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Research Article

**STUDY TO DETERMINE THE INCIDENCE OF VARIOUS
ETIOLOGIC FACTORS CAUSING LOWER
GASTROINTESTINAL BLEEDING AND THE IMPORTANCE
OF ENDOSCOPY IN CHILDREN**Dr. Umama Najam¹, Dr. Muhammad Haseeb Farooq Awan², Dr. Ayesha Iftikhar³¹ Rawal Institute of Health Sciences, Islamabad² CMO at BHU Lamiyan Pattiyar District Muzaffarabad³ House officer, Allied Hospital, Faisalabad

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Abstract:**Aim:** To determine the frequency of various etiological factors causing lower gastrointestinal bleeding by endoscopy.**Study Design:** A cross-sectional study.**Place and Duration:** In the department of Gastroenterology and Pediatrics, PIMS Hospital, Islamabad for one year duration from March 2019 to March 2020.**Methodology:** 160 patients with rectal bleeding undergoing colonoscopy were enrolled in the study.**Results:** The study included 160 patients. The male to female ratio was 2.9: 1. The average age was 7.05. All patients had rectal bleeding. Rectal polyps 74 (46.3%), chronic colitis 20 (12.5%), infectious colitis 19 (11.9%), nonspecific colitis 19 (11.9%) are the most common diagnoses on endoscopy and normal endoscopy results were noted in 27 (16.9%).**Conclusion:** We conclude that rectal polyps are the most common cause of children with rectal bleeding. Colonoscopy is effective for correct diagnosis and further treatment of rectal bleeding.**Key words:** rectal bleeding in children, colonoscopy in children.**Corresponding author:****Dr. Umama Najam,**

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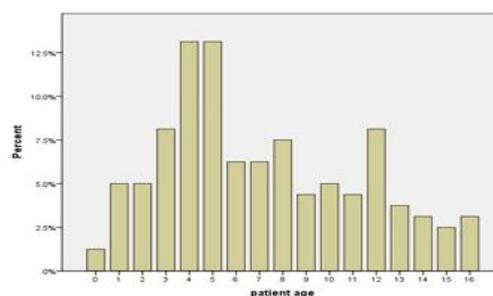
INTRODUCTION:

In the pediatric group, it is important to reduce gastrointestinal bleeding. Gastrointestinal bleeding occurs anywhere in the gastrointestinal tract and determining the area can be difficult. Bleeding occur below the ligament of trietz i.e., Lower gastrointestinal tract from fourth part of duodenum to the anus. Lower gastrointestinal bleeding mainly results from colon pathologies, but the source of bleeding is not always fully available¹⁻³. Lower gastrointestinal bleeding is manifested by rectal bleeding, diarrhea, constipation, abdominal pain, flatulence and abdominal mass. Although not associated with significant mortality, it is associated with chronic blood loss and anemia-related diseases⁴⁻⁵. The low incidence of gastrointestinal bleeding is 20% of all children with gastrointestinal bleeding. According to the study, the low incidence of gastrointestinal bleeding is 20 to 27 cases per 100,000 cases in Western countries. Various causes of lower gastrointestinal bleeding include infectious colitis (37.1%), polyps in the large intestine (21.1%) and chronic colitis (16%), including inflammatory bowel diseases (5.2%) allergic colitis (2.6%), single rectal ulcer syndrome (1.5%) and non-specific colitis (6.7%). Meckel's intussusception and diverticulum were the causes in 7.3% and 2.6%, respectively, while other etiologies involved blood vessels (6.2%), systemic (3.6%), (1.5%)⁶⁻⁸. In 1.5% of cases, the cause remained unclear. Flexible fibrous endoscopic examination provides a unique diagnosis and sometimes a therapeutic tool. Indications for lower gastrointestinal endoscopy included rectal bleeding, chronic diarrhea, anemia, and suspected bacterial hyperplasia. The diagnosis of all these patients is based on history, clinical and digital rectal examination, and barium testing in our case. All these tools have no sensitivity or specificity. Due to the lack of information about the usefulness of these tools among local specialists, the situation is much worse in the pediatric age group, where interventions such as endoscopy with low IG are not frequent, as a result of which many children

RESULTS:

The study included 160 patients, 119 (74.4%) boys and 41 (25.6%) girls. The average age of diagnosis was 7.05 years.

Patients age

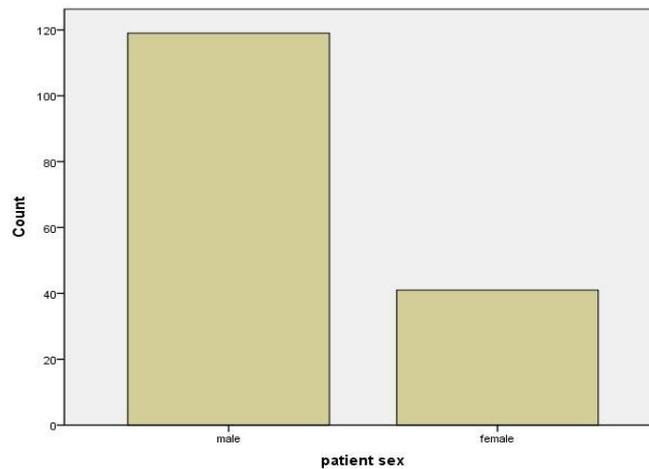


are not diagnosed⁹⁻¹⁰. In this study, we plan to determine the incidence of various etiologic factors that cause rectal bleeding by endoscopy of the lower gastrointestinal tract. Various etiological factors occurring in the lower gastrointestinal endoscopy may promote the use of this tool, emphasizing its importance as a diagnosis, and, in selective situations such as rectal polyps and intussusception, this method can also be used therapeutically.

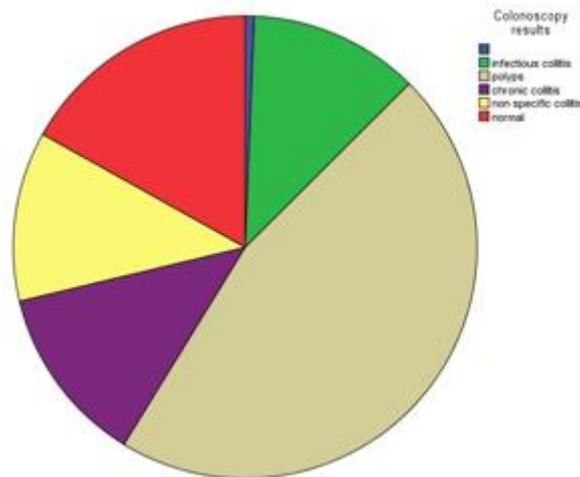
TOOLS AND METHODS:

160 children who were bleeding from the rectum and were selected for endoscopy from both sexes up to the age of 16 were included, and these patients were enrolled. After receiving detailed written consent from the patients were told about the nature of the procedure and possible side effects. Patients with reduced platelet count (<100) and PT (> 5 seconds), APTT (> 10 seconds) and bleeding time (> 15 minutes) and congenital malformations due to pain or incorrect trail was excluded from the study. All demographics were recorded, including age, gender, endoscopic findings and final diagnosis. Before surgery, the intestine was prepared according to the hospital protocol. All endoscopes were performed by one gastroenterologist consultant in accordance with the unit protocol. Various etiologic factors were recorded, including colon polyps and intussusception diagnosed during endoscopy, and histopathological evidence of infectious colitis, chronic colitis, nonspecific colitis and inflammatory bowel disease was confirmed. Many lower gastrointestinal biopsies were performed. Histopathology of biopsy samples was performed to obtain a final diagnosis. All data obtained was entered in the SPSS 19 version (because SPSS 12 is not available) and analyzed using the statistical package. The variables examined included age, gender and etiological factors. Age and quantitative variables were presented by calculating the mean and standard deviation. Qualitative variables such as sex and infectious colitis, polyps, chronic colitis including inflammatory bowel diseases, vascular colitis, nonspecific colitis and intestinal invasion are presented by calculating frequency and percentage.

Patient Sex



Colonoscopy Results



Rectal polyps are the most common cause of rectal bleeding in children and 74 (46.3%) were found. The average age of patients was 7 years. All polyps were successfully removed by colonoscopy. The second cause of bleeding was chronic colitis and 20 (12.5%). Infectious colitis and nonspecific colitis were the same and occurred with the same values of 19 (11.9%). Normal colonoscopy was 27 (16.9%), but the children had bleeding disorders. No vascular cause or intussusception was diagnosed.

DISCUSSION:

There are often common causes of frequent rectal bleeding in children and all patients require appropriate assessment and more appropriate treatment¹⁰⁻¹¹. In a larger report, rectal bleeding was the main complaint in 0.3 percent of over 40,000 patients who had referred to the Boston Children's Emergency Department since September 1991¹². Until August 1992. In another study, polyps were the most common cause of bleeding without rectal bleeding (56.25%). He was very high in India (61%). This reflects the very frequent occurrence in this region. Polyps have been reported in children undergoing colonoscopy for various indications, from 4% to 17% in Western countries. Juvenile polyps are usually benign, but adenomatous lesions and cases of colorectal polyps from juvenile polyps

have been reported. Non-specific cause is one of the main causes of rectal bleeding in children. Infection should be considered in children with rectal bleeding accompanied by dysenteric symptoms¹³. In Egyptian children, infectious enteritis, followed by polyps in the colon and chronic colitis are the main causes of rectal bleeding. According to our study, the pathological causes of rectal bleeding in children account for 83.1% of patients who were selected according to our inclusion and exclusion criteria¹⁴⁻¹⁵. Our study shows that, unlike Western studies, rectal polyps are the most common cause of rectal bleeding (46.3%) and are large in this area (subcontinent). The second most common reason in our study is chronic colitis, which is also against the international pattern. In Western studies, the leading cause of rectal bleeding, an infectious cause, occurs

at position 03 in my study, accompanied by nonspecific colitis, which is almost twice as common as the cause of bleeding in this area.

CONCLUSION:

Colorectal polyps are the most common cause of rectal bleeding in children. The selection of patients suitable for colonoscopy allows for quick and accurate diagnosis and further management. Depending on the source of bleeding, treatment may include endoscopic removal for relief of symptoms. It is therefore important to determine the cause of colonoscopy in properly selected patients to ensure definitive treatment.

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