

Bleeding per Rectum in Children : North Indian Experience

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ABSTRACT

Background: Bleeding per rectum in children is a common cause of hospital attendance for the paediatric patients. We tried to look for the causes of the same in a tertiary care center on out patients basis so that proper care can be instituted.

Methods: We have enrolled 211 consecutive patients in our OPD from 1- 12 years of age and tabulated the cause. We divided the patients in two groups based on their stool. Proper history taking and examination done, some patients required special investigations like endoscopy and Meckel's scan.

Results: Anal fissure (64%) was the commonest cause of rectal bleeding in preschool children although polyp, intussusception and Meckel's diverticulitis play a significant role.

Conclusions: Most of the causes can be diagnosed and treated on OPD basis with proper history taking and examination of the patients, thereby we can alleviate the distress to the family.

Key words: Bleeding per rectum, Paediatric rectal bleeding, Anal fissure.

Introduction

Per rectal bleeding is relatively less common problem in children though it is very much frightening and can cause a lot of anxiety to the parents. The majority patients of rectal bleeding are due to minor causes which needs little care but at times it may indicate significant pathology which needs prompt diagnosis and care[1]. Rectal bleeding is one of the most common presenting complaints in paediatric surgical superspeciality clinic though sometimes patient present in emergency clinic with a more severe problem which requires urgent treatment. the epidemiology of this problem is not well studied till date[2-6]. In infant and younger children anal

fissure is one of the commonest cause but in older children rectal polyp is the main culprit. A careful clinical history, examination specially digital rectal examination (DRE), stool test is essential to diagnose the cause. Special investigations like radiological investigation, endoscopy and

Meckel's scan sometimes needed in special circumstances to pin point the diagnosis. The objective of this study was to analyze the causes of rectal bleeding mostly in out-patient department (OPD) basis to provide proper care.

Materials and Methods

This is a prospective study of 211 paediatric patients who attended our paediatric surgical clinic from Jan 2015 to June 2016. Some of them were referred from other peripheral hospitals where paediatric surgical superspeciality was not available. All our patients were from infant to 12 years of age. We have excluded all neonates from this study as neonatal rectal bleeding requires different line of management. We have divided

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all patients in two groups on their stool and rectal bleeding basis.

Group A –normal appearing stool coated with bright red blood and constipation related.

Group B - normal appearing stool with blood mixed .

Different causes of bleeding are summarized in table 1 & 2 . Age related distribution are shown in table 3.

Table 1: Causes of Rectal Bleeding

Causes	Number
Anal fissure	135
Proctitis	4
Rectal Prolapse	20
External hemorrhoids	3

Table 2: Causes of Rectal Bleeding

Causes	Number
Polyp	20
Nodular Lymphoid hyperplasia	4
Meckel's Diverticulum	9
Intussusceptions	16

Table 3: Causes of rectal bleeding with number and age

cause	Number	age
Anal fissure	110	1-2 YEARS
	25	3-12 YEARS
Proctitis	8-12 Years	
Rectal Prolapse	1-5 Years	
External hemorrhoids	8-12 years	
Polyp	3-5 years	
Nodular Lymphoid hyperplasia	3-5 Years	
Meckels Diverticulum	3-12 Years	
Intussuception	1-2years	

We have enrolled 162 patients in group A and 49 patient's in group B

Each and every patient undergone proper history taking and DRE on OPD basis. DRE not done in all patient's with anal fissure. Few of our patients needed proctoscopy as well as sigmoidoscopy where we suspected rectal polyp or other pathology. Some of them needed ultrasonography of abdomen where strong suspicion of intussusceptions was there and Meckel's scan was advised in some appropriate patients. We did stool test for all patients as parasitic infection is very common in our part of world. Histopathological examination of excised rectal polyp was done .

Results

This study included 211 patients of whom 150(71%) were boys and 61(29%) girls with a male to female ratio of 2.5: 1. Age range of the patients was 1-12 years with a median age at diagnosis 2 years. The mean duration of bleeding was 2 months with a range of 1 week to 2 years. Maximum number of boys presented earlier than girls. In our study, anal fissure is the most common cause (64%) of rectal bleeding over all and most of the patients were in age group of 1-2 years. Boys were affected more with anal fissure and all patient's of anal fissure responded well with conservative therapy. Rectal polyp and rectal prolapse shared the same number , 20 each. In our series all but two were single rectal polyp and DRE was the initial method of diagnosis. (fig 1). The other two patient's had multiple polyp and endoscopic polypectomy were done by gastroenterologist and doing fine. All rectal prolapse patients had some form of bowel problem either diarrhoea or constipations with excessive straining. The age group of polyp patients was 3-5 years and age group of rectal prolapse patients was 1-5 years. A good number of patients (16) had intussusceptions all of them came with bleeding per rectum and subsequently required surgery. For intussusceptions patients the age group was 1-2 years. Nine patients presented with bleeding per rectum and later diagnosed as Meckel's diverticulitis. All of them showed ectopic gastric mucosa on histopathological examination of the resected specimen but all had Meckel's scan positive. Though less in number external haemorrhoid patients came late for treatment. Another two groups of patients namely proctitis and nodular lymphoid hyperplasia patients also contributed their number this present study. These patients were treated conservatively and all improve well in times.



Fig 1: Prolapsing rectal polyps with bleeding

Discussion

Per rectal bleeding is one of the most common complaints in paediatric surgical clinic. It causes a huge anxiety and psychological stress to the parents and family. But a significant number of cases the cause is minor, needs little care and supervision to cure the patients. Sometimes simple care is not sufficient when the cause demands expertise care and intervention. Although this problem generates a lot of curiosity, its epidemiology has not been properly evaluated and studied [2-6]. Gastrointestinal (GI) bleeding originating proximal to ligament of Treitz is termed upper GI bleed and if bleeding source is distal to Treitz ligament it is called Lower GI bleed [7]. In paediatric patients lower GI bleed mostly occurs from colon and rectum though Meckel's diverticulum is part of small bowel which contributes significantly to the cause of rectal bleeding in children. Till now the largest series of rectal bleeding in paediatric population showed that only 0.3% of patients contributed out of 40000 patients presented in a tertiary care center in US². In our series we tried to find out the causes and etiology of bleeding per rectum in north Indian paediatric population who are attending our OPD directly or referred to. In this study we found anal fissure is the leading cause (64%) over all and it affects mainly 1-3 years age group. This is the majority patients in group A where we have given stress on normal appearing stool coated with bright red blood associated with constipation. The cause of bleeding was erosion and tear of anal margins due to passage of hard stool [7]. All our patients were constipated without any red flag signs of constipation [8]. On further enquiry it has been found that due to lack of health education parents were practicing bad dietary habits for their children. There was significant lack of fiber in diet and most of them were consuming lots of fast food. So we treated the patient for fissure conservatively by giving Sitz bath, local application of anesthetic gel, stool softener and high fiber diet. But to prevent recurrence side by side we started health education for proper diet habit for their children. We saw that they are the most anxious patients and parents as anal fissure causes lots of discomfort and pain associated with bleeding per rectum. After proper treatment with our protocol they are the most satisfied patients group. In group A, rectal prolapse was another cause of concern and most of them are also associated with constipation. These patients also improved with conservative treatment. Another two groups, proctitis and external haemorrhoids also had significant improvement with treatment. In contrary to group A, group B patients presented with normal appearing stool with blood mixed and they were not associated with constipation. Group B was dominated by juvenile polyp (10%) followed by intussusceptions (5%)

and Meckel's diverticulitis (8%). The cause of bleeding in this group was erosion, ulceration and thinning of the mucosal surface of the gut. In India the incidence of juvenile polyp was (61%) as quoted by Poddar et al [9]. Among rectal polyp patients only two has multiple polyp, rest were single pedunculated polyp. All polyps were sent for histopathological examination to confirm the diagnosis of juvenile polyp, no dysplastic changes were seen in our study. Other authors have found dysplastic changes from 0.3% to 11% [10,11]. Four patients did not showed up any obvious cause but on endoscopy they came out to be nodular lymphoid hyperplasia and they responded well with conservative therapy. All intussusceptions patients came to us with bleeding per rectum with typical features of colicky pain in a well nourished child. The diagnosis was confirmed by ultrasonography and proper surgical intervention done. In Meckel's group of patients the history of bleeding was for longtime and it was recurrent. There history was long and had taken treatment for several months. All of them had their Meckel's scan done and was positive for it. We operated them on routine basis and histopathology showed ectopic gastric mucosa. The idea of grouping them was that it was very much convenient to diagnose them on OPD basis. Stool routine test was positive for some patients and treated them accordingly. We also gave them a course of deworming drugs who were defaulters of school deworming programme and whose stool was positive for worm.

Conclusion

Paediatric bleeding per rectum is a common but distressing cause of concern to the parents and family of the affected patients. In infant and preschool children anal fissure is the forerunner among the causes. To give a composite care to the cause every patients need to be examined thoroughly and there is no substitute for proper history taking. Special investigations do play a role for the evaluation of the cause and health education to the parents cannot be neglected.

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