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ORIGINAL ARTICLE

CLINICO MORPHOLOGICAL STUDY OF MALIGNANT RECTAL LESIONS

***¹A.S.Ponneyinchelvi, ²U.Manohar, ³P.Viswanathan and ⁴Valluvan**

^{*1}Post Graduate, Department of Pathology, RMMCH, Chidambaram-608002, Tamilnadu, India.

²Professor, Department of Pathology, RMMCH, Chidambaram-608002, Tamilnadu, India.

³Professor and Head, Department of Pathology, RMMCH, Chidambaram-608002, Tamilnadu, India.

⁴Lecturer, Department of Pathology, RMMCH, Chidambaram-608002, Tamilnadu, India.

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ABSTRACT

Malignant epithelial tumors of colon and rectum together accounts for 85% of all cancers worldwide. In India, the annual incidence rates for rectal cancer in men is 4.1/100000 and in women is 3.9/100000. Study of these lesions in patients presenting to RMMCH, ANNAMALAI UNIVERSITY in respect to age, gender distribution, clinical presentation and histopathological confirmation may yield valuable information's regarding the epidemiology of anorectal lesions in the urban rural based area.

Keywords Malignant lesions, Rectal malignancies, Rectal carcinoma

1. INTRODUCTION

The malignant rectal lesions are on the rise these days because of the lifestyle changes and dietary modifications that has occurred through the years. Incidence is found to be increased in meat eating countries and where population feeds on chemically preserved food. Malignant epithelial tumors of colon and rectum together accounts for 85% of all cancers worldwide (Basil et al., 1990). In India, the annual incidence rates for rectal cancer in men is 4.1/100000 and in women is 3.9/100000 (Basil et al., 1990).

Adenocarcinoma of the colon is the most common malignancy of the Rectum. Study of these lesions in patients presenting to RMMCH, Annamalai University in respect to age, gender distribution, clinical presentation and histopathological confirmation may yield valuable informations regarding the epidemiology of anorectal lesions in the urban rural based area.

2. METHODOLOGY

This is a prospective and retrospective study of the various malignant rectal lesions reported in the Department of Pathology, RMMCH, Annamalai University from August 2006 to August 2016. The histomorphological pattern of the various malignant rectal lesions are studied as per the

**Corresponding author: Dr. A.S.Ponneyinchelvi, ¹Post Graduate, Department of Pathology, RMMCH, Chidambaram-608002, Tamilnadu, India*

standard characteristics. Correlation with clinical Presentations was done.

The specimens were received in 10% formalin. Gross appearances of the specimens such as size, location, and appearance on cut section were recorded. The sections of 3-5 micron were prepared and stained with Haematoxylin and Eosin stain. All lymph nodes isolated were subjected for histopathological examination. The slides were examined by the pathologist of the department and reports were dispatched. Biopsy of adequate size and from represented sites was included in the study. Inadequate biopsies were excluded.

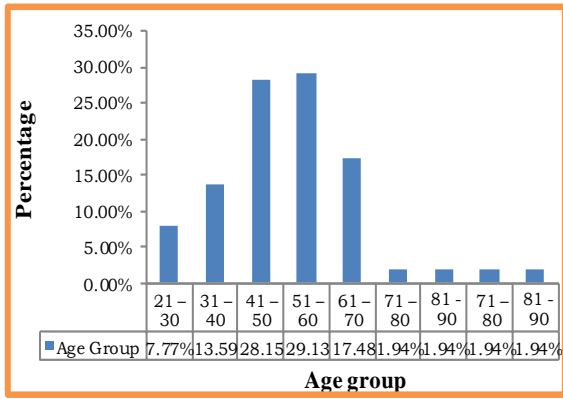
3. OBSERVATIONS AND RESULTS.

The total number of Rectal specimens received in the department of pathology, RMMCH during the period of study [August 2006 – August 2016] was 142. Out of which 103 were malignant in nature. The present study was conducted on these 103 malignant rectal lesions.

AGE GROUP DISTRIBUTION

All cases studied were distributed according to their age of presentation at an interval of 10 years. It was found out that the maximum incidence occurred in the 6th decade which constituted 29.13% followed by 5th decade with 28.15%. Extremes of age group (very young and very old patients) had minimum incidence.

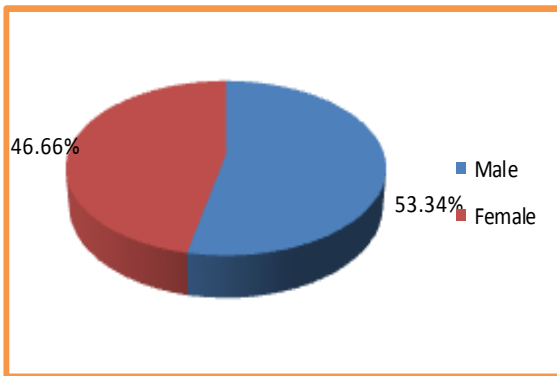
Age group Distribution



GENDER WISE DISTRIBUTION

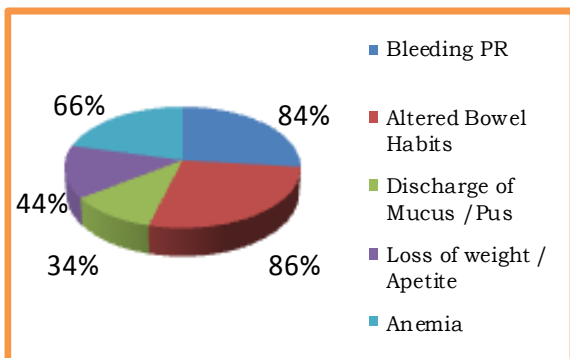
Among the malignant rectal lesions studied, the total numbers of female patients were 46, which constituted 46.66% of the cases and the male patients were 57, which constituted 53.34% of the cases. Hence the male patients and female patients were equally affected, with a minor degree of male preponderance.

Gender wise Distribution



FREQUENCY OF CLINICAL PRESENTATION

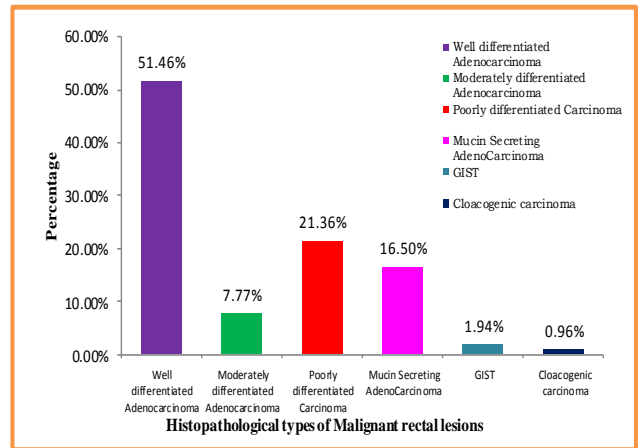
The frequency of clinical presentation was studied and was found that majority of the cases presented with Altered Bowel Habits with 86% of patients having the complaint. This was followed by bleeding per rectum with 84% of patients. The most common constitutional presentation was anemia with an incidence 66%.



Histopathological Types of Malignant Rectal Lesions

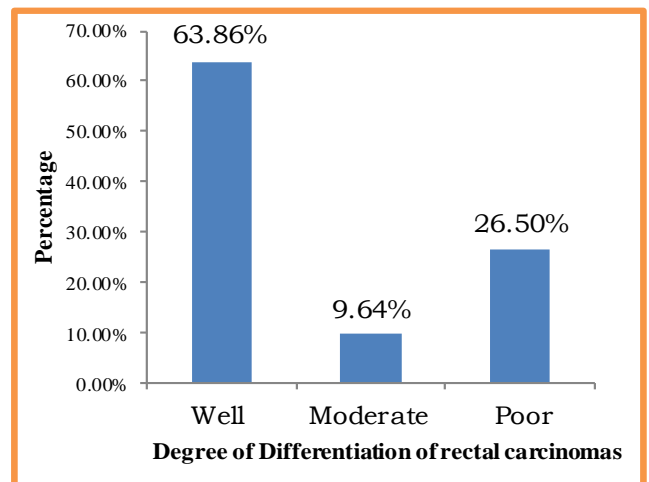
Out of the 103 malignant rectal lesions. Adenocarcinoma was the most common histopathological type of malignancy contributing 61 cases (59.22%). Poorly differentiated carcinoma constituted 22 cases (21.36%) Mucin secreting Adenocarcinoma constituted 17 cases (16.50%). A small percentage of cases was contributed by GIST 2 cases (1.94%) and cloacogenic carcinoma 1 case (0.98%).

Histopathological types of malignant rectal lesions



DEGREE OF DIFFERENTIATION OF RECTAL CARCINOMAS

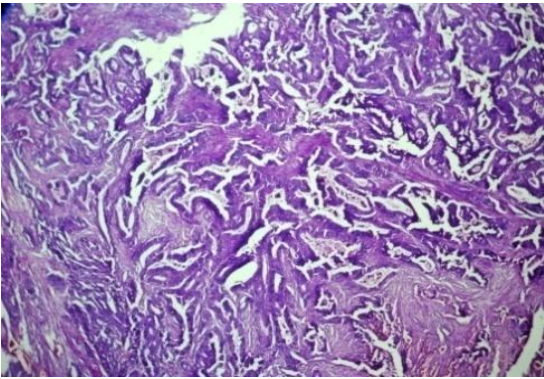
The frequency of each histopathological type of rectal malignancies and its degree of differentiation the present study was compared with other standard studies done by Sarvesh.B et al (2015) and Tadashi Terada (2013). Well differentiated adenocarcinoma was the most common type in study done by Sarvesh.B et al (2015) (67.31%), Tadashi Terada (2013) (58.63%) and also in the present study (63.86%). All three studies are comparable.



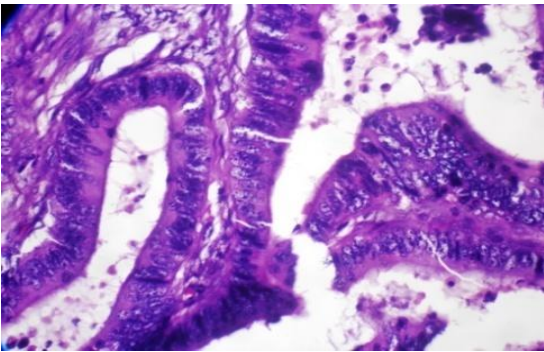
Degree of Differentiation of rectal carcinomas

PICTURES

PAPILLARY ADENO CARCINOMA OF RECTUM

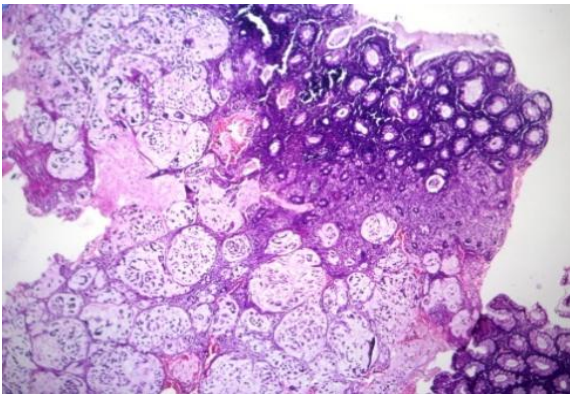


Tumor cells tend to form papillary configuration with central fibrovascular core. (H&E: 10X)

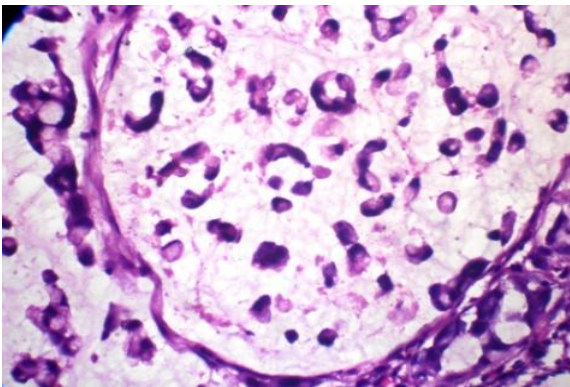


Papillae lined by markedly anaplastic, pleomorphic tumor cells. Tumor cells show stratification (H&E: 40X)

MUCIN SECRETING ADENO CARCINOMA



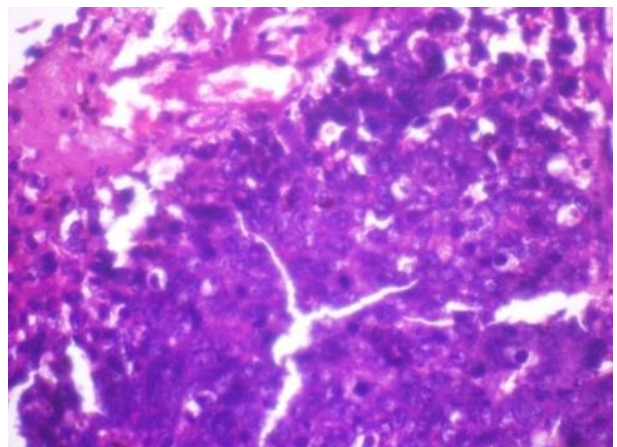
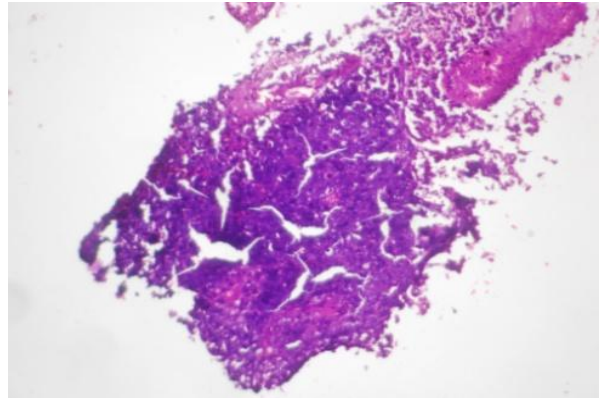
Lakes of mucin in which tumor cells float. (H&E: 4X)



Signet ring cells are seen floating. Cells tend to form glandular units. (H&E: 40X)

POORLY DIFFERENTIATED CARCINOMA

Tumor cells arranged in sheets along with necrosis. (H&E: 4X)



Markedly anaplastic, pleomorphic tumor cells with along with necrosis. (H&E: 40X)

4. DISCUSSION

Among the total rectal specimens received malignant rectal lesions are more common. This correlates with the fact that in today's world, due to change in lifestyle and unhealthy dietary modifications malignancy of rectum is on the rise. The most common age group of presentation is 6th decade. Both male and female are equally affected, with only a minimal male preponderance. This may be due to the fact that predisposing factors such as alcoholism and intake of red meat are more common among male gender. Altered bowel habits was the most common presenting complaint and this fact is comparable with the literature. well differentiated adenocarcinoma was the most common histopathological type of rectal malignancy (Juan Rosai and Ackerman) this finding correlated with two other standard studies (one study done by Sarvesh and Abhishek (2015) and other study done by tadashi terada (2012).

5. CONCLUSION

The total number of Rectal specimens received in the department of pathology, RMMCH during the period of study [August 2006 – August 2016] was 142. Out of which was 103

were malignant in nature. Among rectal lesions malignant lesions were more common than benign lesion. Majority of the patient are in their 6th decade of life Male patients outnumbered female patients by a very minimal margin. Altered bowel habits was the most common clinical presentation. Anemia was the most common constitutional symptom encountered. The most common malignant rectal lesion encountered was adenocarcinoma of the rectum, of which well differentiated adenocarcinomas was most common. Also a small percentage (3%) of cases which were diagnosed clinically as benign lesions turned out be malignant lesions histopathologically. Hence a careful unbiased clinical as well histopathological examination o all cases presenting to our hospital is necessary.

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