

# HISTOPATHOLOGICAL STUDY OF ENDOSCOPIC BIOPSIES OF STOMACH

Pages with reference to book, From 177 To 179

Javed Iqbal Kazi, Syed Mahmood Alam ( Departments of Pathology, Jinnah Postgraduate Medical Centre, Karachi-35. )

Moeed Kazi, S.M. Rab ( Departments of Medicine, Jinnah Postgraduate Medical Centre, Karachi-35. )

Aftab Anwar, Ziauddin Shamsi ( G. I. Consultants, 5/15 Rimpa Plaza, M.A. Jinnah Road, Karachi. )

## Abstract

A histopathological study of endoscopic biopsies of 193 patients is presented. The commonest lesions were gastritides (108); other lesions found were Ulcers (7), and Carcinoma (9) while no significant changes were found in 64 cases (JPMA 38: 177, 1988).

## INTRODUCTION

The use of flexible fiberoptic gastroscope has become a part of routine gastroenterological practice. It allows a direct look of upper gastrointestinal mucosa and target biopsies can be taken under direct vision. Endoscopic examination alone is not sufficient since many lesions need histological identification like metaplasia, dysplasia, atypia and carcinoma in situ.<sup>1</sup> This histopathological study was done to determine the frequency of various lesions seen in the endoscopic biopsies of the stomach.

## MATERIALS AND METHODS

The material comprised of 310 biopsies from 193 patients, which were flattened on a piece of filter paper and fixed in 10% neutral buffered formalin and processed for paraffin embedding. The sections were stained for H&E, PAS, Trichrome and Reticulin. Gastritides were classified according to Whitehead<sup>2</sup> and carcinoma according to Lauren's<sup>3</sup> classification.

## OBSERVATIONS AND RESULTS

The ages of the cases ranged between 11-80 years and there were 115 males and 78 females. One hundred and fifty nine gastric biopsies were from the body and 151 were from the antrum (Tables 1 and II).

**Table I. Classification of Lesions of Stomach, Body with their Age & Sex distribution in 159 Biopsies.**

Age Group/ Lesions	Upto 30 years	31-60 years	Above 61 years	Total
No significant changes	43	42	6	91
Chronic gastritis	18	36	8	62
Atrophic gastritis	--	1*	-	1
Erosions	--	1	-	1
Acute gastritis	1	2	-	3
Adenocarcinoma (diffuse type)	--	1	-	1

\*The case of Atrophic gastritis was associated with Intestinal Metaplasia.

**Table II. Classification of Lesion of "Stomach Antrum" with their Age and Sex distribution in 151 Biopsies.**

Age Group/ Lesions	Upto 30 years	30-60 years	Above 60 years	Total
No significant changes	21	23	4	48
Chronic gastritis	23	31	4	58
Atrophic gastritis	7	10	6	23*
Acute gastritis	2	--	--	2
Erosions	--	1	--	1
Eosinophilic gastritis	1	--	--	1
Regenerative poly	--	--	1	1
Gastric Mucosal gastritis	1	--	1	2
Ulcers	--	6	1	7
Carcinoma (diffuse)	--	5	1	6
Carcinoma (intestinal)	--	--	2	2

\* Three cases of Atrophic gastritis were associated with Intestinal Metaplasia.

In 116 cases paired biopsies were taken from body and antrum. No significant changes were found in 64 (33%). One hundred and eight (56%) had gastritides, 7 (3.6%) ulcers, 9 (4.6%) carcinomas, 2 (1%) erosions, 2 (1%) gastric mucosal hyperplasia and one patient had regenerative polyp.

Of the 108 cases of gastritides, acute gastritis was found in 3, chronic gastritis in 80, atrophic gastritis in 9 while in 15 patients a combination of chronic and atrophic gastritis were found in paired biopsies of stomach, body and antrum. A single case of eosinophilic gastritis was also seen. In 43 patients gastritis (Figure 1-4)

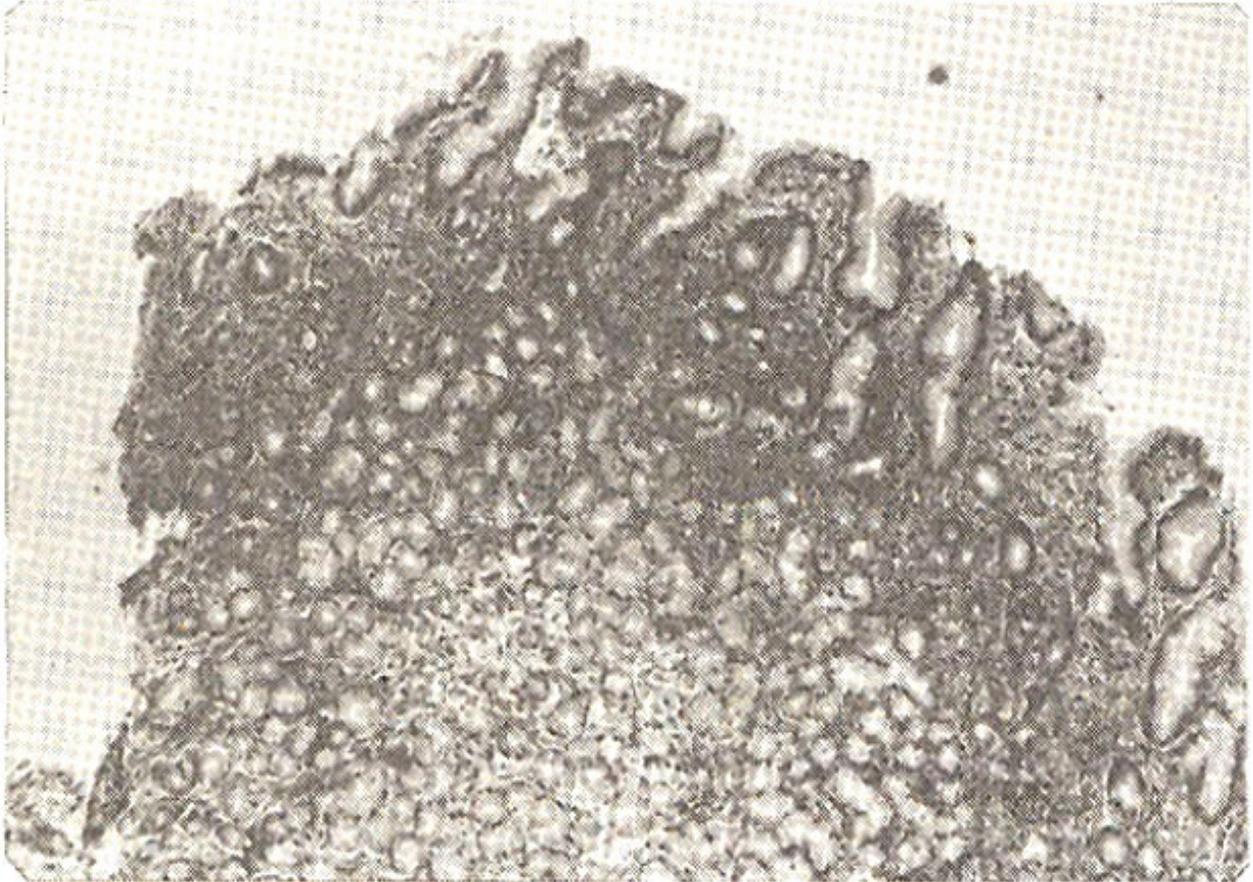


Figure 1. Showing antral mucosa with inflammatory cells limited to the superficial mucosa in a case of chronic superficial gastritis. (H&E x 36).

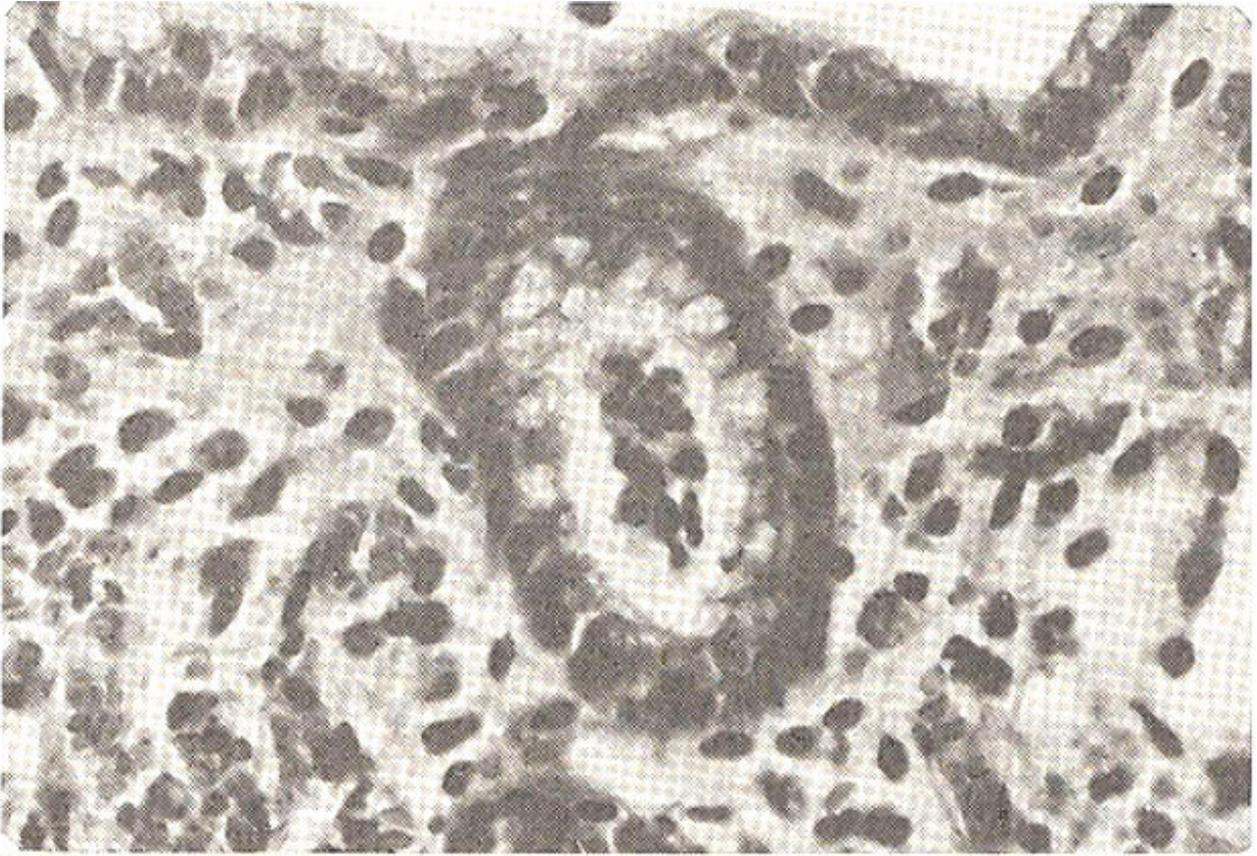
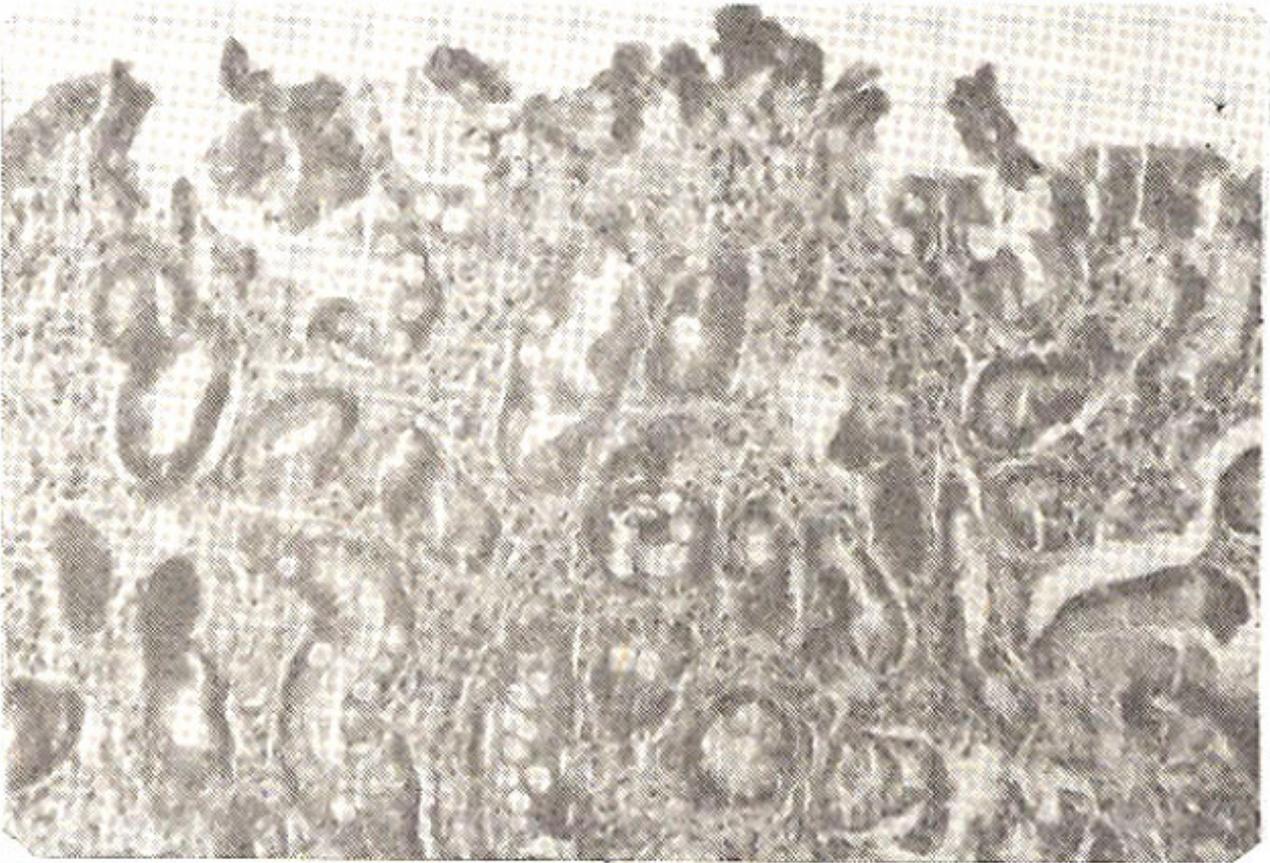


Figure 2. A case of chronic gastritis active phase with inflammatory cells infiltrating into the lumen of gastric pit. (H&E x 180).



Figure 3. A case of chronic atrophic gastritis showing marked atrophy of the surface epithelium, pits and glands. (H & E x 36).



**Figure 4. A case of chronic gastritis with intestinal metaplasia (H & E x 90).**

involved antrum only while in 40 both body and antrum were involved. In 25 cases only the body of the stomach was involved. Of the nine cases of gastric carcinoma, diffuse type was found in 7 while intestinal type occurred in 2 cases.

In this series, the commonest lesion was gastritis (56%) which is comparable (57%) with that reported by Rotterdam.<sup>4</sup> A much higher frequency (82%) has been reported by Joske et al.<sup>5</sup> In Japan over 90% of the population above the age of 60 years suffers from chronic gastritis.<sup>6</sup> A low frequency (16%) of chronic gastritis has been reported from neighbouring country of India.<sup>7</sup> Higher frequencies of gastric ulcer (13%) and carcinomas (11%) has been reported by Rotterdam<sup>4</sup> Similarly Simha and Doctor<sup>7</sup> have also reported higher frequencies of these lesions, gastric ulcers (10.6%) and gastric carcinomas (30%) (Table III).

**Table III. Showing comparative Analysis of frequencies of various Gastric Lesions as noted in different Series.**

Series/ Lesions	Owen Japan (1984)	Simha & Doctor India (1986)	Present Series (1986)	Joske et al. Aust- ralia (1985)	Rotter- dam America (1983)
Chronic gastritis	90%*	16%	56%	82%	57%
Ulcers	--	10.6%	3.6%	--	13%
Cancers	--	30%	4.6%	--	11%

\* In Japanese population above 60 years of age.

Histological examination of endoscopic biopsies is important not only in diagnosis but also in knowing the frequencies of different upper gastrointestinal lesions.

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