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Paediatric Lower Gastrointestinal Tract Bleeding and Endoscopy.

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Introduction

Lower gastrointestinal bleeding (LGIB) in infants and children is usual symptoms for presentation into a GI Unit. The Lower gastrointestinal (GI) tract is a vascularised organ with a large surface area. Thus, any pathology involving the vasculature of the GI tract directly or indirectly can lead to GI bleeding. GI bleeding is considered as an alarming sign depending on the amount and pattern in any age group and should be approached meticulously. Moreover, in children, GI bleeding causes excessive anxiety and concerns and undue stress for the parents. It is categorized into upper and lower according to the site from which the bleeding originates.

Lower GI bleeding is defined as bleeding originating from parts of the intestine distal to the ligament of Treitz, which is located at the duodenojejunal junction.1 Among pediatric patients presenting to an emergency department with a chief complaint of rectal bleeding, approximately one-third have LGIB and the remainder have an upper GI source of bleeding or the source is unspecified (2]. GI related Bleeding is severe enough to warrant hospital admission in about 5 -10 percent of cases [2,3]

Definitions

- Upper gastrointestinal bleeding (UGIB) refers to bleeding that originates from the GI tract proximal to the ligament of Treitz (the junction of the duodenum and jejunum). It includes bleeding sources in the esophagus, stomach, and duodenum.
- Lower gastrointestinal bleeding (LGIB) refers to bleeding distal to the ligament of Treitz and thus includes bleeding sources in the small bowel and colon.

Lower Gastrointestinal (LGIB) bleeding, which has several clinical manifestation and origins, some of them is known for life-threatening events in children. Several aetiologies have been suggested for GI bleeding4. The study was done to find out Paediatric lower GI Bleeding coming to gastroenterology practice.

Methods

In this Retrospective study done in patient underwent lower GI scopies for suspected LGI blood loss. After obtaining informed consent of their parents, 22 patients aging from newborn infants to 12-year-old children with LGI bleeding Medical trust hospital ,Kochi were enrolled in this study from June 2019 to July 2021.

After performing routine diagnostic and therapeutic procedures, a checklist containing all necessary information including 5demographic data, clinical history of patients6, endoscopy and pathology findings7, clinical and preclinical 8information were collected.

Analysis

22 children under the age were included in the study of which includes 6 males (27.27%) and 16 females (72.72%).

Age Distributions

Table 1: Age distribution of Lower Gastrointestinal bleeding in children

Most common age of presentation were between 8-12 years involving 63.64%. While least 4.54% occurred less than 2 years of age.

Site of Involvement	Male	Percentage	Female	Percentage
< 2 Years	1	4.54	0	0
2-5 Years	0	0	3	13.63
5-8 Years	1	4.54	3	13.63
8-12 years	4	18.18	10	45.45

Clinical Presentations of LGIB

Most Children's presented with Fresh bleeding per rectum or as anal verge bleeding .Few of them had additional history of Perianal pain ,swelling and hematochezia.

Table 3: Signs of presentation

Sign of presentation	Male	Female
Fresh bleeding	6	14
Haematochezia	0	2
Perianal pain	1	8
Perianal Swelling	1	0
History of Trauma	0	0
Any sign of Coagulopathy vasvascular	0	1

Source of LGIB

The most common source identified was from anterior 9and posterior anal fissures (40.90%) followed by Proctitis and colitis (13.63%) as per the study

Table 4. Site of Bleeding during Endoscopy.

Site of Bleeding	Male	Percentage	Female	Percentage
Peri anal Erosions	0	0	0	0
Anterior anal fissure	0	0	3	13.63
Posterior anal fissure	1	4.54	5	22.72
Haemorrhoids	0	0	1	4.54
Proctitis / colitis	1	4.54	2	9.09
Polyps	2	9.09	0	0
Rectal Ulcers	1	4.54	1	4.54
No detected abnormalities	2	9.09	4	18.18

Type of procedure Underwent

For most Children's a sigmoidoscopy or a limited colonoscopy were only required for arriving at a diagnosis. Full length colonoscopy was done in only 27.27 % as required. Of the patients underwent scopies 9.09 % of patient underwent a Polyp removal.

Table 6: Type of procedure underwent

Procedure	Frequencies	Percentage
Sigmoidoscopy/Limited colonoscopy	16	72.72
Colonoscopy	6	27.27
Endoscopic Hemostasis	0	0
Polypectomy	2	9.09

Complications and Hospital stay

No major complications were noted during any procedures or admissions. None of them had any redo procedures or any episode of bleeding. All patients admitted were discharged within 5 days of stay.

Discussion

GI bleeding may have several etiologies. Zahmatkeshan 10 et al., in a study in 2012, reported that lower GI bleeding was more prevalent in 2–10-year-old children, and occurs infrequently in neonates. Fresh bleeding PR was the greatest common presentation. The most prevalent reported finding in colonoscopy was sigmoid polyps. GI bleeding causes might change by season and location. Of a total 22 study children, 6 (27%) were male and 16(72%) were female. The results of this study showed that the most important causes of bleeding in lower GI among all admitted patients was Perianal fissure. The other main causes of lower GI bleeding were polyp (9.09 %), chronic nonspecific colitis and Proctitis (13.4). No definite source were identified in 6 children's. The current study is very limited due to its short study time, single center, short duration and a small sample size .

Conclusion

The presence of bloody stool is a common finding among pediatric clinics. It can cause stress and panic in parents, babysitters, and even physicians. Previous studies have demonstrated that rectal bleeding in most infants and children is a benign and self-limiting condition usually requiring no treatment or one that can be managed by supportive care. The fact that etiologies of pediatric lower GI bleeding vary among different geographical regions and ethnic groups necessitates the investigation of the epidemiology and characteristics of this disorder in each region.

We found that lower GI bleeding was more common among 10–12-year-old children and rarely encountered in neonates. Fresh bleeding PR was the most common form of presentation followed by painful bleeding, which was similar to previous studies of Western populations. In the current study, the most common colonoscopy finding was sigmoid colon polyps leading to rectal bleeding. The etiologies of lower GI bleeding in our series varied significantly with previous reports.5 Most previous reports have shown that constipation with fissure formation was the most common cause for rectal bleeding in toddlers and school-age children which were replicated in our study too. Milk or soy allergy as well as intussusceptions have been classified as other common causes of lower GI bleeding in children which is rarely presented in adult gastroenterology practices.

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Key Words-Lower GI bleeding, Perianal Fissures, Endoscopy.