

To find out the incidence of different non-neoplastic lesions in resected segment of ileum and colon

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Abstract- Background-The small intestine and large intestine accounts for most of the GI tract length and are the sites of a broad array of diseases. Small intestine is the principal site for digestion and absorption of ingested food from the gastro-intestinal tract.

Methods- This study was Conducted in the Department of Pathology at Sardar Patel Medical College and Associated group of hospitals, Bikaner. This study was hospital based prospective study. All the resected segments of ileum and colon received for histopathological examinations showing non-neoplastic lesions were included in the study.

Results- In the present study non-neoplastic intestinal lesions were most commonly encountered around 3rd to 6th decade of life accounting for 20.40% and 17.34% respectively, while only 3.06% of cases were above 70yr of age. A male predominance was seen in ileum & colon accounting for 36.73% and 26.53% of cases respectively. The incidence of non-neoplastic lesions affecting ileum & colon in females accounting for 22.44% and 13.26% respectively.

Conclusion- Our study shows that the lesions of ileum and colon can affect wide range of age groups with different etiological factors.

Index Terms- Non-neoplastic lesions, Ileum, Colon

I. INTRODUCTION

The small intestine and large intestine accounts for most of the GI tract length and are the sites of a broad array of diseases. Small intestine is the principal site for digestion and absorption of ingested food from the gastro-intestinal tract. Whereas the principal function of the large intestine is recovery of water and salt. Some of the diseases are related to nutrient and water transport. Perturbation of these processes can cause malabsorption and diarrhoea. The intestines are also the principal site where the immune system interfaces with a diverse array of antigens present in food and gut microbes. Thus small intestine and large intestine frequently encounter infectious and inflammatory processes.¹

Resected segments of small bowel & large bowel form the major bulk of specimens in the pathology department. They include both neoplastic as well as non neoplastic lesions. Non-neoplastic lesions are a major challenge for both surgeons & pathologists. Most common non-neoplastic lesions accounting for ileocolic

resections are inflammatory bowel disease and ischemic disease. The incidence of these are increasing. Successful management of patients necessitates a close working between endoscopist, surgeon and pathologist.²

II. MATERIAL AND METHODS

This study was Conducted in the Department of Pathology at Sardar Patel Medical College and Associated group of hospitals, Bikaner. This study was hospital based prospective study. All the resected segments of ileum and colon received for histopathological examinations showing non-neoplastic lesions were included in the study.

Inclusion criteria- All the resected biopsy specimen of ileum and colon suspected to have non-neoplastic lesions.

Exclusion criteria-

- 1) Neoplastic lesions of ileum and colon
- 2) All lesions of duodenum, jejunum, appendix, cecum, rectum.
- 3) Inadequate biopsies

III. MATERIAL

Glass slides, formalin, ethanol, xylene, paraffin wax, cassettes, Leuckart's mould, rotary microtome, automatic tissue processor, H&E stain & microscope.

IV. METHOD

Excisional biopsies of all cases of ileum and colon lesion were sent in 10% formalin fixative solution to the histopathology section from surgery department. These small samples were then put in cassettes and immersed in formalin for fixation.

V. OBSERVATIONS

The present study was conducted for a period of 2 years from 1st July 2017 to 30th June 2019 in the Department of Pathology at Sardar Patel Medical College and Associated groups of PBM Hospital, Bikaner.

We received a total of 98 surgical specimens of ileum and colon which show non-neoplastic lesions. A thorough histopathological examination was conducted which showed a varied etiology of the lesions which were documented and reported.

Table 1: Age & sex wise distribution of intestinal lesions in present study

Age group in years	Male		Female		Total	
	No.	%	No.	%	No.	%
0-10	4	4.08	5	5.10	9	9.18
11-20	6	6.12	7	7.14	13	13.26
21-30	14	14.28	6	6.12	20	20.40
31-40	8	8.16	3	3.06	11	11.22
41-50	8	8.16	5	5.10	13	13.26
51-60	11	11.22	6	6.12	17	17.34
61-70	9	9.18	3	3.06	12	12.24
>70	2	2.04	1	1.02	3	3.06
Total	62	63.26	36	36.73	98	100%

In present study, most of the patients were found in the age group of 21-30 years(20 cases,20.40%) followed by 51-60 years of age group (17 cases,17.34%). Minimum number of patients were found in the age group of >70 years (3 cases,

3.06%). Out of 98 cases mostly were seen in males (62 cases) predominantly affected in the 3rd and 6th decades. However, the females(36 cases) were mostly affected in 2nd, 3rd & 6th decades.

Table 2: Site wise distribution of intestinal lesions in accordance to sex in the present study

Gender distribution	Small intestine (Ileum)		Large intestine (Colon)		Small and large intestine(Ileocolic)		Total	%
	Total	%	Total	%	Total	%		
Male	36	36.73	26	26.53	0	0	62	63.26
Female	22	22.44	13	13.26	1	1.02	36	36.73
Total	58	59.18	39	39.79	1	1.02	98	100

The present study revealed a male predominance (63.26%) while female contributed 36 out of 98 cases(36.73%). The male to female ratio was found to be 1.72:1.

Table 3: Age and sex wise categorization of non-neoplastic intestinal lesions in the present study

Age in years	Small intestine(Ileum)			Large intestine(Colon)			Small& large intestine(Ileocolic)			Total	
	Male	Female	Total	Male	Female	Total	Male	Female	Total	No.	%
0-10	3	2	5	1	2	3	0	1	1	9	9.18
11-20	3	6	9	3	1	4	0	0	0	13	13.26
21-30	10	4	14	4	2	6	0	0	0	20	20.40
31-40	2	2	4	6	1	7	0	0	0	11	11.22
41-50	4	3	7	4	2	6	0	0	0	13	13.26
51-60	9	4	13	2	2	4	0	0	0	17	17.34
61-70	4	1	5	5	2	7	0	0	0	12	12.24
>70	1	0	1	1	1	2	0	0	0	3	3.06
Total	36	22	58	26	13	39	0	1	1	98	100

In the present study non-neoplastic intestinal lesions were most commonly encountered around 3rd to 6th decade of life accounting for 20.40% and 17.34% respectively, while only 3.06% of cases were above 70yr of age.

A male predominance was seen in ileum & colon accounting for 36.73% and 26.53% of cases respectively. The incidence of non-neoplastic lesions affecting ileum & colon in females accounting for 22.44% and 13.26% respectively.

VI. DISCUSSION

Various lesions affecting the small intestine and large intestine are obstructive lesions (adhesions, volvulus, intussusceptions), ischemic bowel disease, infectious enterocolitis, inflammatory bowel disease, granulomatous inflammatory diseases including tuberculosis, polyps, carcinoma, carcinoid tumours and lymphomas.

The intestinal lesions may vary from common to rare causes including non-neoplastic and neoplastic lesions which require different modalities of treatment.

Non neoplastic lesions are mainly found in small intestine while large intestine harbours most of the neoplastic lesions.

The present study was conducted for a period of 2 years from 1st July 2017 to 30th June 2019 in the Department of Pathology at Sardar Patel Medical college and Associated group of PBM Hospitals, Bikaner.

We received a total of 98 surgical specimens of ileum and colon which show non-neoplastic lesions. A thorough histopathological examination was conducted which showed a varied etiology of the lesions which were documented and reported.

Intestinal lesions in the present study were mostly seen in 3rd and 6th decade of life, however the age of patients ranged from 0-70 years. The males were affected in 3rd & 6th decades and the females were affected in 2nd, 3rd, & 6th decades of life.

The observations were in accordance with study carried out by Nanavati MG et al, 2014¹ which showed maximum no of cases in 3rd (23%) and 4th decades (18.5%) and Chityala Jyothi et al, 2016⁶⁴ which showed maximum no of cases were in 3rd and 6th decade 18.12% and 17.8% respectively.

In our study most common non-neoplastic intestinal lesion was found to be ischaemic enterocolitis with or without gangrene which was 26.53%. This finding is in consonance with study conducted by Sulegaon R et al, 2015³ (25.53%).

In present study non specific enterocolitis has accounted for 21.42% cases which was similar to the studies conducted by Nanavati MG et al, 2014¹ (23.6%), Sulegaon R et

al, 2015³ (34.04%), Chityala Jyothi et al, 2016⁴ (58.44%), & Masgal et al, 2018⁵ (46.15%).

VII. CONCLUSION

Our study shows that the lesions of ileum and colon can affect wide range of age groups with different etiological factors.

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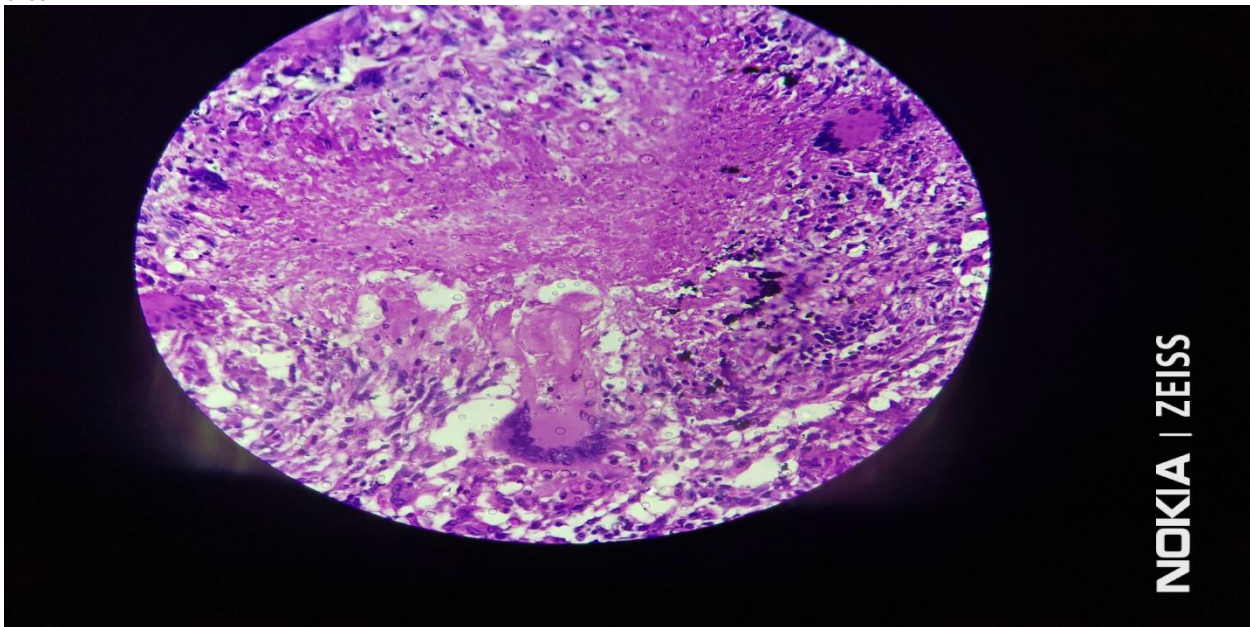


Fig 1. Tuberculosis: showing central caseous necrosis, langhan's giant cell,epithelioid cells

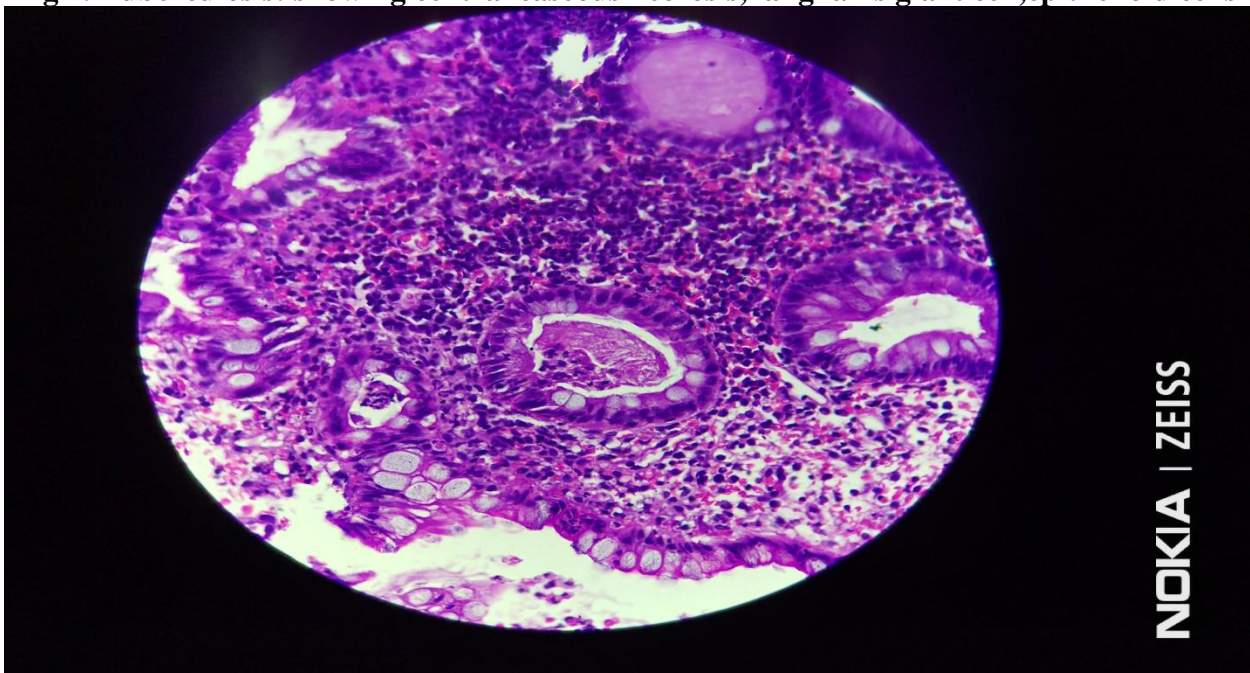


Fig 2. Ulcerative colitis:showing cryptitis and crypt abscess