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Giant Solitary Rectal Polyp with Prolapse in a Young Child

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Abstract

Background: *Juvenile polyps are the most common polyps seen in children and are usually solitary lesions located in the rectosigmoid colon. They are generally small, measuring 1 to 3 cm in diameter, and are considered benign hamartomas. Giant juvenile polyps exceeding 4 cm are rare in children and can mimic other anorectal conditions, which may lead to diagnostic confusion. Case presentation: We report the case of a 9-year-old Indian girl who presented with intermittent rectal bleeding and obstructed defecation symptoms, including protrusion of a globular mass during defecation, incomplete evacuation, and straining. On examination, a pedunculated polypoidal mass measuring 4.0 × 3.7 × 3.5 cm was identified in the anal canal.*

Endoscopic snare polypectomy was performed under general anaesthesia, and the lesion was completely excised. Histopathological evaluation confirmed the diagnosis of a juvenile polyp, showing cystically dilated glands lined by non-dysplastic epithelium within an inflamed stroma. No dysplasia or malignancy was detected. Follow-up colonoscopy at three months revealed no recurrence, and the patient remained asymptomatic at six months.

Conclusion: *A rare presentation of a giant juvenile polyp in the anal canal of a child. Endoscopic polypectomy provides a safe and effective treatment, and histopathological confirmation is essential for accurate diagnosis.*

Educational Objectives

- *This report describes a rare case of a giant juvenile polyp exceeding 4 cm in size, located in the anal canal of a young child.*
- *This case provides a comprehensive overview of the successful management of a giant juvenile polyp.*

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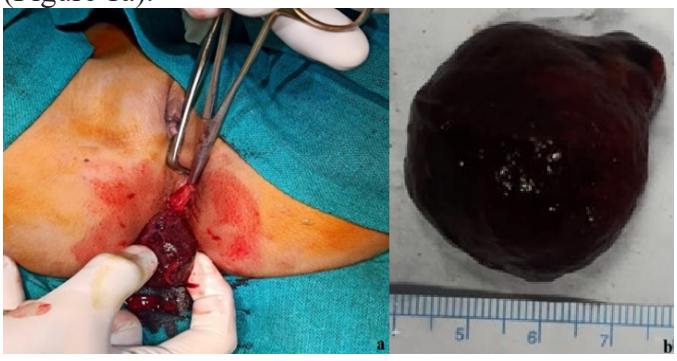
Introduction

Juvenile polyps (JPs) are the most common type of polyps seen in children. These include juvenile polyposis syndrome or simple JPs [1,2]. Familial adenomatous polyposis or Peutz–Jegher syndrome are other less common causes of JPs [3]. The colorectal region is the most frequent site, accounting for approximately 93% of cases [4]. Solitary JPs are the most common type of JPs, predominantly found in the rectosigmoid colon and less frequently in other regions of the ascending, transverse, and descending colon. They typically measure 1 to 3 cm in diameter, with a peak incidence in children aged 2 to 5 years [5]. While JPs are considered benign hamartomas, very few studies have reported instances of giant juvenile polyps exceeding 4.5 cm in size. Patients commonly present with symptoms of painless lower gastrointestinal fresh bleeding and a globular-shaped growth mass protruding through the anal opening, obstructed defecation syndromes (ODS), solitary rectal ulcer syndrome (SRUS), and incontinence [6,7]. Such clinical presentations can be indistinguishable from other conditions, including true rectal prolapse, Meckel's diverticulum, inflammatory bowel disease, or intussusception [8]. Written informed consent was obtained from the next of kin for the use of case data in research and for academic publication. All identifying information has been anonymized to ensure confidentiality.

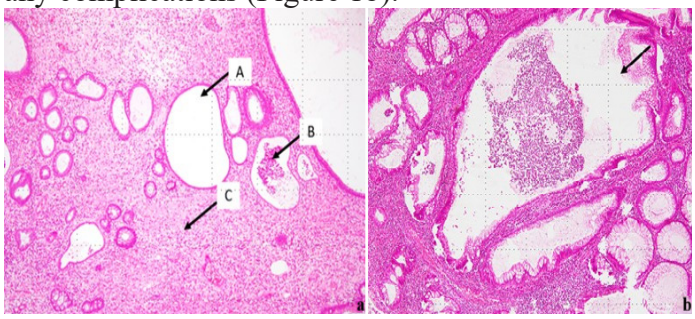
Case Report

A 9-year-old Indian girl presented to the paediatric surgery department with symptoms of intermittent rectal bleeding and ODS, including protrusion of a globular mass during the act of defecation, incomplete evacuation, and the need for excessive straining and digital manual evacuation for the past two months. On local examination of the perineal region, a pedunculated polypoidal mass measuring 4.0 × 3.7 × 3.5 cm was noted, situated 2 cm proximal to the anal verge. The mass was easily reducible manually (Figure 1a).



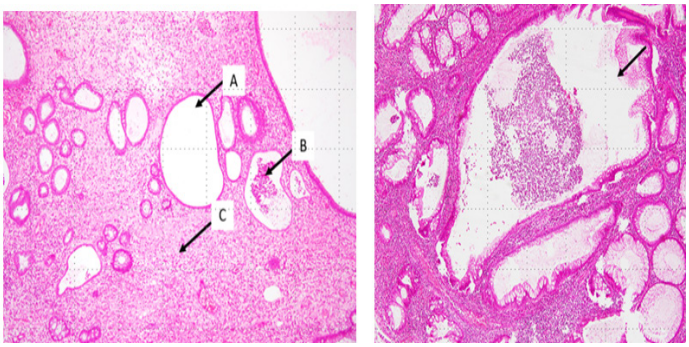
The surface was lobulated with areas of superficial ulceration. There was no history of associated abdominal pain, changes in bowel habits, weight loss, or any family history of colorectal cancer or polyposis syndromes. Growth parameters were within the normal range for her age, and no other significant systemic abnormalities were observed. Haematological investigations, including a complete blood count and coagulation profile, were all within normal limits.

Snare polypectomy was performed under general anaesthesia, and the entire polyp was excised without any complications (Figure 1b).



No additional polyps were seen throughout the colon on colonoscopy examination.

On histopathological examination, the resected polyp showed cystically dilated glands lined by non-dysplastic epithelium embedded within an inflamed and oedematous stroma, confirming the diagnosis of a JP. No findings of dysplasia or malignancy were identified (Figure 2 a & b).



On follow-up, a repeat colonoscopy performed at three months showed no evidence of polyp recurrence, and at six months she remained asymptomatic with no further episodes of rectal bleeding or prolapse.

Discussion

JPs are hamartomatous lesions caused by localized overgrowth of the colonic mucosa. The precise aetiology of solitary JPs is unknown. A hypothesis proposed by Roth et al. suggested that mucosal ulceration

or inflammation affecting the main excretory duct of colorectal glands results in obstruction, subsequent proliferation, and dilatation of these glands, leading to the formation of granulation tissue and eventual polyp development [9]. Therefore, the pathogenesis of JPs is considered multifactorial, including mucosal injury, glandular obstruction, and inflammation, causing cystic dilation of glands and stromal oedema [10].

Solitary JPs are most frequently present in the rectosigmoid colon, but are rarely observed in the anal canal [6]. Painless fresh bleeding from the anus is the most common clinical manifestation, reported in over 98% of cases. Other associated features may include mucous discharge, prolapse of the polyp through the anus causing ODS, SRUS, abdominal pain, and, less frequently, anaemia due to chronic blood loss [4,8,11].

Commonly reported sizes of the polyps are about 1 to 2 cm, with few instances of 3 cm polyps reported in the literature [12-15]. Large JPs measuring about 4–5 cm is very rare. To our knowledge, two cases of large JPs measuring 5 to 5.5 cm have been reported in young children,7 while one case of a 5 cm JP was reported in an adult. This case report is unique in describing a giant JP in the anal canal measuring about 4.5 cm in a young child, which to the best of our knowledge has not been reported previously. Giant JPs, as observed in the present case, can present with prolapse, mimicking other conditions such as true rectal prolapse or even intussusception. This emphasizes the importance of careful clinical differentiation, as the management strategies for these conditions differ significantly [6].

Grossly, JPs appear as pedunculated, smooth-surfaced, reddish lesions characterized by the presence of cystic spaces. On histological examination, these cysts correspond to dilated glands filled with mucin and inflammatory debris. The remaining portion of the polyp consists of lamina propria with mixed inflammatory cell infiltration. The muscularis mucosae may appear normal or attenuated [16]. While dysplasia is uncommon in solitary JPs, its potential occurrence warrants thorough histological evaluation, particularly in cases involving multiple polyps or suspected syndromic presentations such as Juvenile Polyposis Syndrome (JPS) [17].

The standard management for JPs involves endoscopic polypectomy, typically performed under general anaesthesia to ensure patient comfort and cooperation, especially in children. Prior to the procedure, premedication, digital rectal examination, and anoscopy are often employed to identify and assess accessible lesions. This is usually followed by complete pan colonoscopy to detect and resect any additional polyps if present, using a snare.11 Although generally safe, potential complications of endoscopic polypectomy include excessive bleeding and intestinal perforation, which are rare.

Surveillance colonoscopy is generally not indicated for solitary JPs once completely resected, unless there is recurrence of symptoms. However, in cases involving multiple polyps, a positive family history of colorectal cancer or polyposis syndromes, or histological features suggestive of JPS, further genetic and endoscopic evaluation is essential [18].

Conclusion

This case report describes a rare presentation of a giant JP measuring 4.0 × 3.7 × 3.5 cm in the anal canal, which is even rarer in a 9-year-old child. JPs should be considered in the differential diagnosis of rectal bleeding and prolapse in children. Endoscopic polypectomy represents a safe and effective management strategy, even for large lesions. Histopathological evaluation of the resected polyp is essential to confirm the diagnosis and to exclude dysplasia or malignancy. The long-term prognosis for solitary JPs is generally excellent following complete removal. However, continued vigilance and appropriate follow-up are necessary in cases involving multiple polyps or suspected underlying polyposis syndromes.

Ethical Information and Consent Statement: Written informed consent was obtained from the next of kin for the use of case data in research and for academic publication. All identifying information has been anonymized to ensure confidentiality.

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