

The Histopathological Spectrum of Gastrointestinal Endoscopic Biopsies in a Tertiary Care Hospital

Dr. Devi B.¹, Dr. Letha P.², Dr. Kiran Sapru³

¹Associate Professor, Department of Pathology, Azeezia Institute of Medical Science and Research, Kollam, Kerala, India.

²Professor, Department of Pathology, Azeezia Institute of Medical Science and Research, Kollam, Kerala, India.

³Associate Professor, Department of Pathology, Azeezia Institute of Medical Science and Research, Kollam, Kerala, India.

Corresponding Author

Dr. Kiran Sapru, Associate Professor, Department of Pathology, Azeezia Institute of Medical Science and Research, Kollam, Kerala, India.

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ABSTRACT

Background

Gastrointestinal tract disorders are one of the most commonly encountered problems in the clinical practice. A variety of disorders can affect the gastrointestinal tract. For making the exact diagnosis and for further management, along with biopsy, endoscopy plays an important role.

Aim

To determine the spectrum of histopathological lesions of gastrointestinal tract. Materials and

Methods

A retrospective study was conducted in the Department of Pathology, from January 2020 to January 2023 (3 years).

Results

A total 278 endoscopic biopsies were evaluated. Out of which, 18 were from esophagus, 232 cases were from gastric, 12 were from duodenum and 16 were colorectal biopsies. Among 18 cases of esophageal biopsies, 12 cases were of non-neoplastic and 6 cases were of neoplastic nature. Among the gastric biopsies, 229 cases were non-neoplastic and 3 cases were of neoplastic nature. Among 12 cases of duodenum biopsies, all cases were non-neoplastic, of which chronic non-specific duodenitis (66.66%) was the commonest. Among colorectal biopsies, the most common were non-neoplastic lesions and the most common malignancy was adenocarcinoma.

Conclusion

Correlation of endoscopy and histopathological examination of biopsy play an important role in diagnosis and management of gastrointestinal tract disorders. Histopathology is the gold standard for the diagnosis of endoscopically detected lesions of the GI tract.

Keywords: Endoscopy, Histopathology, GIT.

INTRODUCTION

Gastrointestinal tract disorders are one of the most commonly encountered problems in the clinical practice with a high degree of morbidity and mortality. Endoscopic biopsy is common procedure performed in the hospital for a variety of benign and malignant lesions.¹ The GIT comprises of oral cavity, oesophagus, stomach, duodenum and colorectum and can get affected with vast lesions which can be broadly classified into congenital anomalies, infections, inflammation, benign and malignant neoplasms². Gastrointestinal endoscopy in combination with biopsy play an important role in the early diagnosis of gastrointestinal lesions³. It is not only used to diagnose malignant and inflammatory lesions but also for monitoring the course, extent of disease, response of the therapy and early detection of complications⁴. Colonoscopic biopsies are performed not only for the diagnosis of disease but also for the monitoring of the course of a wide variety of conditions and for the early identification of complications. Gastrointestinal cancers are associated with significant morbidity and mortality. Thus early diagnosis is required to lessen patient suffering and improve disease outcome⁵.

This study was undertaken to determine the spectrum of histopathological lesions of gastrointestinal tract.

MATERIALS AND METHODS

This retrospective study was conducted in the Department of Pathology, Azeezia institute of medical sciences and research from January 2020 to January 2023 (3 years) A total 278 endoscopic biopsies were evaluated. All the biopsy samples were fixed in 10% formalin, followed by conventional tissue processing and embedding. Each section were stained with Haematoxylin and Eosin and studied. Additional sections were stained with Giemsa to observe H. Pylori and Periodic Acid Schiff (PAS) stain were performed wherever necessary. Analysis of spectrum of lesion in GIT was done.

RESULTS

In this present study, out of 278 cases, 166 were males and 112 were females. The mean age of presentation was 52 years. The youngest patient was 18 year male with chronic active gastritis and the oldest patients was 87 years male with adenocarcinoma. Among the 18 oesophageal biopsies, 8 cases were of chronic non-specific esophagitis, 2 cases of Barrets esophagus, 2 cases showed dysplasia and 6 cases were squamous cell carcinoma .Out of 232 cases of gastric biopsies, 199 cases were chronic active gastritis, 12 cases were H. Pylori gastritis, 18 cases were polyps, of which 9 were hyperplastic polyps, 6 were fundic gland polyps and 3 were inflammatory polyps and. Out of 3 malignant cases, 2 cases were adeno-carcinoma and one was signet ring cell carcinoma. Among 12 cases of duodenum biopsies, all were non-neoplastic, of which chronic non-specific duodenitis was the commonest. Among the 16 colorectal biopsies, non-neoplastic lesion was seen in 9 cases. Adenocarcinoma (7 cases) was the malignant lesion seen in colorectal biopsy. (Table: 1)

HP lesions	Present study Number of cases
Oesopgagus (18) chronic non-specific esophagitis	08
Barrets esophagus	02

Dysplasia	02
Squamous cell carcinoma	06
Stomach (232)	
Chronic active gastritis	199
H.Pylori gastritis	12
Polyps	18
Carcinoma	03
Duodenum (12)	
Chronic non-specific duodenitis	12
Colorectal (16)	
Ulcerative colitis	
Chronic nonspecific colitis	02
Lymphocytic colitis	05
Carcinoma	02
	07
<i>Table 1: Spectrum of lesions</i>	

DISCUSSION

Disorders of the gastrointestinal tract are responsible for a great deal of morbidity and mortality. A wide span of tests are available for the investigation of patients with gastrointestinal symptoms. GIT endoscopy, sigmoidoscopy and colonoscopy has a great impact on the diagnosis of whole GIT lesions and their histopathological analysis.

In the present study, the peak incidence of the gastrointestinal lesion was in the 5th and 6th decade. A comparative study done by Sharanabasavaraj et al shows similar results in which the most commonly affected age range was 51-70 years⁶. The male to female ratio was found to be 1.46:1 in our study which was similar to the studies done by Mohapatra et al⁷ and Veerendrasagar et al⁸, Khaled et al⁹. Among oesophageal biopsies, most common age group involved was sixth decade that was similar to, Jaynul Islam SM et al¹⁰ and Somani NS and Patil P¹¹. In the current study, non neoplastic lesions outnumbered the neoplastic lesions, which was comparable to the Krishnappa R et al¹². Similar to our results, squamous cell carcinoma was the most common lesion in majority studies^{13,14}. In our study the most common site for endoscopic biopsy was found to be stomach which was similar to the studies done by Maiti et al¹⁵, Jaffary et al¹⁶, and Alghamdi et al¹⁷. Majority of gastric biopsies showed a predominance of non neoplastic lesions with gastritis being the most common lesion¹⁸. In small intestinal biopsies non neoplastic lesions outnumbered the neoplastic lesions in all studies including the current study with non specific duodenitis being the most common lesion^{19,20}. Majority of colorectal biopsies showed a predominance of non neoplastic lesions, which was similar to the findings of T Abilash SC et al.²¹ and Makaju R²².

CONCLUSION

Endoscopic examination and biopsy are the beneficial procedures for correct assessment of patients with gastrointestinal symptoms. It is recommended as the first investigation in the workup of patients with GI disorders. A variety of non-neoplastic and neoplastic lesions were reported in the present study. The commonest site of upper gastrointestinal lesions was stomach and the

commonest non-neoplastic lesion was chronic active gastritis and neoplastic lesion was adenocarcinoma. Endoscopy with combination of histopathological examination of biopsy plays an important role in early detection of lesions, understanding the pathophysiology of disease, prognosis and survival rates after staging in the case of carcinomas and aids in improving the further management.

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