



HISTOPATHOLOGICAL STUDY OF LOWER GIT LESIONS – A 3 YEAR STUDY

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ABSTRACT

A variety of lesions affect large bowel which include both neoplastic and non- neoplastic pathologies. Intestinal tumors account for a large proportion of all neoplasms. Colorectal cancer is the third most common cancer in men and the second in women worldwide. Due to vague symptoms, the clinical diagnosis is usually delayed. Pathologic examination of biopsy, polypectomy, and resected specimens are crucial for determining local extent of disease, patient management, and prognosis assessment

Aims and Objectives: The aim is to study the histomorphology of various lesion of colon, Rectum, including Anal canal and to evaluate the incidence, age, and sex ratio.

Materials and Methods: The Intestinal specimens received in the Dept of Pathology from July 2014 to June 2017. Routine processing, H&E and other special staining procedures are followed. IHC done whenever necessary

Results: Out of the 89 cases of large intestine 39 were non-neoplastic, 50 were neoplastic. 34 cases from Anal canal included 30 non-neoplastic and 4 neoplastic lesions. The non-neoplastic conditions included congenital anomalies, infective and ischaemic lesions while neoplastic included benign and malignant lesions. For malignant lesions, majority of the patients were between 4th-7th decade of life and male to female ratio was 1.3:1.

Conclusion: Neoplastic lesions were more common in large intestine while non-neoplastic lesions were common in Anal canal. In our study, Adenocarcinomas are the most common malignant lesions of Large intestine. Present study emphasizes on the need for early diagnosis for appropriate treatment.

KEYWORDS : Lower GIT, neoplastic, non neoplastic, adenocarcinoma

INTRODUCTION:

A variety of lesions affect large bowel which include both neoplastic and non- neoplastic, such as inflammatory lesions, polyps, cancerous growths, with some of the inflammatory lesions being premalignant. Intestinal tumors account for a large proportion of all neoplasms. Colorectal cancer is the third most common cancer in men and the second in women worldwide, with significant geographical, racial and ethnic variation in its incidence rate and pattern. Due to vague symptoms, the clinical diagnosis is usually delayed. Pathologic examination of biopsy, polypectomy, and resected specimens are crucial for determining local extent of the disease, for the patient management and prognosis assessment

AIM OF THE STUDY

- 1) To Study the Histomorphology of various lesions of Colon, Rectum, including anal canal.
- 2) Age and Sex wise incidence,
- 3) Congenital, Non-neoplastic and Neoplastic Lesions.

MATERIALS AND METHODS: The Intestinal specimens received in the Dept of Pathology from July 2014 to June 2017. Received specimens were fixed in 10% formalin for 24hrs. Gross features were noted and multiple sections were given from different sites. Routine processing with H&E staining was done. Other special staining procedures were followed. IHC was done whenever necessary. Detailed microscopic examination was done and final diagnosis was obtained. Then the data was analysed and results were interpreted.

RESULTS: The lower GIT lesions were divided into lesions of Large intestine and Anal canal for easy interpretation. A three year study was done from June 2014 to June 2017. Total surgical specimens were 9220. Total lower GIT lesions were 123 out of which 89 were from large intestine and 34 were from anal canal. Results are shown in Table 1

Table 1 DISTRIBUTION OF LOWER GIT LESIONS

DISTRIBUTION OF LARGE INTESTINAL LESIONS		
1	NONNEOPLASTIC	31 (34.83%)
	1) Hirschsprung's disease	13 (14.6%)
	2) TB Intestine	12 (13.48%)
	3) Intussusception	4 (4.44%)
	4) Inflammatory bowel disease	2 (2.24%)
2	NEOPLASTIC	58 (65.16%)
	Benign	14 (15.7%)
	1) inflammatory polyps	6 (6.74%)
	2) Juvenile polps	2 (2.24%)
	3) Adenomatous polyps	6 (6.74%)
	Malignant	44 (49.43%)
	1) Adenocarcinoma	44 (49.43%)
DISTRIBUTION OF ANAL CANAL LESIONS		
1	NON NEOPLASTIC	30(88.23%)
	Fistula in ano	26(76.47%)
	Hemorrhoids	4(11.76%)
2	NEOPLASTIC	4(11.76%)
	Warts	2(5.88%)
	ScC	1(2.94%)
	Melanoma	1(2.94%)

Lesions of Large intestine: Among 89 large intestinal lesions 31 cases (34.83%) were non neoplastic and 58 cases (65.16%) were neoplastic. The most common non neoplastic lesion was Hirschsprung's disease(13) followed by TB intestine(12), intussusception(4) and crohn's disease(2).

Adenocarcinoma (44) was the common neoplastic lesion, common histological type being well differentiated adenocarcinoma, noted in 4th -6th decade of life with male predominance. Table 2. Other neoplastic lesions were polyps (14)

Table 2 AGE AND SEX INCIDENCE OF CARCINOMA OF LARGE INTESTINE

Age in yrs	Male	Female	No. of cases
0-20	-	-	-
21-40	9	7	16(36.36%)
41-60	12	6	18(40.90%)
61-80	4	6	10(22.72%)

Lesions of Anal canal:

Among 34 anal lesions, common neoplastic lesions were fistula in ano (26) and common neoplastic were warts (2). Age group ranged from 3rd to 6th decade. There was one case of Melanoma and one case of squamous cell carcinoma

DISCUSSION

Lesions Of Large Intestine: In the present study out of 89 cases, there were 39 cases of non-neoplastic lesions, 50 neoplastic lesions 13 cases (14.6%) of Hirschsprung disease were noted. One was a two days old neonate and others, age range was 0 -10yrs. USG abdomen of them showed dilated bowel loops. M:F – 3.3:1. Cecilia & Rescorla et al., stated that 80% cases of Hirschsprung disease are male with 80% of cases diagnosed during first year of life & 10% first present in adults^{1,2}. Most of them present with severe constipation. Zaid F et al., in their study found that the age range of Hirschsprung disease patient was from 1 day to 13 yrs with peak during the neonatal period³. In our study the age range was 0-10yrs, correlating with the above study. On histology, in Hirschsprung disease, the transitional area in the affected bowel shows abnormally small ganglion cells.

There were 12 cases(1.48%) of TB Intestine, age group was 40 -50yrs, M:F – 2:1. Common morphologic patterns of caseating, noncaseating, confluent, discrete, and suppurative granulomas were identified on histopathology⁴. Other non neoplastic lesions were intususception (4.4%), Inflammatory bowel disease - croh's disease (2.24%)

There were 58 cases (65.16%)of neoplastic lesions. These finding are similar to another study where neoplastic lesions were seen more than non-neoplastic lesions (56.2% vs. 43.1%)⁵.

Among them 14 (15.73%) were polyps and 44 (49.43%) were adenocarcinoma. Types of polyps observed were juvenile, hyperplastic and adenomatous polyps. One case of Familial adenomatous polyposis was encountered, which showed malignant transformation. The present study was compared with the study series of Hassan Abdulla Al-aquili et al⁶. As observed, juvenile polyps and hyperplastic polyps were the most common non neoplastic polyps occurring in both studies.

Malignant lesions commonly presented with bleeding per rectum constipation, pain in abdomen and diarrhoea. The most common age group affected was from 4th to 7th decade consistent with Mohsin-ul-Rasool *et al* study⁷. Most common histological type was well differentiated adenocarcinoma, followed by moderate and poorly differentiated type. There were 5 cases of mucinous adenocarcinoma and 2 cases of signet ring type. Our study correlated with Shyamal Kumar *et al*⁸ and Shah A *et al* study⁹ where well differentiated adenocarcinoma was most common type.

Figure 1: Familial Adenomatous polyposis colon



Figure 2: Adenocarcinoma Colon - Gross

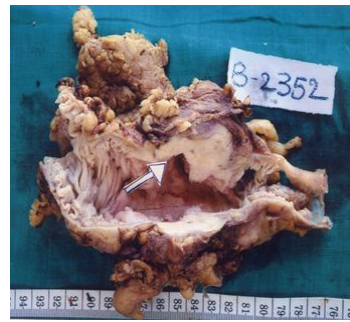
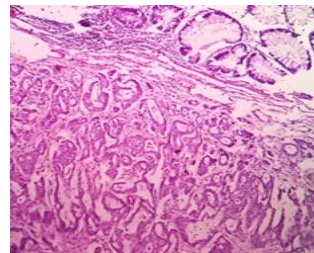


Figure 3: Well differentiated Adenocarcinoma Colon



Lesions of anal Canal

Non neoplastic lesions, 30 cases (88.23%) were more common than neoplastic lesions, 4 cases (11.76%) correlating with Rasool *et al* study. Non Neoplastic lesions were fistula in ano¹⁰, 26 cases (76.47%) and hemorrhoids, 4 cases (11.76%). Neoplastic were warts, 2 cases (5.88%), 1 case of melanoma¹¹ (2.94%) and 1 case of squamous cell carcinoma¹² (2.94%) which was well differentiated type.

SUMMARY: During the 3-year study, malignant lesions of the colon were most common. Among the malignant lesions, maximum cases were adenocarcinomas of well-differentiated type. Among the benign lesions, majority of the cases were adenomatous polyps. Most common age group affected was 4-6th decade of life. Predominantly, males were affected.

CONCLUSION: This study concludes that various types of lesions occur in the Large intestine and Anal canal affecting the persons from early childhood to late adulthood. Most of the lesions present vaguely which prevent their early diagnosis and treatment leading to grave complications. This study emphasises the need for early diagnosis of the disease through histopathology, which when correlated clinically will help the surgeon/clinician to implement the appropriate treatment and improve the survival of the patients

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