ABSTRACT

Objective

To determine causes and management of rectal bleeding in infants and children.

Patients and Methods

This descriptive retrospective study was carried out at department of pediatric surgery, the children’s hospital, Pakistan Institute of Medical Sciences (PIMS), Islamabad from January 2010 to December 2010. All children under the age of 12 years presenting with rectal bleeding were included. The data was reviewed for age, gender, clinical characteristics and management. In all cases complete blood counts (CBC) was done, and patients with palpable rectal polyp underwent sigmoidoscopy. The rectal polyp and mucosal biopsy were sent for histopathology.
Results

Two hundreds eighty seven children were included in the study with a mean age of 5.25 years and male to female ratio of 2.3: 1. Out of 287 patients, 192(66.9%) were male and 95 (33.1%) were female. Rectal polyps were found the most common cause of bleeding (n=173, 60.3%). The polyp was mostly single pedunculated cherry red in color. Site of polyp was mostly the recto sigmoid or descending colon. Thirty six (12.5%) children were treated conservatively with the suspicion of infectious colitis. Intussusception (n=25), anal fissure (n=24), Meckel’s diverticulum (n=5), rectal prolapsed (n=16), Midgut volvulus with malrotation (n=4), juvenile polyposis coli (n=2) and necrotizing enter colitis (n=2) were other causes of rectal bleeding.

Conclusion

Juvenile colorectal polyps were the most common cause of rectal bleeding in children. Most were removed by colonoscopic polypectomy. Majority of the polyps were hyperplastic or hamartomatous. (Rawal Med J 2011;36:281-283).

Key Words

Rectal polyp, rectal bleeding, digital rectal examination.

INTRODUCTION

Gastrointestinal bleeding in infants and children causes parental anxiety. Bleeding, although common, is usually limited; thus, time is available for diagnosis with careful history and physical examination1 aided by standard endoscopic and radiographic procedures.2 Lower gastrointestinal bleeding is commonly encountered in clinical practice; although its epidemiology has not been well studied.3-7 The causes are usually simple, and require little or no treatment, for example, anal fissure, juvenile polyps, but sometimes these symptoms may indicate more severe and life
threatening conditions, such as Intussusception, Meckel’s diverticulum, midgut volvulus and peptic ulcer disease.\(^8\)\(^-\)\(^9\) Localization of the source of bleeding is important in the management of these children.\(^4\)\(^,\)\(^5\) Juvenile polyps, also called retention polyps because they contain mucin cysts, occur in children less than 10 years of age.\(^10\) They tend to be single, pedunculated, cherry red with smooth surface and often bleed due to friable mucosa. Juvenile polyps are hamartomas, which are rare in the first year of life and are thus thought to be acquired.\(^11\) The aim of present study was to determine etiology of rectal bleeding in infants and children and their management.

**PATIENTS AND METHODS**

This descriptive retrospective study was carried out in the department of pediatric surgery, the children’s hospital, PIMS, Islamabad for one year from January 2010 to December 2010. Infant and children who were under 12 years of age with a common symptom of rectal bleeding were included. Data regarding history, physical examination including digital rectal examination was collected. Those suspected of polyp and underwent sigmoidoscopy, polypectomy and histopathology were reviewed. In case where polyp was not found on rectal digital examination, and by sigmoidoscopy, they were had empirical treatment of infectious colitis. The demographic data, clinical presentation, sigmoidoscopic and histological findings were analyzed. In patients where on sigmoidoscopic polyp was not found, fiber optic scope examination was done under general anesthesia.

**RESULTS**

Out of 287 patients, 192 (66.9%) were male and 95 (33.1%) were female. The mean age at diagnosis was 5.25 years. Rectal polyps were the most common cause and found in 173 (60.3%) children (Fig 1). They were more often in boys than girls. Anemia was noted in 52 (30%) patients. Eight (4.62%) children had prolapsed polyps and auto amputated polyp through anus. All polyps
were removed successfully by endoscopy. No surgical complication occurred. Histology of all the patients showed juvenile polyps.

**Fig. 1. Causes of rectal bleeding in children (N=287).**

Thirty six (12.54%) patients had nothing significant on clinical as well as on rectal digital examination. They were treated conservatively with the suspicion of infectious colitis for 2 weeks. Two child were diagnosed as a case of juvenile polyposis coli, out of them one patient under went for total colectomy and ileoanal pull through, and one patient refused from surgery.

We had twenty five patients with intussusception, which were diagnosed on clinical examination and confirmed by ultrasonography and exploratory laprotomy was done in all of them. We found five cases with Meckel’s diverticulum, and these underwent resection with end to end anastomosis.

Four patients with mid gut volvulus also underwent exploratory laparotomy. Two patients with necrotizing enterocolitis expired due to sepsis. Twenty four cases (8.33%) of anal fissure were treated conservatively.
DISCUSSION

The present study showed that colonic polyps were frequent in children and presentation was rectal bleeding. A source of bleeding could be identified by physical examination and sigmoidoscopy. In this study 93% rectal polyps were found by digital examination and were removed at sigmoidoscopy. In our study, polyps were the most common cause of rectal bleeding. The reported prevalence of juvenile polyps in children undergoing endoscopic examination for various indications varies from 4% to 17% in western data.\textsuperscript{12-14} In India, it was very high (61%),\textsuperscript{15} reflecting high incidence in this region. Polyps may cause anemia secondary to passive blood loss in stool.\textsuperscript{9,10} In this study, anemia was found in 30% patients with polyp.

Forty four (97.77%) children were diagnosed a polyp with digital examination and with rigid sigmoidoscope in one child (2.22%) only. Other reports showed 60-70% of colorectal polyps were detected by digital examination.\textsuperscript{15} Juvenile polyps are usually benign, however, adenomatous changes and colorectal carcinoma arising from them have been reported.\textsuperscript{16,17} In our study, there was no single case found with dysplastic changes; whereas others have reported it from 0.3% to 11% in their series.\textsuperscript{9,11,18,19} We encountered no complication in our series, however, 5-14% had bleeding and perforation.\textsuperscript{12,18,20}

Non-specific colitis in children is often one of the causes of rectal bleeding in children. Lesions are restricted to rectum but may extend proximally to involve sigmoid colon.\textsuperscript{21} We saw two children who were diagnosed at histology. Two patients of juvenile polyposis coli were noted which has different prognosis than non-specific colitis.\textsuperscript{22} The common causes of lower bleeding in the preschool period (two to five years) are infections and polyps.\textsuperscript{23} In Egyptian children, enterocolitis, polyps and chronic colitis were major causes of rectal bleeding.\textsuperscript{24}
CONCLUSION

Colorectal polyps were common cause of rectal bleeding in children. Most polyps were hyperplastic or hamatomatous or juvenile therefore single session of polypectomy was good enough to relieve the symptoms permanently.

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REFERENCES


