

Histopathological Spectrum of Upper Gastrointestinal Lesions in A Tertiary Care Centre

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ABSTRACT

Background: Gastrointestinal disorders are commonly encountered in clinical practice. Histopathologic examination of the endoscopic biopsies will help in definitive diagnosis and early therapeutic intervention. This study is done to know the various lesions presenting in our hospital.

Materials and Methods: This is a prospective study done in the Department of Pathology, Kanachur Institute of Medical Sciences between January 2018 to January 2019. 100 cases from esophagus up to the second part of duodenum were studied. The biopsies were sent to the histopathology lab in 10% buffered formalin. They were processed, sectioned and stained with H&E

Results: of the 100 cases, 26 cases were from the esophagus, 66 from the stomach and 8 from duodenum. Of the 26 esophageal biopsies, 6 cases showed dysplastic changes, 4 had hyperplastic epithelium, 3 showed chronic inflammatory changes, 2 showed features of reflux esophagitis and 11 were diagnosed as Squamous cell carcinoma. Of the 66 gastric biopsies, majority were benign, commonest being chronic non specific gastritis. 8 cases were malignant and showed features of Adenocarcinoma. Among the 8 duodenal biopsies all showed features of chronic duodenitis.

Conclusion: Biopsies helps in establishing a definite diagnosis of upper gastrointestinal lesions at an early stage thereby reducing the progression to invasive carcinoma

Keywords: Upper GIT, Histopathology, Biopsy

Introduction

Disorders of gastrointestinal tract are commonly encountered in clinical practice, definite diagnosis of which depends on histopathological examination. [1],[2] Introduction of fiberoptic endoscopes in the 1960's has improved the diagnostic facility by providing numerous small biopsies for diagnosis and monitoring of various gastrointestinal tumours. Esophagus and stomach show a wide variety of inflammatory disorders, infections vascular disorders and neoplasms. [3],[4] Endoscopic examination can be done on an outpatient basis with minimal discomfort to the patient. Endoscopy along with histopathological examination will help in early diagnosis and subsequent timely treatment in a patient. [5] Hence the need for obtaining mucosal biopsies has increased for early diagnosis and therapeutic intervention. [3],[4] The aim of this study is to determine the histopathological spectrum of lesions of the upper gastrointestinal tract.

Materials and Methods

The present study was conducted in the Department of Pathology, Kanachur Institute of Medical Sciences from January 2018 to January 2019. 100 cases were studied. All endoscopic biopsies done from esophagus up to the second

part of duodenum were included in the study. All lesions of the mouth, pharynx and beyond second part of duodenum were excluded from the study. The sample obtained was sent to the histopathological laboratory in 10% buffered formalin where it was processed. Sections were stained with H and E and studied microscopically.

Results

Of the 100 biopsies, 72 patients were males and 28 patients were females; Male: Female ratio being 2.5:1. The age of the patients ranged from 18 to 86 yrs. Among the upper gastrointestinal biopsies, esophageal biopsies were 26 (26%), gastric biopsies were 66 (66%) and duodenal biopsies were 8 (8%). [Fig 1]

Of the 26 esophageal biopsies, 11 were malignant and all 11 cases showed features of Squamous cell carcinoma. 6 cases showed dysplastic changes, 4 had hyperplastic epithelium, 3 showed chronic inflammatory changes and 2 showed features of reflux esophagitis.

Of the 66 gastric biopsies, 58 cases (88%) were non neoplastic and 8 cases (12%) were neoplastic. The majority of the non-neoplastic lesions were chronic non-specific gastritis (34%). Helicobacter pylori associated gastritis formed about 18% of the cases. 4 cases were diagnosed

as peptic ulcers and 1 case of acute on chronic gastritis was seen. Of the 8 neoplastic cases, all were malignant and showed features of Adenocarcinoma.

There were 7 patients with biopsies from the upper part of duodenum. All showed features of chronic non-specific duodenitis.

Table 1: Histopathological findings in Esophageal biopsies.

Lesions of Esophagus	Number of cases
Hyperplastic epithelium	4
Chronic inflammatory changes	3
Reflux esophagitis	2
Squamous cell carcinoma	11

Table 2: Histopathological findings in Gastric biopsies.

Gastric lesions	Number of cases
Chronic non-specific gastritis	34
H.pylori associated gastritis	18
Peptic ulcers	4
Acute on chronic gastritis	1
Adenocarcinoma	8

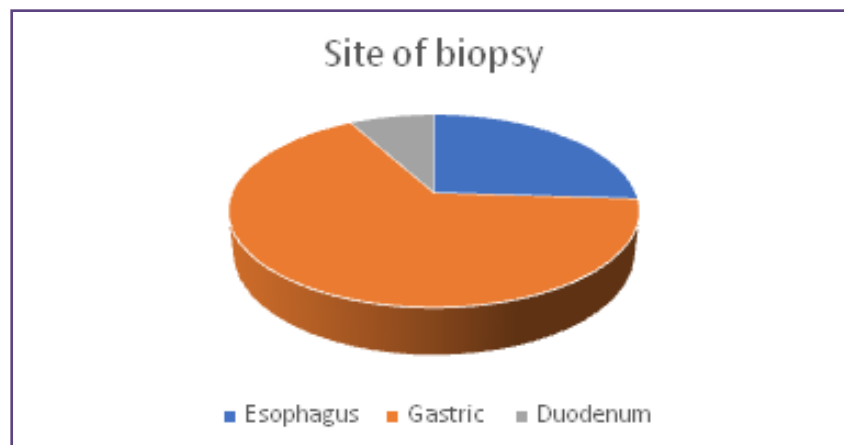


Fig. 1: Distribution of upper GI biopsies.

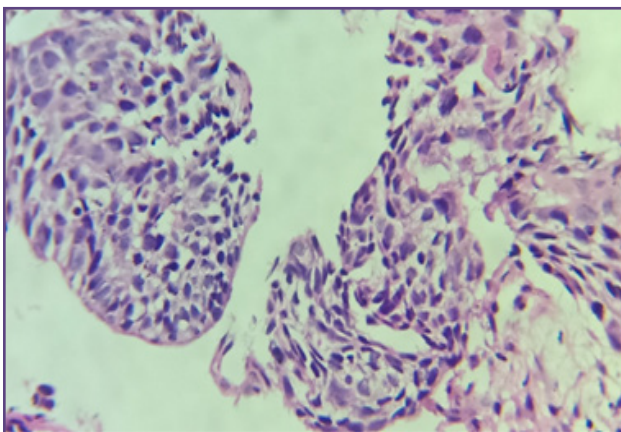


Fig. 2: Moderately differentiated squamous cell carcinoma of esophagus (H&E stain, 40x).

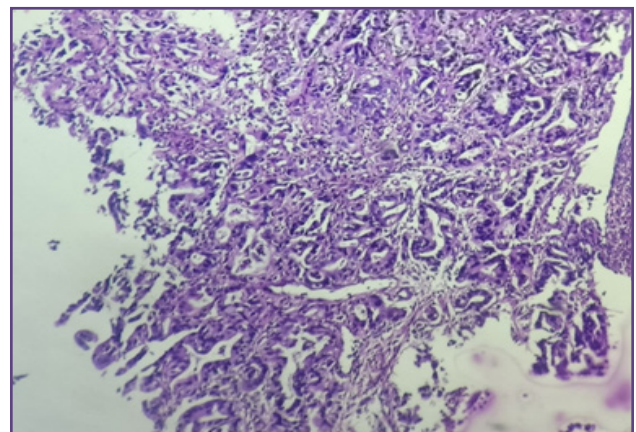


Fig. 3: Malignant cells arranged in glandular pattern in Gastric adenocarcinoma (H&E stain, 40x).

Discussion

The current gold standard for an accurate assessment of patients with upper GI symptoms is endoscopic examination followed by a histopathological examination. This is used to diagnose inflammatory and malignant lesions as well as monitor the course, disease extension, response to therapy and early detection of complications. The need to differentiate benign and inflammatory lesions and to detect malignant cases at an early stage has led to the increase in obtaining mucosal biopsies from upper GIT.^[6]

The present study was conducted on 100 cases of upper gastrointestinal biopsies which were received from January 2018 to January 2019. A male: female ratio of 2.6: 1 was observed which was similar to Krishnappa Rashmi et al,^[3] Sheik Bilal A et al,^[1] P Uma Raniet et al^[2] and Shennak MM et al.^[7] The higher male incidence was attributed to increased exposure of males to various risk factors when compared to females.^[1] Also according to JC Paymaster^[8] gastrointestinal malignancies are more common in men than females. Predominance of upper GI lesions were found in the age group of 50-80 years which are similar to other studies.^[1]

Esophageal Lesions: Of the 26 esophageal biopsies, 11 cases were neoplastic and 15 were non neoplastic. The increase in non neoplastic cases were similar to studies done by Krishnappa Rashmi et al^[3] and Shennak MM et al.^[7] Among the malignant cases all showed features of Squamous cell carcinoma similar to study done by Krishnappa Rashmi et al.^[3]

Gastric Lesions: Majority of the biopsies in this study was carried out from the stomach. This was similar to Krishnappa Rashmi et al,^[3] Sheik Bilal A et al,^[1] Hussain et al^[4] and Shennak MM et al.^[7] Of the 66 cases, 58 were benign and 8 cases were malignant. The most common benign lesion observed in our study was chronic non specific gastritis (34%) followed by H.pylori associated gastritis (18%). This distribution of benign and malignant cases are similar to studies done by Sheik Bilal A et al^[1] and Rupendra et al.^[9] In our study the most common site of gastric adenocarcinoma was the pylorus which was similar to studies done by Krishnappa Rashmi et al.^[3]

Duodenal Lesions In our study we had only 8 cases of duodenal biopsies all of which showed features of chronic duodenitis. Other studies in addition to chronic

duodenitis also had other cases of tubular adenoma and adenocarcinoma.

Conclusion

Biopsies of the upper gastrointestinal lesions done with the help of endoscopy helps in establishing a definite diagnosis. The study of endoscopic biopsy specimens helped in confirming diagnosis of suspicious malignant cases and to diagnose benign conditions, thus allowing an early therapeutic intervention without delay. Our study saw a variety of lesions in esophagus as well as stomach among different age groups. Even though limitations maybe seen occasionally due to tiny biopsy material, we can still detect mucosal lesions at an early stage thereby reducing the progression to invasive carcinomas.

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