



A STUDY ON HISTOPATHOLOGICAL SPECTRUM OF LESIONS OF GASTROINTESTINAL TRACT ENDOSCOPIC BIOPSIES

Pathology

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ABSTRACT

Background: Disorders of gastrointestinal tract are one of the commonest problem encountered in clinical practice. Definitive diagnosis is based on histopathological confirmation. For evaluation of these patients endoscopic biopsy is taken. It is one of the basis of effective management. This study is done to analyse the spectrum of lesions affecting gastrointestinal tract in our institute.

Objectives: To determine the spectrum of histopathological lesions of gastrointestinal tract.

Materials and methods: All endoscopic biopsies from upper and lower GIT were received and processed. Sections were made and stained with routine Hematoxylin and Eosin stain.

Results: Out of total 91 endoscopic biopsies, the most commonly encountered were gastric biopsies (30 cases) followed by colon (25). Chronic non-specific gastritis was the most common lesion reported in stomach. Esophagus was found to be the most common site for malignancy.

KEYWORDS

Gastrointestinal lesions, endoscopic biopsy, malignancy, non-neoplastic lesions.

INTRODUCTION

Disorders of gastrointestinal tract are commonly encountered problems in the clinical practice with a high degree of morbidity and mortality.¹ For a variety of diseases both benign and malignant, endoscopic biopsy is a common procedure performed in the hospitals. Now a days an endoscopy or colonoscopy without histopathological examination of biopsies has become an incomplete procedure.²

Biopsies from oesophagus, stomach and duodenum upto the second part constitute upper gastrointestinal endoscopic biopsies and lower gastrointestinal biopsies are taken from lower GIT beyond second part of duodenum.³

Various non-neoplastic and neoplastic lesions can occur in GIT. Common entities are infection, inflammation, vascular disorder and toxic and physical injury etc. Polyps seen in GIT are of hyperplastic, adenomatous, inflammatory and carcinomatous type.⁴

Endoscopic biopsies are used to diagnose various lesions and apart from that, are also used to monitor the course of disease process, detect complication, extent of the disease and response to the therapy. They are considered gold standard investigation for Gastrointestinal lesions.⁵

AIMS AND OBJECTIVES

To determine the spectrum of histopathological lesions of gastrointestinal tract.

MATERIALS AND METHODS

This is a retrospective study done in Silchar Medical College and hospital, Assam, India. It was carried out during a period of one year from September 2018 to August 2019. A total of 91 cases (Upper and Lower gastrointestinal biopsies) were received in the histopathology section.

Complete clinical history was collected for histopathological correlation.

Inclusion Criteria:

1. All lesions of upper and lower GIT
2. All age groups and both sexes

Exclusion Criteria:

1. Resection specimens
2. Lesion of mouth and pharynx
3. Lesion of anal canal and rectum
4. Lesion of liver and gall bladder

The biopsies were received as tiny tissue fragments. Fixation was done in 10% formalin, followed by tissue processing and embedding. Section were stained with Hematoxylin and Eosin. Analysis of spectrum of lesion in GIT was done.

RESULTS:

In the present study, out of 91 cases, 54 (59%) were males and 37 (41%) were females with male to female ratio of 1.4:1 (Figure 1). The mean age of presentation was 47 years. The youngest patient was 8 year male with chronic non-specific colitis and the oldest patient was 71 year male with adenocarcinoma of colon.

Out of all cases, gastric biopsies constituted higher number of 36 (40%), followed by colon (27%), oesophagus (22%) and small bowel (11%). Out of 20 cases of esophageal biopsies, six cases were non-neoplastic and 14 cases were neoplastic in nature.

Out of 30 cases of gastric biopsies, the most common lesion was found to be chronic non specific gastritis (68%), followed by malignancy.

Among eight cases of duodenal biopsies received, six cases were chronic non specific duodenitis, one was hyperplastic polyps, one case was moderately differentiated adenocarcinoma.

27 cases were biopsies from ileal, jejunal and colonic regions excluding anal canal and rectum. The most common lesion was 14 cases of chronic non specific colitis (56%). 10 cases of colon were reported as adenocarcinoma and one case of colon was tuberculous lesion. Only one case of ileal biopsy was received which was reported as tuberculous lesion.

Figure 1 shows a case of squamous cell carcinoma of esophagus and Figure 2 shows a case of moderately differentiated adenocarcinoma of colon.

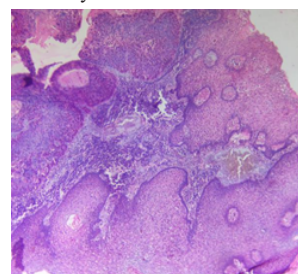


FIGURE 1: 10x : squamous cell carcinoma of esophagus showing invasive squamous epithelium and keratin pearl

Table 1 shows distribution of lesions in gastrointestinal tract.

Table – 1 Distribution of lesions in gastrointestinal tract (n=91)

Tissue (n)	Diagnosis	Percentage
Esophagus(20)	squamous cell carcinoma	60(12)
	Dysplastic squamous epithelium	10(2)
	Chronic non-specific esophagitis	30(6)
Stomach (30)	Chronic non-specific gastritis	68(20)
	Hyperplastic polyp	6(2)
	Adenocarcinoma	26(8)
Duodenum(8)	Chronic non-specific duodenitis	75(6)
	Hyperplastic polyp	12.5(1)
	moderately differentiated adenocarcinoma	12.5(1)
Ileum(1)	tuberculous lesion	100(1)
Jejunum(1)	Chronic non-specific inflammation	100(1)
Colon(25)	Chronic non-specific colitis	56(14)
	Adenocarcinoma	40(10)
	Moderately differentiated tuberculous lesion	4(1)

Out of 91 cases 31 cases were malignant. Their distribution is shown in Table 2.

Table – 2 Distribution showing malignancies of GIT (n=31)

SITE OF MALIGNANCY	PERCENTAGE
ESOPHAGUS	39
STOMACH	26
DUODENUM	3
ILEUM & JEJUNUM	0
COLON	32

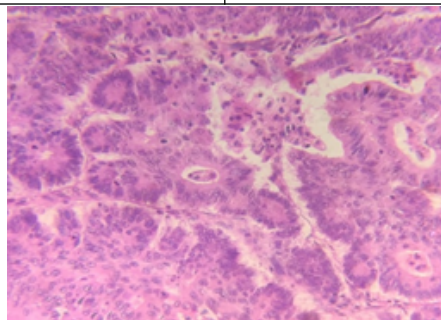


Figure 2: 40X: moderately differentiated adenocarcinoma of colon showing malignant glands

DISCUSSION

In clinical practice gastrointestinal tract lesions are one of the most commonly encountered problems which can be broadly classified into upper and lower gastrointestinal lesions.

In our study , most common biopsies that we recieved were gastric biopsies which was 40% of total 91 cases. This is similar to a study by Venkatesh V³, Krishnappa Rashmi⁵ and Prashad PR⁶. In their studies they found percentage of gastric biopsies to be 57%, 68% and 56% respectively.

Of the total 30 cases of stomach , 22 were non neoplastic and 8 were neoplastic. Most common lesion was chronic gastritis. In the studies done by Venkatesh V³ and Hirachand et al.¹ found similar findings.

Eight cases were malignant, moderately differentiated adenocarcinoma was the most common type. This is similar to the findings of Venkatesh V³, Hirachand et al.¹ and Sharma P et al.⁷

Regarding esophageal biopsies , we recieved 20 cases .Out of which 14 cases were malingnant and 6 cases were benign . The malignant cases were of squamous cell carcinoma type. Venkatesh V³, Bilal A Sheikh⁸, Islam et al⁹ found similar data as our study. Although Islam et al⁹ in their study found that 18.75% cases of esophagus were adenocarcinoma.

Out of eight cases of duodenum , only one case was malignant (moderately differentiated adenocarcinoma). Other seven cases were chronic non specific duodenitis. This is similar to study done by Krishnappa R⁵. Venkatesh V³ in their study did not find any case of

malignancy of duodenum.

Among the lower gastrointestinal biopsies, colonic biopsies were most common comprising of 25 cases. We found that the most common lesion in colon in our study was chronic non specific colitis (56%). There were 10 cases of moderately differentiated adenocarcinoma , which is similar to the finding of studies done by Venkatesh V³ and Durani A¹⁰.

Regarding malignant cases, a total of 31 cases were reported as malignant. The most common site was found to be esophagus ,which is similar to the study done by Venkatesh V³, however it is in contrast with study done by Hirachand et al.¹

CONCLUSION

A variety of non-neoplastic and neoplastic lesions were reported in the present study with a wide range of age and site distribution. The most common site being stomach . The most common neoplastic lesion was squamous cell carcinoma of the esophagus and non neoplastic lesion was chronic non specific gastritis.

Advantages are it is a minimally invasive procedure and sensitive for diagnosing mucosal lesions. Disadvantages are it can not diagnose functional disease .Wall thickness and luminal diameter can not be assessed. Very tiny biopsies are difficult to assess.

Endoscopy with combination of histopathological examination of biopsy plays an important role in early diagnosis of diseases and further management .

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