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Histopathological Study of Colorectal Carcinomas

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Abstract:
Introduction: *Colorectal carcinoma ranks the fourth most frequent cancers in men and third in women which causes significant mortality and morbidity. Studies have shown increasing trend in incidence in India. Chronic inflammatory bowel diseases like ulcerative colitis, crohn's disease and schistosoma mansoni infection, high calorie diet and sedentary life style are etiological factors for colorectal carcinoma. Pathological examination of the biopsy and resected specimens is important for appropriate patient management, prognosis assessment and family counselling.*
Aims and Objectives: *This is a retrospectively conducted study at our institute to evaluate histopathologically the colorectal carcinomas based on age and sex distribution.*
Material and Methods: *All cases of abdominoperineal resection, colectomy, rectal and colonic biopsy received in the Department of Pathology, Mysore Medical College and Research Institute over a period of 3 years (between july 2013 – july 2016) were evaluated.*
Results: *The study included 75 cases with almost equal prevalence in males and females, with most of the cases occurring in 6th decade and adenocarcinoma not otherwise specified is the most common malignancy and rectum being the commonest site.*
Conclusion: *Colorectal adenocarcinoma is a heterogenous disease that involves multiple tumorigenic pathways. Prediction of prognosis in colorectal cancer is vital for the choice of therapeutic options. Histopathologic diagnosis remain paramount importance in this aspect.*
Keywords: *Adenocarcinoma, Rectum, Tumor grade.*

Introduction

Colorectal carcinoma ranks the fourth most frequent cancers in men and third in women which causes significant mortality and morbidity[1]. Carcinoma of large bowel is common in Northwest Europe, North America and other Anglosaxon areas but low in Africa, Asia and some other parts of South America. Males and females are affected equally. The mean age is 62 years[2]. Epithelial tumors of the colon and rectum are frequent pathologic entities and deserve to be histologically reported with accuracy and completeness[3]. Prediction of prognosis in colorectal cancer is vital for the choice of therapeutic options. Histopathological factors remain paramount in this respect. Surgical resection is the primary treatment for colorectal carcinoma and pathologic assessment of the

specimen place a critical role for prognosis, management such asthe estimation of post-operative outcome and rationale for adjuvant therapy.[4]

Materials and Methods

All cases of abdominoperineal resection, colectomy, rectal and colonic biopsy received in the Department of Pathology, Mysore Medical College and Research Institute over a period of 3 years (between july 2013 – july 2016) were evaluated. Histopathological examination was done after routine processing and staining with haemotoxylin and eosin.

Results

A total of 75 cases were studied. Age ranged between 12 years to 85 years. The most common age group affected were in 6th decade with almost equal incidence in males (38 cases) and females (37 cases). Patients presented with history of pain abdomen, bleed per rectum, features of bowel obstruction and other constitutional symptoms like fever, malaise and loss of weight. Rectum was the commonest site involved and the commonest gross tumor morphology was ulceroproliferative growth. Conventional adenocarcinoma was the commonest histologic type followed by mucinous adenocarcinoma. Majority of the cases were of grade 1. Out of the specimens received, lymph nodes were dissected in 38 cases of which 15 cases showed tumor deposits and 3 cases showed involvement of one of the surgical margins.

1) Distribution of Cases According to Age and Sex:

Age(Years)	Male	Female	Total
0-10	0	0	0
11-20	2	0	2
21-30	1	2	3
31-40	5	3	8
41-50	7	10	17
51-60	7	8	13
61-70	8	10	18
71-80	6	3	9
81-90	2	1	3
91-100	0	0	0
Total	38	37	75

2) Histopathological Distribution of Colorectal Carcinomas:

Sl No	Histopathological Diagnosis	No Of Cases	Percentage
1)	Well Differentiated Carcinoma	38	50.7
2)	Moderatetly Differentiated Carcinoma	16	21.4
3)	Poorly Differentiated Carcinoma	5	6.7
4)	Signet Ring Cell Carcinoma	3	4
5)	Neuroendocrine Carcinoma	1	1.3
6)	Mucinous Adenocarcioma	3	4
7)	Squamous Cell Carcinoma	1	1.3
8)	NHL- Small Lymphocytic Lymphoma	1	1.3
9)	High Grade Dysplasia	7	9.3

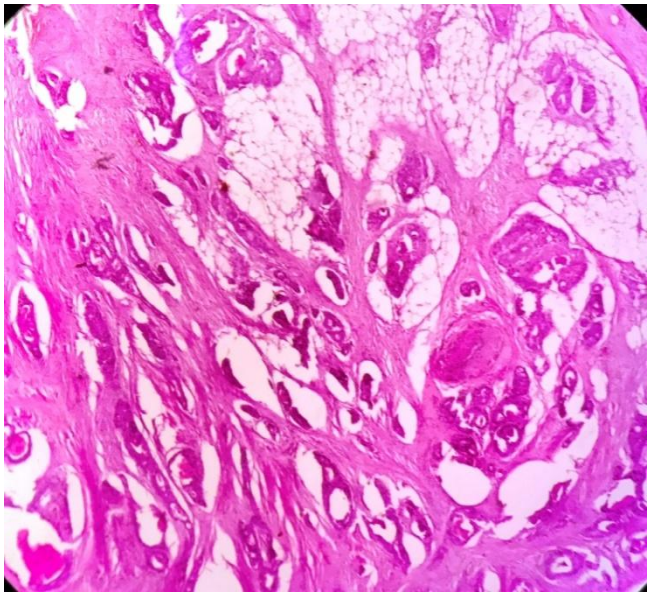

Fig 1: Moderately Differentiated Adenocarcinoma

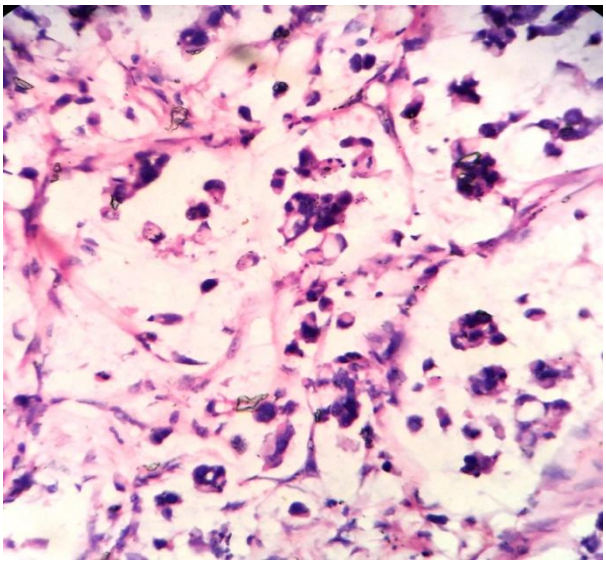

Fig 2: Signet Ring Cell Carcinoma

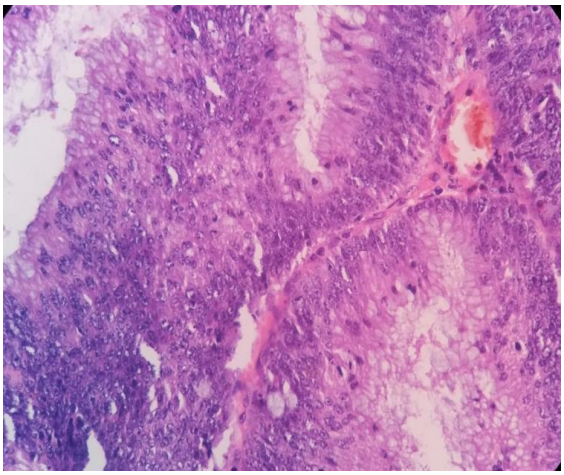

Fig 3: High Grade Dysplasia

Discussion

The country and nationwide studies on colorectal cancer distribution with respect to age, sex, incidence, tumour type and site is comparable with our study. Occurrence is equal in both sexes [8] and peaks with increase in age seen most commonly in persons aged 60 to 70 years[4,7,8,9,10]. In our study the youngest patient was 12 years old and the oldest was 85 years old. Rectum being the frequent site[4,5,7] and adenocarcinoma not otherwise specified type was the commonest tumour type[4,5,6,7,8,9,10] presenting as ulcer proliferative growth in majority of cases[4]. The incidence of occurrence is also considerably increasing as seen in studies done by Kalyani et al[11], Sharitha et al[6] studies which is also reflected in our study.

Conclusion

Our study has concorded with the results of other studies which reveal rapid increase in the incidence rate after the age of 40 years and both sexes being affected equally. Many colorectal carcinoma can be prevented through regular screening because when detected early they can be treated effectively.

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