



“HISTOPATHOLOGICAL STUDY OF UPPER GASTROINTESTINAL ENDOSCOPIC BIOPSIES”

Pathology

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ABSTRACT

Introduction: According to National cancer registry, esophageal and gastric cancers are the most common cancer in men and in women esophageal cancer is third most common cancer after carcinoma of breast and cervix[4,5] Early detection of malignancy greatly improves the survival rate of the patients. Endoscopy followed by histopathological evaluation is the gold standard for diagnosis (7). This study was done to determine the histopathologic spectrum of Upper Gastrointestinal Tract Mucosal Biopsies. **Materials And Methods:** A cross-sectional study of upper GI endoscopic biopsy was carried out in Bharati Vidyapeeth (Deemed to Be University) Medical College and Hospital, Sangli. After obtaining ethical clearance (reference number: BV(DU)/MCH/2398/19-20), a total of 50 cases were identified of endoscopic biopsies over the period of 18 months from November 2019 to April 2021. After proper processing and H&E staining, tumors were diagnosed as per WHO histological classification of gastrointestinal tumors and lymphoproliferative disorders. **Results:** Out of 50 UGIE biopsies, 37 (74%) were non neoplastic lesions whereas neoplastic lesions were 13 (26%) only. Esophageal biopsies 13, gastric biopsies 27 and duodenal biopsies 10. Majority of cases were non neoplastic and male predominance was seen in all neoplastic lesions. **Conclusion:** There is good correlation between both the endoscopic and histopathological diagnosis. Endoscopy gives us the exact site of the lesion from which endoscopic guided biopsy can be taken followed by the gold standard method which is histopathological examination.

KEYWORDS

Endoscopic biopsies, Esophageal Biopsies, gastric biopsies, duodenal biopsies.

INTRODUCTION:

In clinical settings upper gastrointestinal tract disorders are commonly observed, these are mostly associated with an increase in morbidity and mortality⁽¹⁾. The causes of lesions in the upper GIT can be either infectious or malignant.⁽³⁾ The lesions found in the upper git could be extremely difficult to diagnose clinically.⁽⁶⁾ According to National cancer registry, esophageal and gastric cancers are the most common cancer in men and in women esophageal cancer is third most common cancer after carcinoma of breast and cervix^(4,5)

Early detection of malignancy greatly improves the survival rate of the patients. Endoscopy followed by histopathological evaluation is the gold standard for diagnosis.⁽⁷⁾ This study was done to determine the histopathologic spectrum of Upper Gastrointestinal Tract Mucosal Biopsies.

MATERIALS AND METHODS

A cross-sectional study of upper GI endoscopic biopsy was carried out in Bharati Vidyapeeth (Deemed to Be University) Medical College and Hospital, Sangli. After obtaining ethical clearance (reference number: BV(DU)/MCH/2398/19-20), a total of 50 cases were identified of endoscopic biopsies over the period of 18 months from November 2019 to April 2021.

After proper processing the haematoxylin and eosin (H and E) stained slides will be reported. Special stains like Giemsa, Periodic Acid Schiff (PAS) will be also done whenever necessary. Tumors will be diagnosed as per WHO histological classification of gastrointestinal tumors and lymphoproliferative disorders.

Inclusion criteria: - All endoscopic biopsies of the upper gastrointestinal tract from esophagus, stomach and 1st and 2nd part duodenum.

Exclusion Criteria: - All excisional biopsy and radical specimens.

RESULTS:

A total of 50 upper GI biopsies were studied over the period of 18 months from November 2019 to April 2021.

Out of 50 UGIE biopsies, as shown in table 1, 37 (74%) were non neoplastic lesions whereas neoplastic lesions were 13 (26%) only. Esophageal biopsies 13, gastric biopsies 27 and duodenal biopsies 10.

Sex wise distribution of lesions shows 34 Male and 16 female patients.

In esophageal lesions, female predominance is seen in non-neoplastic lesions and male predominance is seen in neoplastic lesions. In Gastric and duodenal lesions male predominance is seen in both non neoplastic and neoplastic lesions.

Table 1: Results

	Endoscopic diagnosis	Histopathological Diagnosis	No
Esophagus:			
Non neoplastic	Barretts oesophagus	Barretts oesophagus	1
	Esophagitis	pill induced esophagitis	1
	Esophagitis	viral esophagitis	1
	Achalasia cardia (1) SCC (1)	Inadequate for opinion	2
Neoplastic	Ca Esophagus	Well differentiated Adenocarcinoma	2
	Ca Esophagus	Moderately differentiated Adenocarcinoma	1
	Ca Esophagus	Well differentiated squamous cell carcinoma	2
	Ca Esophagus	Moderately differentiated squamous cell carcinoma	1
	Ca Esophagus	Poorly differentiated squamous cell carcinoma	1
Stomach:			
Non neoplastic	Gastritis	Acute gastritis	3
	Gastritis	Chronic gastritis	12
	Gastritis	H. Pylori Gastritis	5
	Ulcer	Corrosive injury	1
	Gastritis	No specific pathology	2
Neoplastic	Adenocarcinoma	Poorly cohesive carcinoma	1
	Gastric Carcinoma	Well differentiated adenocarcinoma	2
	Gastric Carcinoma	Signet ring cell carcinoma	1

	Gastric Carcinoma	Neuroendocrine tumor NOS	1
Duodenum			
Non neoplastic	Duodenitis	Acute duodenitis	4
	Duodenitis	Chronic duodenitis	1
	Polyp	Brunner gland hyperplasia	2
	Duodenitis	Inadequate for opinion	2
Neoplastic	Polyp	Well differentiated adenocarcinoma	1
Total			50

DISCUSSION

According to National Cancer Registry, most common carcinomas in men are esophageal and gastric carcinoma whereas it is the third most common cancer in females after breast and cervical carcinoma.⁽¹⁾ All upper gastrointestinal tract lesions have overlapping symptoms. That's why it is important to distinguish these lesions so that we can diagnose them early and treat them.⁽¹⁾

To diagnose the disorders of upper gastrointestinal lesions the investigation of choice is upper gastrointestinal endoscopy.⁽²⁾ It has its own advantages because we can take biopsies from the findings which we have got in endoscopy and can proceed for histopathological examination of the same which is the gold standard technique.⁽²⁾

The present study is conducted in the Department of Pathology, at Bharati Vidyapeeth (Deemed To Be University) and medical college, Sangli and was carried out for a period of 18 months from November 2019 to April 2021.

Our study showed majority of cases in age group above 60 years (40%) were as in the study done by Deepa Rani et al⁽⁸⁾, most of the cases were in between 50-70 years of the age group, which is similar with our study. Many risk factors among different age group can be the reason for predominance of many cases in later age group.⁽¹⁾

Male (34) patients were affected more than females (16) in our study. Out of 34 cases in males, 24 were non neoplastic and 10 were neoplastic. This male predominance in neoplastic lesions overall is correlated with the studies of Krishnappa et al⁽⁹⁾. This is due to smoking, dietary habits and alcohol consumption according to many previous studies.⁽¹⁾

The most common clinical symptom of these UGIE lesion and most of the patients with gastritis had dyspepsia (50%), and this is correlated with the findings of Syed Imtiaz Hussain et al (37.9%).⁽⁶⁾ In present study patients with malignancy presented with weight loss.

Total numbers of esophageal biopsies were 13, out of which 05 were nonneoplastic and 07 were neoplastic. These findings were in concordance with the study of Bhat N et al.⁽²⁾ Endoscopic findings of the esophageal biopsies were well correlated with the histopathological finding. Most of the patients with Adenocarcinoma (Fig 1) and squamous cell carcinoma (Fig 2) were presented as ulcerative growth.

Total number of gastric biopsies we received were 26, out of which 21 (85.18%) cases were nonneoplastic and 5 (14.81%) cases were neoplastic. This is in concordance with Deepa Rani et al,⁽⁸⁾ Krishnappa Rashmi et al⁽⁹⁾ and Bilal A Sheikh et al.⁽¹⁾ The most commonly found nonneoplastic lesions were chronic superficial gastritis (12) followed by H. pylori gastritis (5). These findings are similar with the studies of Bhat N1 and Sheikh BA et al.⁽²⁾ One case of each poorly cohesive carcinoma (Fig 3), adenocarcinoma NOS, signet ring cell carcinoma (Fig 4) and neuroendocrine tumor were seen.

Out of 10 duodenal biopsies out of which 09 biopsies were nonneoplastic and 01 was neoplastic lesion of duodenum. Nonneoplastic lesions were more common than neoplastic lesions and this is correlated with the findings of Deepa Rani et al.⁽⁸⁾ 4 cases of acute duodenitis and 2 cases of brunner gland hyperplasia (Fig 5) were seen. The neoplastic lesion seen was well differentiated adenocarcinoma (Fig 6).

CONCLUSION:

In present study there is good correlation between both the endoscopic and histopathological diagnosis. Endoscopy gives us the exact site of

the lesion from which endoscopic guided biopsy can be taken followed by the gold standard method which is histopathological examination. We culminate our findings as endoscopy alone to diagnose the lesions of upper gastrointestinal tract is not sufficient and for the greater management of the patients it is very important to do endoscopic guided biopsies followed by histopathological examination rather than doing endoscopy alone.

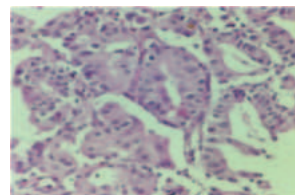


Fig 1: Well differentiated Adenocarcinoma – Esophagus (H & E, 40X)

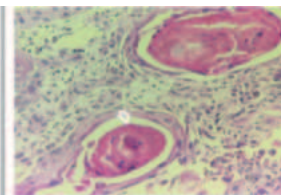


Fig 2: Well differentiated Squamous cell carcinoma – Esophagus (H & E, 40X)

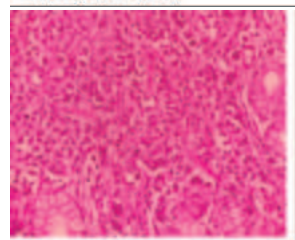


Fig 3: Poorly Cohesive Carcinoma – Stomach (H&E, 40X)

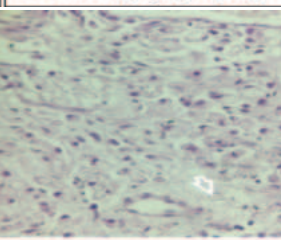


Fig 4: Signet Ring Cell Carcinoma – Stomach (H&E, 40X)

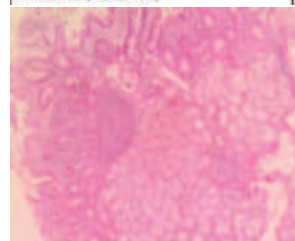


Fig 5: Brunner Gland Hyperplasia – Duodenum (H&E, 10X)

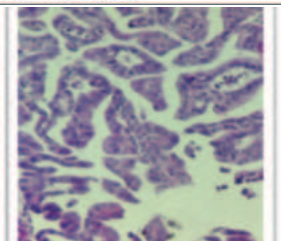


Fig 6: Well Differentiated Adenocarcinoma – Duodenum (H&E, 40X)

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