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Research Article

SPECTRUM OF LESIONS IN ENDOSCOPIC GASTROINTESTINAL BIOPSIES - A RETROSPECTIVE STUDY

Parvathi Pillai

Department of Pathology, Azeezia Medical College, Meeyanoor, Kollam, Kerala

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ABSTRACT

Introduction: The gastrointestinal tract disorders are the commonly encountered problem in the clinical practise. Endoscopic biopsies form an important diagnostic modality to classify them into neoplastic and non neoplstic. The present study estimates the distribution of various gastrointestinal lesions with respect to age, sex and frequency of occurrence. **Materials and Methods:** A retrospective study conducted in three year period from September 2018 to September 2021. Hematoxylin and eosin slides from the pathology department was reviewed with appropriate clinical details and lesions were classified as neoplastic and non neoplastic. **Observation and Results:** A total of 410 cases were studied, most commonest were the non – neoplastic cases 286 (69.7%), neoplastic 124(30.24%) cases. In the neoplastic cases 73(17.8%) were benign and 51(12.4%) malignant. Most number of cases were observed during the age group of 60 to 70 yrs with 96(23.41%) cases followed by 50 to 60 yrs with 85(20.73%) cases. Least common age group was less than 20 yrs and above 80 yrs. In the present study the most common diagnosis was chronic non atrophic gastritis 153 (37.3%), followed by Non specific colitis 48 (11.7%).The next common diagnosis was adenocarcinoma 44(10.7%) cases, followed by adenoma with 41 (10%)cases The most commonest site biopsied is antrum with 201(49%) cases, followed by colon 100 (24.3%)cases. The commonest lesion biopsied from females are non neoplastic, and neoplastic in males. **Conclusion:** Histopathological evaluations play a crucial role in final diagnosis for appropriate patient management and follow up of cancerous and inflammatory conditions. Thus, GI endoscopic representative biopsy is relatively simple and minimally invasive procedure to obtain the tissue for histopathology and clinicopathological correlation of these lesions are helpful in early detection of malignancy, further therapeutic measures, and prognosis.

INTRODUCTION

Disorder of gastrointestinal tract is one of the most commonly encountered problems in clinical practice. A high degree of mortality and morbidity is caused by them.[1] Endoscopic imaging has become a revolutionary tool in managing the patients with gastrointestinal lesions.[2]The definitive diagnosis of gastrointestinal lesions largely depends on the histopathological confirmation and is one of the bases for planning proper treatment regimen. Gastrointestinal (GI) cancers account for 20% of estimated new cancer cases and 15% of estimated death worldwide.[3] Lesions of the gastrointestinal tract include neoplastic and non-neoplastic lesions like infections, inflammation, vascular disorders, physical and toxic injury etc.[4]The present study thus intends to observe the varied lesions in gastric biopsies, their patterns of presentation and to assess the usefulness of these biopsies in patient management.

Aims and Objective of Study

To determine the spectrum of histopathological lesions of gastrointestinal tract To determine the frequency of the lesion among different age group and sex To study the distribution of various type of benign and malignant gastrointestinal tumour.

MATERIALS AND METHOD

This is a retrospective study done in Azeezia Medical College and Hospital, Kollam. It was carried out for a period of September 2018 to September 2021 (three years), with a total of 410 gastrointestinal endoscopic biopsies received in pathology department. Formal ethics review committee was not obtained however the confidentiality of the patient details was strictly maintained as it is a retrospective descriptive study not invovlving direct human interventions. The principles outlined in the Declaration of Helsinki is followed.

Corresponding author:* **Parvathi Pillai
Department of Pathology, Azeezia Medical College, Meeyanoor, Kollam, Kerala

Inclusion Criteria

All lesions of Upper and Lower gastrointestinal tract
All age group and both sexes

Exclusion Criteria

Resection specimen, Lesion of mouth and pharynx, Lesion of anal canal and rectum, Lesion of Liver and Gallbladder These filter paper mounted biopsies were received in container with 10% formalin. Fixed biopsies was processed and embedded in paraffin with oreinting the specimen mucosal surface upper most. Section stained by Hematoxylin and Eosin mounted with coverslip using Distyrene Plasticizer Xylene (DPX) as mountant. Additional sections were stained with Giemsa to observe H.pylori and Periodic acid Schiff (PAS) were performed whenever necessary. Biopsies were categorized as neoplastic and non – neoplastic lesions. All tumours were classified according to WHO classification. Datas were tabulated and analysed statistically.

OBSERVATION AND RESULTS

The total number of cases during the study period is 410. Among them the most commonest were the Non – neoplastic cases 286 (69.75%), Neoplastic cases accounting for 124 (30.24%) cases. In the neoplastic cases benign was 73 (17.8 %) and malignant 51 (12.43%).

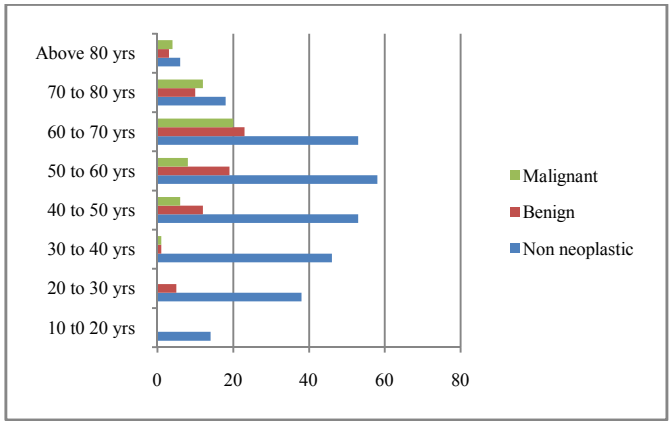

Fig 1 Age wise distribution

Most number of cases were observed during the age group of 60 to 70 yrs with 96 cases (23.4%) followed by 50 to 60 yrs with 85 (20.7%) cases. Least common age group was less than 20 yrs and above 80 yrs. In the study the maximum number of malignant cases and benign neoplastic were observed in between 60 to 70 yrs. Most common Non – Neoplastic in the age group of 50 to 60 yrs.

The youngest patient in the study was aged 15 yrs with a diagnosis of chronic non specific gastritis The oldest patient in the study was aged 87 yrs with a diagnosis of adenocarcinoma

In the present study the most common diagnosis was chronic non atrophic gastritis 153 (37.3%), followed by Non specific colitis 48(11.7%).The next common diagnosis was adenocarcinoma 44 (10.7%) cases, followed by adenoma both tubulovillous and tubular with (10%) cases. Two cases of parasites one in the oesophagus ascaris and other strongyloides. One case of amoebic colitis, and two cases of cytomegalo virus noted. Four cases of barretts.

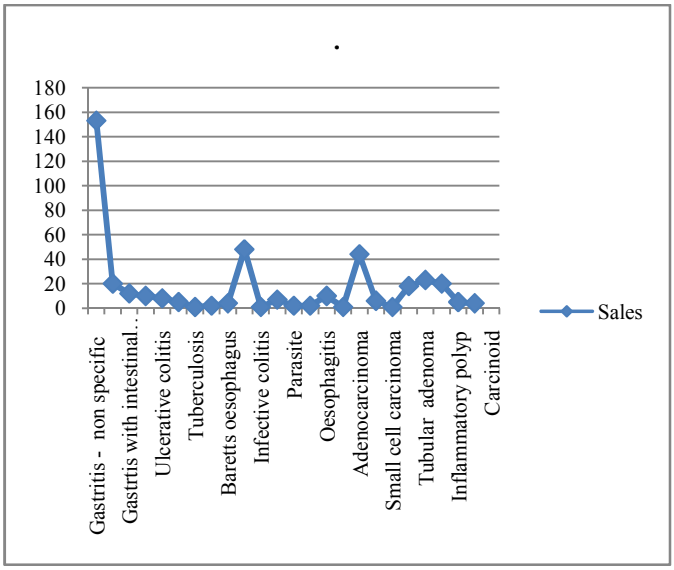

Fig 2 Spectrum of gastrointestinal lesion

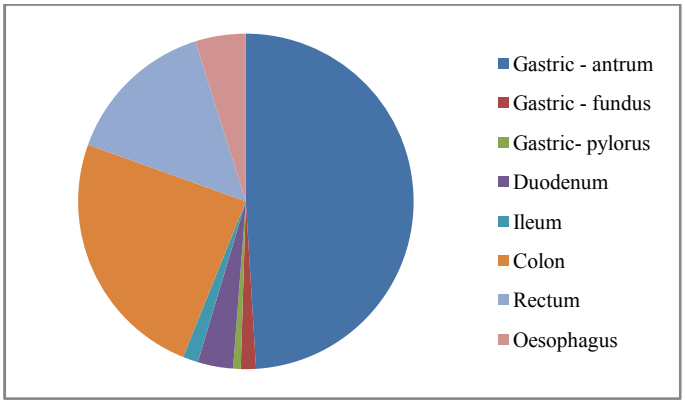

Fig 3 Biopsy site distribution

The most commonest site biopsied is antrum with 201 cases (49.02%), followed by colon 100 cases (24.39%). Least biopsied area is the ileum in the small intestine. Total number of Upper GI cases- 250 (60.9%) cases and total number of Lower GI cases-160 (39.02%).

Sex wise distribution

The commnest lesion biopsied from females are non neoplastic, and neoplastic in males

Fig 4

	Non - Neoplastic	Benign	Malignant
Males	137 (33.41%)	36 (8.7%)	31(7.5%)
Females	149 (36.34%)	37(9.02%)	20(4.8%)

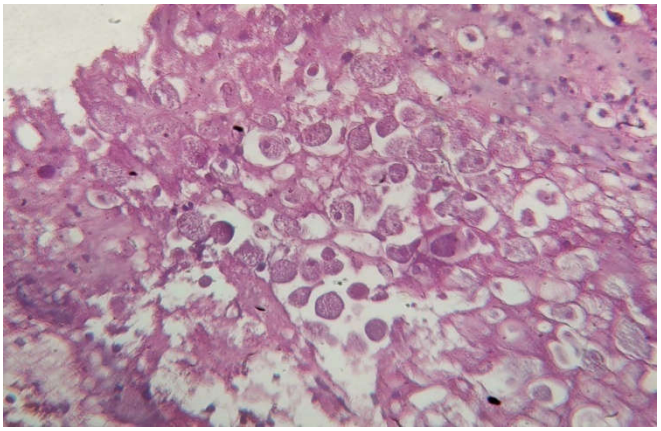

Fig 5 Ameobic Colitis

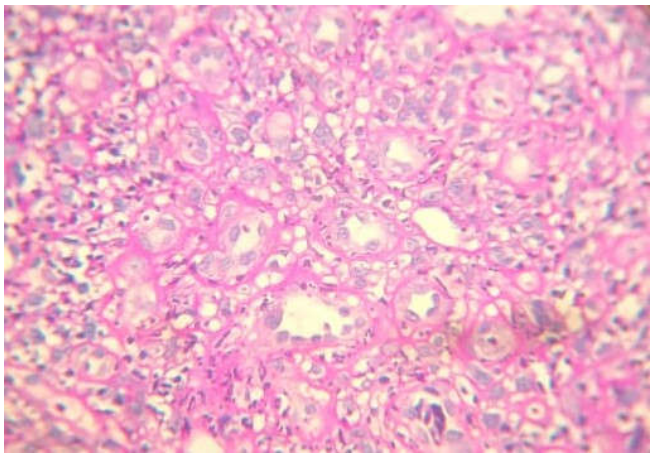

Fig 6 Cytomegalo Virus Colitis

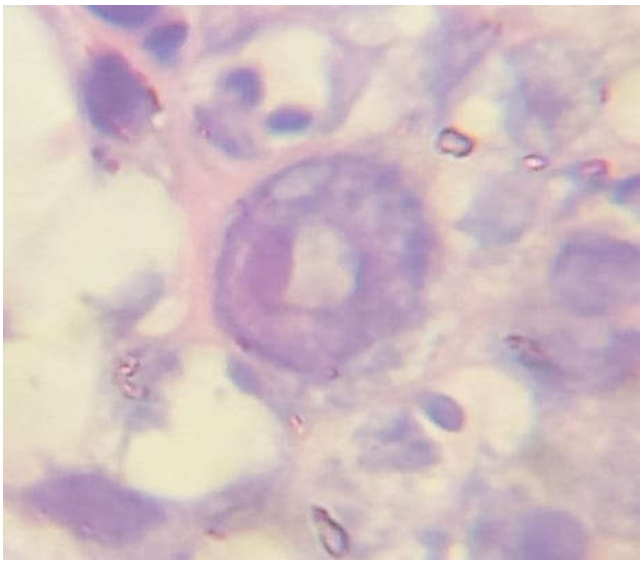

Fig 7 CMV Inclusion Bodies

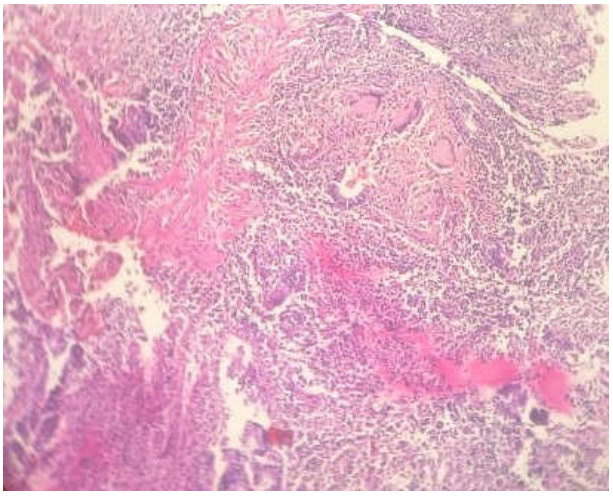

Fig 8 Granulomatous Colitis

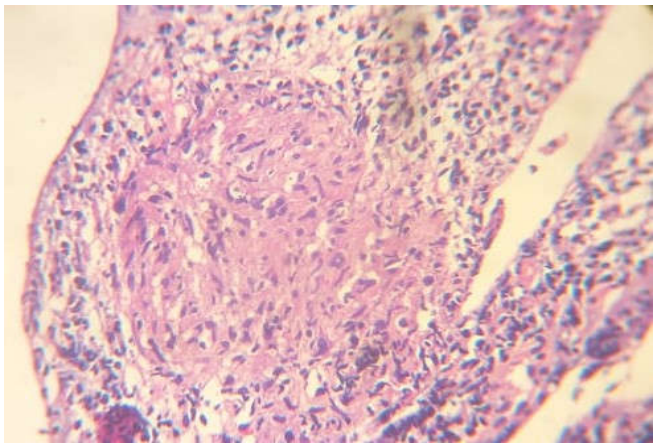

Fig 9 Granuloma

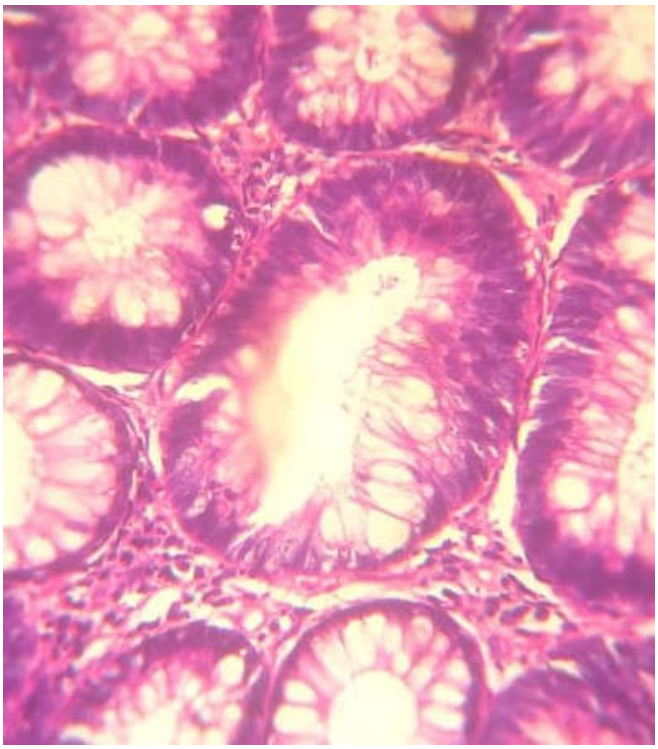

Fig 10 Tubular Adenoma

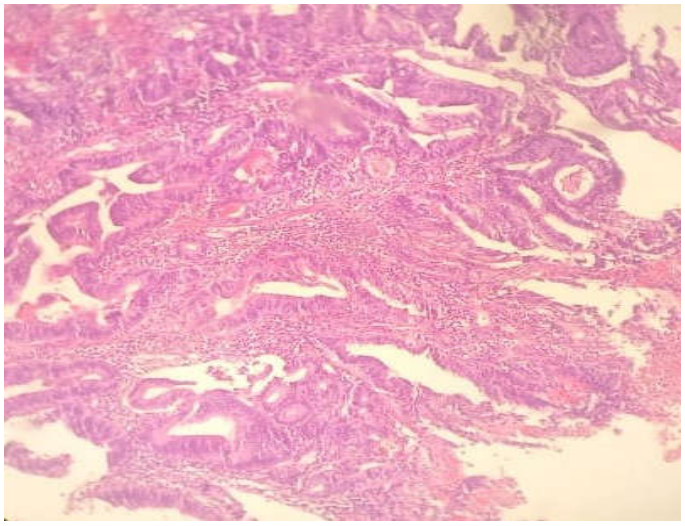

Fig 11 adenocarcinoma

DISCUSSION

In the present study conducted for three years the total number of cases we received was 410. Most common form of GI pathology was inflammatory followed by neoplastic lesions.[5]

In the present study also most commonest were the non – neoplastic cases 28(69.75%) and neoplastic cases accounting for 124(30.24%) cases. In the neoplastic cases benign was 73(17.8%) and malignant 51 (12.43%).

Most number of cases were observed during the age group of 60 to 70 yrs with 96(23.41%) cases followed by 50 to 60 yrs with 85(20.7%) cases. Least common age group was less than 20 yrs and above 80 yrs. In the study the maximum number of malignant cases and benign neoplastic were observed in between 60 to 70 yrs. Most common Non – Neoplastic in the age group of 50 to 60 yrs.

Similar observations were found by Das C *et al* [6] found majority of malignant lesions of large intestine in 61 to 75 years age group, while for oesophagus 46 – 60 yrs. Sreedevi P *et al* [7] found maximum malignant colorectal lesions in the 6th and 7th decades, while. malignant lesions of esophagus in 51 to 60 years. Ekta *et al* [8] showed that the 5th to 7th decade was the most predominantly affected age group contributing to 68.57% of all malignant cases, which was similar to the study conducted by WHO also found the common age group to be more than 50 years In the present study the most common diagnosis was chronic non atrophic gastritis 153(37.3%), followed by Non specific colitis 48(11.7%). The next common diagnosis was adenocarcinoma 44(10.7%) cases, followed by adenoma both tubulovillous and tubular with 41(10%) cases.

The most commonest site biopsied is antrum with 201(49%) cases, This is similar to a study by Venkatesh V [9], Krishnappa Rashmi[10] and Prashad PR[11]. In their studies they found percentage of gastric biopsies to be 57%, 68% and 56% respectively. followed by colon 100 cases. which is similar to the nding of studies done by Venkatesh V[9] and Durani A [12].

The commonest lesion biopsied from females are non neoplastic, and neoplastic in males. The male to female ratio in our study is 1:1.01, is not in concurrence with most of studies like the results reported by Patel., *et al*. [13] and Prasaad., *et al* [14].

CONCLUSION

Biopsy sampling of the gastric mucosa at diagnostic endoscopy provides useful information which helps in the diagnosis of various neoplastic and nonneoplastic gastric lesions. A variety of neoplastic and non- neoplastic lesions were observed in the present study across a wide range of site, age and sex distribution Histopathological evaluations play a crucial role in final diagnosis for appropriate patient management and follow up of cancerous and inflammatory conditions. Thus, GI endoscopic representative biopsy is relatively simple and minimally invasive procedure to obtain the tissue for histopathology and clinicopathological correlation of these lesions are helpful in early detection of malignancy, further therapeutic measures, and prognosis.

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