. Bowel movement frequency was daily or more than once per day in most patients, which may reflect the pattern of defecation associated with the disorder. Painful defecation, burning sensation, and rectal bleeding were also reported in a considerable proportion of patients, highlighting the symptomatic burden of the disease.

Table 1: Clinical status of the studied patients.

Variable	Category	Frequency (n)	Percentage (%)
Gender	Boys	47	61.8
	Girls	29	38.2
Number of Surgeries	One	59	77.6
	Two	13	17.1
	Three or more	4	5.3
Length of Hospital Stay	1 day	60	78.9
	2 days	12	15.8
	More than 2 days	4	5.3
Patient Outcome	Complete recovery	51	67.1
	Partial recovery	22	28.9
	No improvement	3	3.9
	Death	0	0
Bowel Movement Frequency	> Once per day	27	35.5
	Once daily	38	50.0
	2-3 times per week	6	7.9
	< Once per week	5	6.6
Pain During Defecation	Yes	26	34.2
Burning Sensation	Yes	34	44.7
Blood in Stool	Yes	16	21.1

As shown in Table 2, the most common clinical manifestations in children with rectal prolapse are constipation and difficult defecation, reported in over 90% to nearly 100% of patients in both sexes, underscoring the central role of defecatory disorders in the presentation of this condition. Symptoms such as facial redness during straining, fear of using the toilet, and poor appetite were also observed in a considerable proportion of patients, reflecting both physical and psychological stress associated with defecation. Rectal bleeding was reported in more than half of the patients, indicating significant mucosal involvement and possible recurrent mucosal trauma. Although fecal incontinence had a lower prevalence (around 18%), it is clinically important due to its marked impact on the child's and family's quality of life. Overall, the symptom pattern is broadly similar between boys and girls, with no major sex-related differences.

Table 2: Clinical symptoms of the studied patients (n=76).

Clinical Symptom	Females (n=29)	Males (n=47)	Total (N=76)
Constipation	26 (89.7%)	44 (93.6%)	70 (92.1%)
Difficult defecation	28 (96.6%)	47 (100%)	75 (98.7%)
Facial flushing	17 (58.6%)	26 (55.3%)	43 (56.6%)
Fear of toilet	11 (37.9%)	18 (38.3%)	29 (38.2%)
Poor appetite	9 (31.0%)	18 (38.3%)	27 (35.5%)
Rectal bleeding	18 (62.1%)	26 (55.3%)	44 (57.9%)
Fecal incontinence	4 (13.8%)	10 (21.3%)	14 (18.4%)

DISCUSSION

As shown in Table 2, the most common clinical manifestations in children with rectal prolapse are constipation and difficult defecation, reported in over 90% to nearly 100% of patients in both sexes, underscoring the central role of defecatory disorders in the presentation of this condition. Symptoms such as facial redness during straining, fear of using the toilet, and poor appetite were also observed in a considerable proportion of patients, reflecting both physical and psychological stress associated with defecation. Rectal bleeding was reported in more than half of the patients, indicating significant mucosal involvement and possible recurrent mucosal trauma. Although fecal incontinence had a lower prevalence (around 18%), it is clinically important due to its marked impact on the child's and family's quality of life. Overall, the symptom pattern is broadly similar between boys and girls, with no major sex-related differences.

Several studies on rectal prolapse (RP) have been conducted in Iran, most notably those by Shad et al.[15] and Delshad et al.[16] In the retrospective study by Shad et al., the mean age of 50 patients was 4.02 years, with 67.4% being male. Regarding clinical features, 57.1% of patients had daily bowel movements, 68.2% reported consistently hard stool consistency, 48% experienced a burning sensation during defecation, 83.8% maintained consistent fecal control, 64.1% achieved complete recovery post-surgery, and 48% required a single hospital admission.[15] Additionally, Delshad et al. studied 153 children under 15 years of age and reported that the most common symptoms included constipation (97.39%), difficult defecation (96.08%), pain during defecation (91.5%), toilet phobia (67.97%), anorexia (46.67%), rectal bleeding (34.64%), and fecal incontinence (22.22%).[16] Collectively, these studies emphasize the high prevalence of defecatory disorders and associated symptoms among children with RP, while highlighting the significance of therapeutic interventions and positive surgical outcomes in improving the functional status of these patients.

In the study by Hill et al., 49 patients were examined, 37 of whom met the inclusion criteria, with a mean age of 7.7 years and an age at presentation greater than 3 years. Regarding the recurrence rate, 54% (21/39) of patients experienced recurrence, with 10% having more than two episodes, 6.7% having two episodes, and 40% having a single episode of recurrence. Recurrences were managed using Delorme's procedure or rectopexy.[17] Cares et al. investigated 158 patients, 34 of whom required surgery; straining was reported as the most common complaint, constipation was identified as the primary etiology, and factors such as atypical behavior or social stressors were highlighted as contributing to the development of RP.[18]

In a study by Ali et al., the mean age (M ± SD) of the patients was 8.6 ± 3.5 years, with a male predominance (63.3%). Notably, 63.3% of patients experienced pain, and 100% had no prior history of RP surgery. Their findings indicated that surgical intervention significantly improved RP and led to high parental satisfaction.[19] Antao et al. evaluated 49 patients with RP symptoms (mean age of 2.6 years), where 25 patients were treated using conservative measures such as "expectancy" (watchful waiting) and laxatives. Their results suggest that the prognosis is more favorable in patients

under 4 years of age with comorbidities, and that conservative management contributes to the improvement of patients with RP.[20]

CONCLUSION

The findings of this retrospective study indicate that most children with rectal prolapse in Ilam presented with prominent symptoms of constipation and difficult defecation and were treated with a single surgical procedure and short hospitalization. Given the high rate of complete recovery and absence of mortality, surgical intervention appears to be an effective and relatively low-risk approach for managing these patients.

REFERENCES

1. Cares K, El-Baba M. Rectal prolapse in children: significance and management. Current gastroenterology reports, 2016; 18: 1-6.
2. Hintz GC, Zou VZ, Baird R. Sclerotherapy for rectal prolapse in children: a systematic review and meta-analysis. Journal of pediatric surgery, 2019; 54(5): 1083-8.
3. Foxx-Orenstein AE, Umar SB, Crowell MD. Common anorectal disorders. Gastroenterol Hepatol (N Y), 2014; 10(5): 294-301. PubMed PMID: 24987313; PubMed Central PMCID: PMCPMC4076876.
4. Sarmast MH, Askarpour S, Peyvasteh M, Javaherizadeh H, Mooghehi-Nezhad M. Rectal prolapse in children: a study of 71 cases. Prz Gastroenterol, 2015; 10(2): 105-7. doi: 10.5114/pg.2015.49003. PubMed PMID: 26557942; PubMed Central PMCID: PMCPMC4631274.
5. Niasse A, Faye PM, Ndong A, Thiam O, Konate I. Strangulated rectal prolapse in adult: Altemeier cure about two cases and literature review. International Journal of Surgery Case Reports, 2024:110210.
6. Abdulshafi AM, El-Said MM, Hewidy SA. Posterior Sagittal Mesh Rectopexy versus Delorme's Procedure in The Treatment of Complete Rectal Prolapse in Adult. The Egyptian Journal of Hospital Medicine (October 2024), 2024; 97: 3606-10.
7. Laituri CA, Garey CL, Fraser JD, Aguayo P, Ostlie DJ, St Peter SD, et al. 15-Year experience in the treatment of rectal prolapse in children. J Pediatr Surg, 2010; 45(8): 1607-9. doi: 10.1016/j.jpedsurg.2010.01.012. PubMed PMID: 20713207.
8. Cares KE, El-Baba M. Su1166 Rectal Prolapse and It's Clinical Characteristics in Children. Gastroenterology, 2015; 148(4): S-425.
9. Cares K, El-Baba M. Rectal Prolapse in Children: Significance and Management. Current Gastroenterology Reports, 2016; 18(5): 22. doi: 10.1007/s11894-016-0496-y.
10. Morrison ZD, LaPlant M, Hess D, Segura B, Saltzman D. A systematic review of management options in pediatric rectal prolapse. Journal of pediatric surgery, 2019; 54(9): 1782-7.
11. Badebarin D, Aslanabadi S, Farhadi E, Danaie H, Eslami S. Evaluating the Efficacy and Safety of Perirectal Sclerotherapy with 50% Dextrose Injection as a Primary Surgical Procedure for Rectal Prolapse in Pediatric Patients: A Clinical Trial. IJ Pediatrics.34(4).
12. Saadai P, Trappey AF, Langer JL. Surgical Management of Rectal Prolapse in Infants and Children. Eur J Pediatr Surg, 2020; 30(5): 401-5. doi: 10.1055/s-0040-1716725. PubMed PMID: 32920799.
13. Baky Fahmy M, Ezzelarab S. Outcome of submucosal injection of different sclerosing materials for rectal prolapse in children. Pediatric surgery international, 2004; 20: 353-6.
14. Hight D, Hertzler J, Philippart A, Benson C. Linear cauterization for the treatment of rectal prolapse in infants and

children. Surgery, Gynecology & Obstetrics, 1982; 154(3): 400-2.

15. Shad M, Samady Khanghah A, Shojaeian R, Atqiaee K. Defecation habits in children with rectalprolapse: a retrospective analysis. Tehran University Medical Journal, 2024; 82(7): 565-9.
16. Delshad S, Piri N, Mirmoghadam Z. The Most Common Symptoms of Internal Rectal Prolapse in Children Referred to Maryam Hospital, Karaj: During 2015 to 2020. Alborz University Medical Journal, 2021; 10(1): 105-14. doi: 10.29252/aums.10.1.105.
17. Hill SR, Ehrlich PF, Felt B, Dore-Stites D, Erickson K, Teitelbaum DH. Rectal prolapse in older children associated with behavioral and psychiatric disorders. Pediatric Surgery International, 2015; 31(8): 719-24. doi: 10.1007/s00383-015-3733-9.
18. Cares K, Klein M, Thomas R, El-Baba M. Rectal prolapse in children: an update to causes, clinical presentation, and management. Journal of pediatric gastroenterology and nutrition, 2020; 70(2): 243-6.
19. E Ali H, SAE Mohammed A, EMA Hafez E, G El Goharey H, A Elbegawy M. Surgical and functional outcome of laparoscopic suture rectopexy for management of pediatric rectal prolapse. The Egyptian Journal of Surgery, 2024; 43(4): 1371-6.
20. Antao B, Bradley V, Roberts JP, Shawis R. Management of Rectal Prolapse in Children. Diseases of the Colon & Rectum, 2005; 48(8): 1620-5. doi: 10.1007/s10350-005-0074-0. PubMed PMID: 00003453-200548080-00018.