



CLINICAL PROFILE OF CHILDREN WITH LOWER BOWEL AND TERMINAL ILEUM DISEASES

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ABSTRACT

Background: IBD in pediatric age group and IBD during adolescent period present in different ways. It is vague in children. It may present as failure of the growth, presence of anemia, presence of perianal disease, or it may also present as extraintestinal manifestations. Hence paediatricians should be more aware about these kind of atypical presentation in the children.

Objective: To study the clinical profile of children with lower bowel and terminal ileum diseases

Methods: A hospital based cross sectional study was carried out for 18 months among 160 eligible children aged 2-12 years of age. Detailed history was taken. All children have undergone per rectal examination and endoscopy. All these findings were properly recorded.

Results: 117 (73.1%) were males and only 43 (26.9%) were females. Thus, there was male preponderance. The most common presentation was bleeding per rectum in 98.8% of the cases. Past history of polypectomy was seen only in five cases i.e. 3.1% of the cases. Consanguinity was present in only 12 cases i.e. 7.5% of the cases. In majority of the children i.e. 51.9% of the cases had polyp on per rectal examination. Majority of the children i.e. 53.8% of the cases were found to have single polyp on endoscopy.

Conclusion: Males were commonly affected than females. Bleeding per rectum was the most common presenting complaint. Presence on polyp on per rectum examination and endoscopy was the hallmark of children with lower bowel and terminal ileum diseases.

KEYWORDS : Clinical profile, endoscopy, examination, IBD, manifestations

INTRODUCTION:

Young adults as well as adolescents is the beginning of the inflammatory bowel diseases (IBDs) which usually constitute Crohn disease and ulcerative colitis. In these conditions, there is chronic inflammation of the GI tract. It has been estimated that of all the cases of IBDs, one fourth present to the hospitals at the age of less than 20 years of age. It has also been estimated that children less than four years of age constitute nearly 4% of the cases and children less than 10 years of age nearly 18% of the cases. Incidence of IBD in children is 10 for every one lac children in USA.¹

Various factors influence the IBD in children. Important among them are microbial factors, environmental factors and genetic factors. Recent research focuses more on the importance of the microbial and genetic factors in the IBD. It has been stated that IBD in children and IBD in adults, the risk genes are not different. But it has also been stated that pediatric IBD has been associated with higher burden of common risk variants.²

IBD in pediatric age group and IBD during adolescent period present in different ways. It is more vague in children. It may present as failure of the growth, presence of anemia, presence of perianal disease, or it may also present as extraintestinal manifestations. Hence paediatricians should be more aware about these kind of atypical presentation in the children. A positive family history can be commonly found in about one fifth of the children and hence it should not be missed as it will aid in the diagnosis of any atypical presentation in the children.³

There can be increased levels of inflammatory markers, reduced levels of albumin in the blood, thrombocytosis and anemia in children having IBD. But this does not mean that a child with all normal laboratory profile will not have IBD as it

has been stated that 10-20% of the children will have such condition of normal test results. Stool examination should be carried out for presence of occult blood, parasites, ova, and other pathogens.⁴

Whenever IBD is suspected in children, they should be evaluated by endoscopy. For standard diagnosis and appropriate classification of IBD in the pediatric age group, Esophagogastroduodenoscopy and ileocolonoscopy with biopsy are the standard criteria. Histopathology will help to determine the severity of the disease in children as well as extent of the disease.⁵

Present study was carried out to study the clinical profile of children with lower bowel and terminal ileum diseases

Methods:

Study design: A hospital based cross sectional study was carried out to study the Clinical profile of children with lower bowel and terminal ileum diseases.

Study period: The study was carried out for 18 months from July 2014 to December 2015.

Sample size: The study was conducted among 160 eligible children suffering from lower bowel and terminal ileum diseases. The children were aged 2-12 years of age.

Settings: The study was carried out among the in-patient and out-patient department of Pediatrics, Chacha Nehru Bal Chikitsalaya, Delhi

Inclusion criteria:

1. Children suffering from lower bowel and terminal ileum diseases

2. The children were aged 2-12 years of age

Exclusion criteria:

1. Children with other morbidities
2. Parents not willing

Methodology:

Institutional Ethics Committee permission was obtained before the actual initiation of the study. Child assent form was used to obtain informed consent from the parents. Appropriate treatment and management were done for all included children.

Detailed history pertaining to gender, presenting complaints, past history of polypectomy, history of consanguinity and diet pattern was obtained from the parents or the immediate relative present at the time of interview or history taking and recorded in the pre designed, pre tested, semi structured study questionnaire developed for the present study.

All children have undergone per rectal examination and endoscopy. All these findings were properly recorded.

Statistical analysis:

The data was entered in the Microsoft Excel worksheet and analysed using proportions.

Results:

Table 1: Distribution of Subjects Based on Gender

Gender	Number	%
Male	117	73.1
Female	43	26.9
Total	160	100

Table 1 shows distribution of Subjects Based on Gender. Out of 160 children in the study, 117 (73.1%) were males and only 43 (26.9%) were females. Thus, there was male preponderance in the present study. The male to female ratio was 2.7:1

Table 2: Distribution of subjects based on Presenting Complaints

Presenting complaints	Number	%
Diarrhea	11	6.9
Pain abdomen	9	5.6
Bleeding per rectum	158	98.8
Abdominal distension	1	0.6
Vomiting	1	0.6
Constipation	46	28.8

Table 2 shows distribution of subjects based on Presenting Complaints. The most common presentation was bleeding per rectum in 98.8% of the cases followed by constipation in 28.8% of the cases. 11 children presented with diarrhea; 9 children presented with pain in the abdomen.

Table 3: Distribution of subjects based on Past history (P/H) of Polypectomy

Past history of polypectomy	Number	%
Yes	5	3.1
No	155	96.9
Total	160	100

Table 3 shows distribution of subjects based on Past history (P/H) of Polypectomy. Past history of polypectomy was seen only in five cases i.e. 3.1% of the cases.

Table 4: Distribution of subjects based on Consanguinity

Consanguinity	Number	%
Yes	12	7.5
No	148	92.5
Total	160	100

Table 4 shows distribution of subjects based on Consanguinity. Consanguinity was present in only 12 cases i.e. 7.5% of the cases.

Table 5: Distribution of subjects based on Diet Pattern

Diet	Number	%
Lacto-veg	29	18.1
Lacto-ovo-veg	22	13.8
Non-veg	109	68.1
Total	160	100

Table 5 shows distribution of subjects based on Diet Pattern. Majority of the children i.e. 68.1% of the cases had non vegetarian diet. 13.8% of the cases had Lacto-ovo-veg diet and 18.1% of the cases had Lacto-veg diet.

Table 6: Distribution of subjects based on Socio-economic Status (SES)

Socio-economic status	Number	%
Upper	5	3.1
Upper middle	48	30
Lower middle	81	50.6
Upper lower	26	16.3
Total	160	100

Table 6 shows distribution of subjects based on Socio-economic Status (SES). Majority of the children i.e. 50.6% of the cases belonged to lower middle class. 30% of the cases belonged to the upper middle class. 16.3% of the cases belonged to the upper lower class. Only five children belonged to the upper class.

Table 7: Distribution of subjects based on Per Rectal examination findings

Per Rectal examination findings	Number	%
Polyp	83	51.9
Fissure/fistula	0	0
None	77	48.1
Total	160	100

Table 7 shows distribution of subjects based on Per Rectal examination findings. In majority of the children i.e. 51.9% of the cases had polyp on per rectal examination. Remaining 48.1% had normal per rectal examination. No child had fissure or fistula.

Table 8: Distribution of subjects based on Endoscopy findings

Endoscopy findings	Number	%
Single polyp	86	53.8
1-3 polyps	11	6.9
Polyposis syndrome	5	3.1
Mucosal ulcer	12	7.5
Vascular malformation	3	1.9
Lymphoid hyperplasia	1	0.6
No pathology	35	21.9
Poor visualization	5	3.1
Worms	2	1.3
Total	160	100

Table 8 shows distribution of subjects based on Endoscopy findings. Majority of the children i.e. 53.8% of the cases were found to have single polyp on endoscopy. 6.9% of the cases were found to have 1-3 polyps. 3.1% of the cases were found to have polyposis syndrome on endoscopy. 7.5% of the cases were found to have mucosal ulcer on endoscopy. 21.9% of the cases were found to have no pathology on endoscopy.

DISCUSSION:

There was male predominance in our study in both study groups. Similar results were found in study conducted by

Najafi et al⁶ (29 out of 50 in one study group and 34 out of 50 in other study group were males), Phatak et al⁷ (61 out of 111 were males), Pinfield et al⁸ (34 out of 63 were males), Abbas et al⁹ (26 out of 46 were males), Adamiak et al¹⁰ (52% were males), Phashankar et al¹¹ (24 out of 46 were males). A female predominance was reported by a relatively newer study of Walia et al¹² in which 29 out of 44 (66%) were females. Another recent study by Sorser et al¹³ reported female predominance in one group (10 out of 18 were females) and male predominance in other group (10 out of 18 were males). This male predominance seen in our study might be due to early and extensive medical attention being sought by parents for male child as compared to the female child, reflecting the still prevailing gender bias leading to differential medical resources utilization.

There was history of previous polypectomy in 3.1% of the cases (5 patients). To the best of our knowledge, no other studies had commented on history of previous polypectomy.

In our study, majority 109 (68.1%) out of 160 children were non vegetarian, while only 22 (13.8%) were lacto-ovo-vegetarian and 29 (18.1%) were lactovegetarian. We did not find any relationship between etiological cause of rectal bleeding and dietary pattern. To the best of our knowledge, no other studies have commented on dietary pattern and need for lower gastrointestinal endoscopy.

In our study, most of the patients belonged to middle socioeconomic class according to the Modified Kuppuswamy scale. 81 (50.6%) were from lower middle class while 48 (30%) were from upper middle class. Only 26 (16.3%) patients were from upper lower and 5 (3.1%) patients were from upper class. Most of patients recruited in our study came from Delhi and NCR region which has high per capita income in comparison to rest of country. To the best of our knowledge, no other studies have commented on socioeconomic status.

Most common clinical presentation of patients who were undergoing lower gastrointestinal endoscopy in our study was bleeding per rectum. It was seen in 79 (98.8%) out of 80 patients. While constipation was coexistent in most of the patients with bleeding per rectum in our study. According to standard literature the commonest cause of bleeding per rectum in children is rectal polyp.¹⁴

Polyps are the most common causes of rectal bleeding in children. Polyps occur in 1% of preschool and school age children.¹⁴ Our study also reciprocated a similar result, most common LGIE finding was polyp in both the groups out of polyps,

CONCLUSION:

Males were commonly affected than females. Bleeding per rectum was the most common presenting complaint. Presence on polyp on per rectum examination and endoscopy was the hallmark of children with lower bowel and terminal ileum diseases.

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