



ORIGINAL RESEARCH PAPER

Pathology

HISTOPATHOLOGICAL SPECTRUM OF LESIONS IN ENDOSCOPIC GASTRIC BIOPSIES IN A RURAL TERTIARY CARE HOSPITAL

KEY WORDS: Inflammatory, Non inflammatory, H-pylori, Hematoxylin and Eosin.

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ABSTRACT

Background: Gastric disorders are one of the most commonly encountered problems in clinical practice. Upper GI endoscopic biopsy is common procedure performed in the hospital for variety of neoplastic and non-neoplastic lesions. **Methods:** It is a retrospective study of endoscopic gastric biopsies from June 2018 to June 2019. All the biopsies were stained with Hematoxylin and Eosin, Giemsa and AL-PAS stains. **Result:** Eighty endoscopic gastric biopsies are taken into the study. Among 80 biopsies, 45 (56.25%) were from male and 35 (43.75%) from female patients. Of 80 biopsies, 63 (78.75%) were diagnosed as inflammatory lesions, 6 (7.5%) malignancies, 7 (8.75%) non inflammatory and 4 (5%) were no opinion was possible. **Conclusion:** Endoscopic biopsies are boon for the gastric diagnostics as well as therapeutic managements. However in areas with poor socio-economic population H-pylori infection is high. The study population included in this study is also from very remote area of the state with poor infrastructure facilities, which is one the cause for high prevalence of H-pylori induced gastritis constituting for 57.14%, in spite of being preventable and treatable.

INTRODUCTION:

Human gastrointestinal tract which is long and tortuous is a common site for lesions like congenital, inflammatory and neoplastic conditions¹. To facilitate diagnosis of different lesions, endoscopy and histology are complementary². Gastric lesions have a high degree of morbidity and mortality and endoscopic biopsy is common procedure performed³. Stomach is a common site for wide variety of lesions². The visualisation of the site with biopsy leads to the early detection of the pathologic process and appropriate therapy². Endoscopic practice is undergoing a revolution with the development of much more accurate video-endoscopy, magnifying endoscopy and techniques such as chromo-endoscopy, autofluorescence imaging and narrow band imaging⁴. Distinguishing hyperplastic from neoplastic polyps, differentiating malignant from benign ulcers and detecting mucosal dysplasia in patients with UC or Barrett's esophagus remains with in the preview of GI pathologist⁵. After Barry J. Marshall and J. Robbin Warren discovery of Helicobacter pylori its lesion has been studied extensively by endoscopic biopsy. H-pylori represent one of the most common and medically important infections which survive on the surface of mucosa in the layer of mucin and in gastric pits⁶. The aim of this study is to study the endoscopic gastric biopsies and to classify the pathological lesions.

MATERIALS AND METHODS:

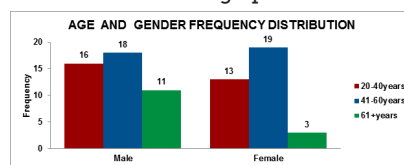
This is a retrospective study carried out among 80 cases of endoscopic gastric biopsies received in the Department of Pathology, PESIMSR, Kuppam from June 2018 to June 2019. Endoscopy was done in all the patient clinically diagnosed with gastric lesions and lesions were diagnosed on gross visualization during endoscopy. Patient of both the gender from 20yrs and above including inpatients, outpatients and those with diagnostic gastric endoscopies were included in the study. Each endoscopic gastric biopsy kept in a labeled bottle containing 10% neutral formalin was received in the department of Pathology PESIMSR, Kuppam. Gross examination and gross technique was done and documented. Tissue processing was done by using automatic tissue processor. Specimens were processed and embedded in paraffin wax and were cut into sections of 5 micrometer

thickness all the slides were stained with Haematoxylin & Eosin and with Giemsa stain, AL-PAS whenever required. All the sections were reported by a pathologist and reviewed by another consultant pathologist. Data was collected and analyzed for frequency, percentages and results were presented through tables.

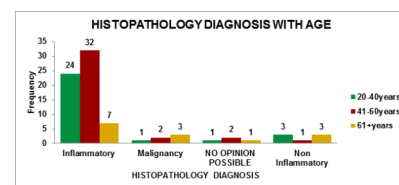
Institutional review board approval: Approved.

RESULTS:

Among 80 cases studied 45 endoscopic gastric biopsies were from male patients and 35 were from female. The gastric lesions are categorized into inflammatory, non inflammatory, malignant lesions. Out of 80 biopsies 4 biopsies were no opinion was given due to insufficiency of the specimen received. Age and sex distribution of variety of lesions are shown in the below graphs 1 and 2



AGE AND GENDER FREQUENCY DISTRIBUTION, Graph (1)



Graph.2

Out of 45 male cases 16 cases were between (20-40yrs), 18 cases were between (41-60yrs), 11 cases were >61yrs. Out of 35 female cases 13 were between (20-40yrs), 19 were between (41-60yrs), and 3 >61yrs. Out of 80 cases 63 diagnosed as inflammatory, 7 as non inflammatory, 6 as malignant and 4 were no opinion was given.

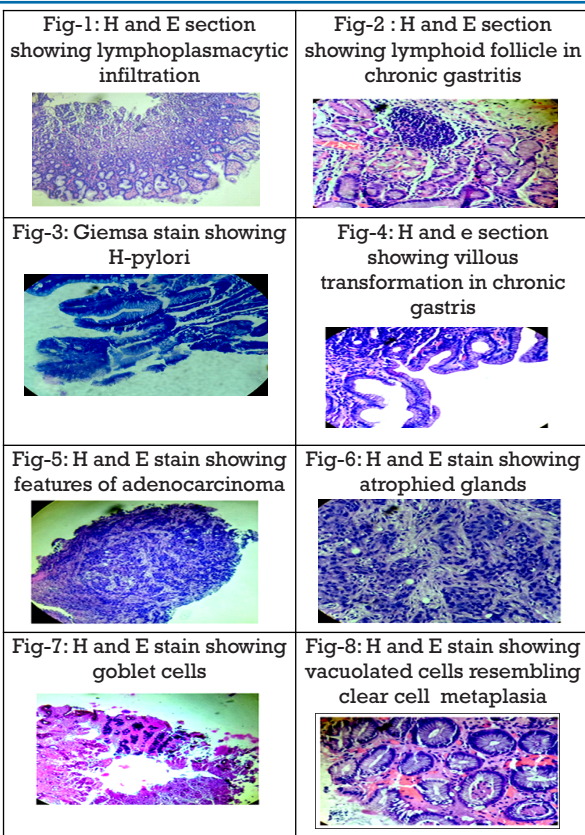
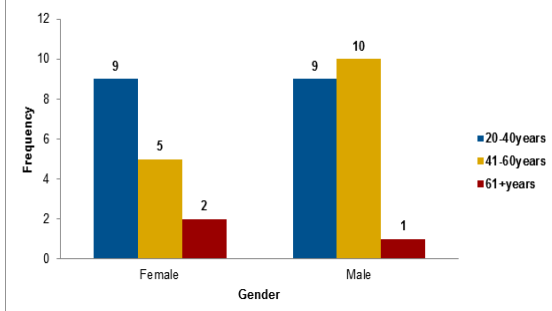
The variety of histopathological lesions are tabulated below.

HISTOPATHOLOGICAL DIAGNOSIS	TOTAL NO OF CASES	%
H PYLORI GASTRITIS	29	36.25
ANTRAL GASTRITIS	3	3.75
CHRONIC GASTRITIS WITH INTESTINAL METAPLASIA DUE TO H-PYLORI	7	8.75
ATROPHIC GASTRITIS	2	2.5
CHRONIC GASTRITIS WITH INTESTINAL METAPLASIA	2	2.5
CHRONIC GASTRITIS	10	12.5
ADENOCARCINOMA	5	6.25
HYPERPLASTIC POLYP	1	1.25
CHRONIC SUPERFICIAL GASTRITIS	3	3.75
REACTIVE GASTRITIS	1	1.25
NON HODGKINS LYMPHOMA	1	1.25
EROSIVE GASTRITIS	3	3.75
PARIETAL CELL HYPERPLASIA	1	1.25
CHRONIC SUPERFICIAL AUTOIMMUNE GASTRITIS	1	1.25
INTESTINAL METAPLASIA	4	5
ANTRAL ULCER	1	1.25
EOSINOPHILIC AND EROSIIVE GASTRITIS	1	1.25
ACUTE EROSIIVE GASTRITIS WITH VILLUS POLYP	1	1.25
NO OPINION POSSIBLE	4	5

Among 80 biopsies, a total of 36 cases were positive for H-pylori, and 1 malignancy were H-pylori is positive. Of the 63 inflammatory lesions, 29 cases were diagnosed with H-pylori gastritis, 7 as Chronic gastritis with intestinal metaplasia were H-pylori is positive, 3 as Antral gastritis, 2 as Atrophic gastritis, 2 as Chronic gastritis with intestinal metaplasia, 10 as Chronic gastritis, 5 as Adenocarcinoma, 1 as Non Hodgkin Lymphoma, 1 Hyperplastic polyp, 3 as Chronic superficial gastritis, 1 Reactive gastritis, 3 Erosive gastritis, 1 as Parietal cell hyperplasia, 1 Chronic superficial autoimmune gastritis, 4 as Intestinal metaplasia, 1 Antral ulcer, 1 as Eosinophilic and erosive gastritis, 1 as Acute erosive gastritis with villus polyp, and 4 were no opinion was made due to scant specimen received. As the incidence of H-pylori in gastric biopsies was more common, it was further tabulated and classified as per the age and sex distribution.

S.No	AGE IN YEARS	H-PYLORI				Chi square	
		Male		Female		P-value	Results
		F	%	F	%		
1.	20-40years	9	45%	9	56.2%	0.455	Not Significant
2.	41-60years	10	50%	5	31.3%		
3.	61+years	01	5%	2	12.5%		
5	Total	20	100	16	100		

AGE AND GENDER DISTRIBUTION OF H-PYLORI



DISCUSSION:

The biopsy sampling of the gastric mucosa at diagnostic endoscopy provides useful information which helps in the diagnosis of various lesions. This study aimed toward finding variety of histological gastric lesions encountered among 80 gastric biopsies studied. In this study we found that males have more gastric lesions compared to female and the most common age group among both males and females varies between 41-60 yrs, and inflammatory lesions are more common in this age groups. The incidence of malignancies were more common above 61yrs. Out of the 80 biopsies studied 63 biopsies were diagnosed as inflammatory lesions, 7 non inflammatory, 6 malignant and 4 were no opinion was given. Among the inflammatory lesions the incidence of H-pylori was found to be 57.14% were 36 biopsies showed H-pylori induced gastritis, and among 6 malignancy 1 was associated with H-pylori. The incidence of H-pylori was more common in males (20) and in the age group of 41-60yrs and in 16 females between 20-40yrs. From the study of Roshana Shrestha et al, the overall prevalence of H-pylori infection was 68% as they have included cases of <20yrs, and the prevalence of H-pylori in their study was more in <20yrs of age⁵. In another study conducted by Priavadhana Rajan Prasad, Bheema Rao the most common diagnosis given in gastric biopsy was chronic gastritis (61%). Among these cases H-pylori was positive in 61% of cases⁶. Syed Imtiyaz Hussain et al, in their study found that out of 32 H-pylori gastritis cases, 10 cases show intestinal metaplasia⁷. Intestinal metaplasia in this study was seen in 11 cases among which 7 cases are positive for H-pylori. The overall prevalence of H-pylori among male and female is similar with a p value of 0.455.

CONCLUSION:

Endoscopic biopsies are boon for the gastric diagnostics as well as therapeutic managements. However in areas with poor socio-economic population H-pylori infection is high. The study population included in this study is also from very remote area of the state with poor infrastructure

facilities, which is one of the causes for high prevalence of H-pylori induced gastritis constituting for 57.14%, in spite of being preventable and treatable.

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