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Juvenile Rectal and Sigmoid Colon Polyps Treated Endoscopically: A Series of Cases Seen at St. Francis Hospital Nsambya, Uganda

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Abstract

Juvenile polyps are common benign mucosal lesions in the gastrointestinal tract, with the colon being a frequently affected site. This case series examined three pediatric patients who underwent endoscopic polypectomy for juvenile polyps in a tertiary hospital. The objective was to analyze their presentation, management and outcomes. The patients in this series all presented with rectal bleeding, which aligns with previous studies highlighting rectal bleeding as the most common symptom in juvenile polyps. Interestingly, none of the patients experienced associated abdominal pain, consistent with findings from studies conducted in Asia. Notably, all the children in this series presented more than a year after the onset of rectal bleeding, indicating a longer duration compared to studies from Asia, where the average was 7.6 months. Endoscopic polypectomy, explicitly using the cold snare technique, was successfully performed in all cases without any reported complications. This procedure involves the removal of polyps during an endoscopic examination, followed by a histopathological examination to assess the risk of malignancy. The findings from this examination guide further surveillance or treatment. In this case series, all the juvenile polyps presented with Rectal bleeding with no associated abdominal pain and all were left-sided and presented after over a year of rectal bleeding and cold snare. Endoscopic polypectomy was used safely in their management with no reported complications in our setting.

Keywords: Juvenile polyps • Endoscopy • Colon • Surgery • Rectal bleeding

Introduction

Polyps are benign mucosal lesions that can develop throughout the gastrointestinal tract, with the colon being one of the most common sites of occurrence. In the pediatric population, juvenile polyps are the most frequently encountered type, accounting for up to 90% of all colorectal polyps in children [1,2]. Although the exact etiology remains unclear, genetic predisposition, immune system dysregulation and environmental factors have been implicated in the development of these lesions [3]. The majority of juvenile polyps are asymptomatic. However, they can present with symptoms such as rectal bleeding, abdominal pain and altered bowel habits. Potential complications of rectal polyps in children include anemia due to chronic bleeding [3], intussusception [4] and, in rare cases, malignant transformation to colorectal cancer which is the third most common and the second leading cause of cancer deaths globally. Endoscopic removal, such as polypectomy or endoscopic mucosal resection, followed by histopathological examination to assess the risk of malignancy can guide further surveillance or treatment [5].

In a large cross-sectional study in the United States, the prevalence of pediatric colorectal polyps was 6.1% with a higher prevalence in males, non-Caucasians and children with lower GI bleeding [6]. Despite the increasing burden of colorectal polyps, there is still limited information regarding their epidemiology, risk factors and complications in the pediatric population of low-resource settings like Uganda. This case series aims to address this gap by focusing on the clinical characteristics, diagnosis and management of juvenile rectal polyps in Ugandan children. By analyzing a series of three cases from a tertiary care center in the region, we seek to contribute to the existing body of knowledge and inform clinical practice in similar settings.

Case Presentation

Case 1

10-year-old female from Wakiso district, Uganda, who was brought by the mother with a history of noticing drops of fresh blood while passing stool for over 3 years. There was no history of anal pain, itching or swelling. She also had no history of constipation or diarrhea, abdominal pain, distension, nausea or vomiting. The rest of the other systems were unremarkable.

On examination, the child was in a good general condition, afebrile, not pale, with no jaundice and no dehydration. The abdomen was of normal fullness, moving with respiration, no palpable organs or masses and the bowel sounds were normal in pitch and frequency. Had a normal Digital rectal examination. The rest of the other systemic examinations revealed no abnormalities. The stool examination was occult blood positive, but the stool was formed and no ova or cysts were seen. The stool Helicobacter Pylori antigen was negative. The urinalysis showed an elevated leucocyte esterase of 75 and 7–10 pus cells seen per low-power field. The complete blood count revealed a hemoglobin concentration of 10g/dL, a hematocrit of 30 and a white cell count of 7 × 103.

Colonoscopy found a single Rectosigmoid polyp involving the posterior surface of the Rectosigmoid junction measuring 1.5cm by 1cm cm, 12 cm from the anal verge. The polyp was not actively bleeding. The entire length of the colon appeared normal. Submucosal saline injection was done and a

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polypectomy done using endo-diathermy, achieving hemostasis. The patient was discharged one day after polypectomy on analgesia and antibiotics for five days and scheduled for a repeat colonoscopy after one year. On review after one week, the symptoms had resolved with no recurrence of the rectal bleeding. Histology confirmed a hyperplastic polyp (Figure 1).

Case 2

9-year-old female, originally from Democratic Republic of Congo but living at Entebbe, Uganda at the time with longstanding history of rectal bleeding for two years. The bleeding was of fresh blood, on and off and the last episode was one day prior to admission. This was no associated abdominal pain. There was no history of diarrhea, constipation, abdominal distension, nausea and vomiting. The parents reported no history of the child having fevers, weight loss and night sweats. The rest of the other systems were unremarkable. There was no known family history of colorectal malignancies.

On examination of, the child was in a fair general condition with no pallor, no jaundice, no dehydration, no lymphadenopathy and no cyanosis. The temperature was 36.8 degree Celsius, pulse rate of 82 beats per minutes and respiratory rate of 24 breath cycles per minute. The abdomen was of normal fullness, moving with respiration, soft, non-tender with no palpable organs or masses. The bowel sounds were normal in pitch and frequency and the abdomen was resonant to percussion. The digital rectal exam revealed no abnormalities with normal perianal skin, no masses palpable in the rectum and no blood in the examining gloves.

Laboratory results showed a hemoglobin concentration of 09 g/dl, with a white blood cell count of 12 × 103, absolute neutrophil count of 5 × 103 and a platelet count of 154. Colonoscopy findings were of a normal ascending, transverse, descending and sigmoid colon. There was a polyp noted in the upper rectum, measuring 2cm by 1.8 cm, 10 cm from the anal verge, pedunculated both with hemorrhagic surface (Figure 2). The child was then prepared for colonoscopy and snare polypectomy with hemostatic clipping under sedation which was done successfully. The child was discharged home the following day with antibiotics and analgesia. Child improved on subsequent review and Histology revealed a hyperplastic polyp.

Case 3

4 years and 6 month male, from Wakiso district, Uganda, who was brought by the mother with complaints of Rectal Bleeding for over one year? The mother reported that the symptoms had worsened over the past three months prior to admission with passage of fresh blood on every episode of passing stool and complaints of anal pain. The child however had no other abdominal symptoms of pain, distension, diarrhea, constipation or vomiting. The child did not have a history of fevers, weight loss or night sweats. He however had a longstanding history of a dry cough with occasional chest pain but no hemoptysis. Other systems were unremarkable.

On examination, the child was in a good general condition, well-nourished with no pallor, no jaundice, no cyanosis, no lymphadenopathy and no dehydration. The pulse rate was 84 beats per minute with an oxygen saturation of 99% on room air. The abdomen was of normal fullness, moving with respiration, soft, non-tender with no scars, palpable organs or masses. The bowel sounds were normal in pitch and frequency. On digital rectal exam, the per-anal skin appeared normal with no skin tags or hemorrhoids. Colonoscopy found a polyp in the sigmoid 16cm from the anal verge measuring 2cm × 1.8cm × 1cm (**Figure 3**). Endoscopic polypectomy was done with snare and Endodiathermy. The child was discharged on the second day of admission and the subsequent reviews were unremarkable.

Discussion

In this series of cases, we set out to look at children in our setting with juvenile polyps who had undergone endoscopic polypectomy.

All our patients presented with rectal bleeding which is the commonest presentation in many studies that looked at juvenile polyps [7]. there was no associated abdominal pain in all patients in our setting , this is in line with some studies in Asia have showed 90% of the children present with Rectal bleeding with no associated abdominal pain [1,8].

All our children presented more than a year after the onset of rectal bleeding. That is much longer that what has been seen in studies done in Asia where the average was 7.6 months [7].

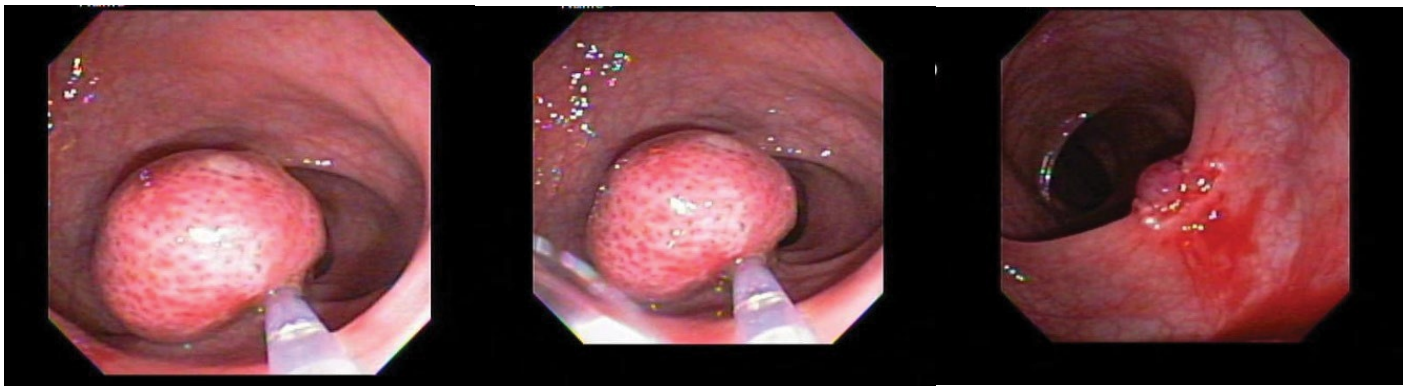

Figure 1. Colonoscopy images of case 1 that show the rectal polyp during and after polypectomy.

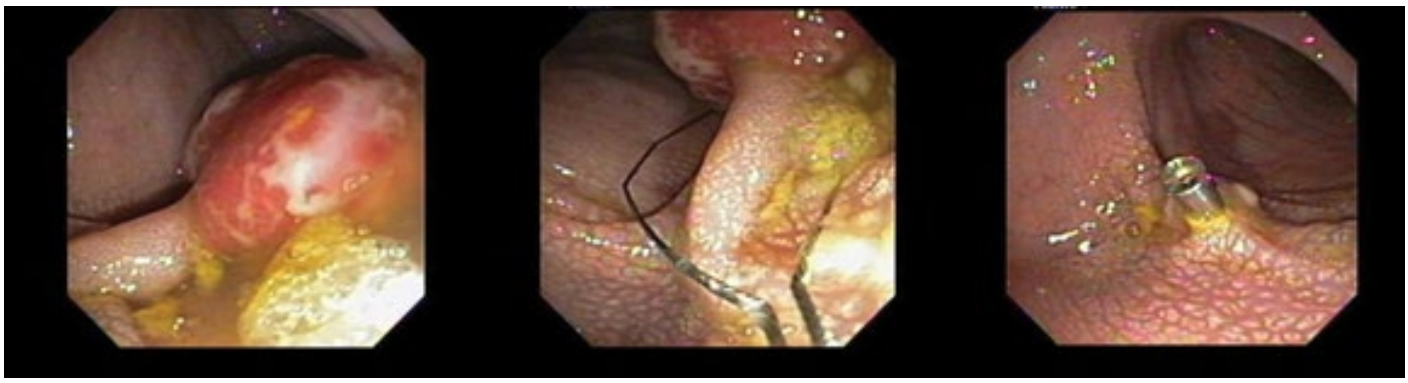

Figure 2. Colonoscopy findings of patient 2 showing rectal polyp measuring 1.8cm by 1.4 cm, 10 cm from the anal verge.

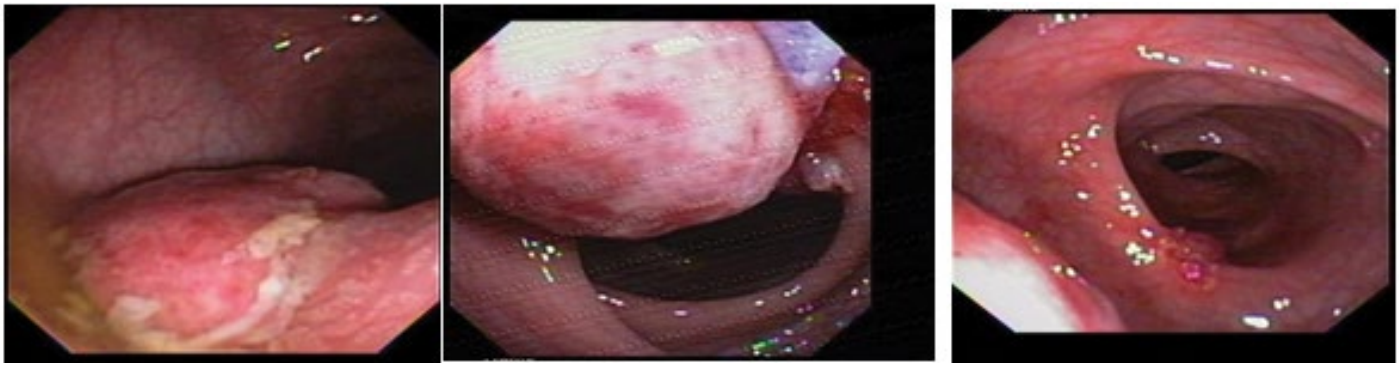

Figure 3. Juvenile hyperplastic polyp in the sigmoid colon cold snare polypectomy done.

This may be because initially there are usually small amounts and streaks of blood mixed with stool and as the polyps grows the amount of bleeding increases as has been reported in some studies in Asia [1], the absence of pain in the majority of these children may also contribute to the delay in presentation.

In this case series , all the juvenile polyps were located in the rectum and sigmoid colon , this is in line with many studies done were the majority of juvenile polyps were located in the sigmoid colon and rectum [1].

All the polyps were hyperplastic which are known to have no malignant transformation potential.

Loop snare polypectomy technique was used in all the cases presented , in two of the cases the polyps were pedunculated, one case had a short stalk and submucosal injection of normal saline was used prior to safe snaring . In one of the cases a hemostatic clip was used to achieve hemostasis. This is standard polypectomy technique used in many cases that involve pediatric polypectomy [1,9].

All the cases under went colonoscopy and polypectomy under sedation with no complications reported as this has been shown to be safe in many studies [1,8,10].

The commonest complications of endoscopic polypectomy by snare include hemorrhage and perforation [11], we did not encounter any of these complications in the cases seen.

Conclusion

In this case series, all the juvenile polyps presented with Rectal bleeding with no associated abdominal pain and all were left sided and presented after over a year of rectal bleeding and cold snare Endoscopic polypectomy was used safely in their management with no reported complications in our setting.

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