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Original Research Article

TO DETERMINE THE AGE & GENDER RELATION OF HISTOMORPHOLOGICAL PATTERNS IN VARIOUS NEOPLASTIC LESIONS OF GALL BLADDER

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Abstract

Background & Methods: The aim of the study is to study the histomorphological diversity of various non-neoplastic and neoplastic lesions of gall bladder. The gross specimens received were fixed in 10 percent formalin for 24 hours and multiple sections from each specimen were taken to include the representative area for histological examination. Sections were processed with a tissue processor and embedded in paraffin block which were cut in 5 micron thickness with the help of microtome.

Results: In our study out of 53 cases, 49 cases (92.4%) were inflammatory lesions, 03 cases (5.6%) were malignant lesions, 1 case (1.8%) was benign lesion and 1 gall bladder was found normal. According to our study inflammatory lesion are more common than neoplastic lesions and in neoplastic lesions malignant tumours are more common than benign tumours.

Conclusion: In this study the age of patients ranged from 18 years to 80 years. In our study minimum age of the patient with gall bladder lesion was 6 years and maximum age was 73 years. It shows that inflammatory lesion are more common than neoplastic lesions and in neoplastic lesions malignant tumours are more common than benign tumours. It shows that carcinoma of gall bladder affect more frequently females than males.

Keywords: histomorphological, non-neoplastic, neoplastic & gall bladder.
Study Design: Observational Study.

1. Introduction

Gallbladders showing gross abnormalities suggestive of localized or infiltrative malignancy during surgery were excluded. Detailed history and thorough clinical examination of the patients was done with special attention to the right hypochondrium for preoperative assessment of palpable mass[1]. Systemic review was done to any co-morbidity. Baseline and specific investigations especially ultrasonography of abdomen was done in all patients[2]. Laparoscopic cholecystectomy was performed in all cases but had to be converted to open procedure in few cases where anatomical distortion and dense adhesions prevented any further progress laparoscopically. All gallbladder specimens, including those with no obvious

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gross abnormality, were sent for histopathology. A predesigned proforma was used to put down the information gathered[3].

The main purpose of the gallbladder is to store bile, also called gall. The gallbladder is part of the biliary system and serves as a reservoir for bile, which is produced by the liver[4]. The liver produces the bile and then it flows through the hepatic ducts into the gallbladder. At any one time, 30 to 60 millilitres (1.0 to 2.0 US fl oz) of bile is stored within the gallbladder[5].

The liver releases bile into the hepatic duct. If the bile is not needed for digestion, it flows into the cystic duct and then into the gallbladder, where it is stored. The gallbladder can store about 40–70 mL (8–14 teaspoons) of bile. The gallbladder absorbs water from the bile, making it more concentrated. When bile is needed for digestion after a meal, the gallbladder contracts and releases it into the cystic duct. The bile then flows into the common bile duct and is emptied into the small intestine, where it breaks down fats[6-8].

Anatomically, the gallbladder is divided into three sections: fundus, body and neck: The fundus is a rounded end that faces the front of the body[9]. The body lying in the gallbladder fossa, a depression at the bottom of the liver. The neck is narrow and is continuous with the cystic duct, part of the biliary tree. The cystic duct unites with the common hepatic duct to become the common bile duct.

2. Material and Methods

Present study was conducted at Tertiary Care Centre. Due importance was paid to record a brief clinical history with age, Inpatient number, presenting signs & symptoms, drug history and relevant radiological and other investigations. Thorough gross examination was carried out and salient features were noted down. The gross specimens received were fixed in 10 percent formalin for 24 hours and multiple sections from each specimen were taken to include the representative area for histological examination. Sections were processed with a tissue processor and embedded in paraffin block which were cut in 5 micron thickness with the help of microtome. Sections were stained with conventional Haematoxylin and Eosin (H&E) stain. The lesions were then classified and studied as per the W.H.O. and other criteria of Gall bladder lesions.

Inclusion Criteria: Sample received in 10% formalin with properly filled requisition form.

Exclusion Criteria: Autolysed specimen, incomplete form, paraffin embedded block for review.

3. Result

Table 1: Relation between age of the patients and GB malignancy

Age group	No.	Percentage
20-29 years	00	00
30-39 years	00	00
40-49 years	00	00

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50-59 years	02	2.8
> 60 years	01	1.8
Total	05	5.6

In our study out of 53 cases, 05 cases (5.6%) were diagnosed as malignant lesions. Out of these 02 cases (3.7%) were found in the age group of 50 -59 years and 01 cases (1.8%) were found in >60 years of age.

Table 2: Sex Distribution of Malignant Lesion of Gall Bladder

Adenocarcinoma	**MALE**	**FEMALE**	**TOTAL %**
Adenocarcinoma, biliary type	01	03	9.4
Adenocarcinoma, gastric foveolar type	00	00	00
Adenocarcinoma, intestinal Type	00	01	1.8
Clear cell adenocarcinoma	00	00	00
Mucinous adenocarcinoma	00	00	00
Signet ring cell carcinoma	00	00	00

In our study out of 53 cases, 5 cases (9.4%) were malignant. Out of these 4 cases (7.5%) were found in females and 1 case (1.8%) was found in male. According to our study malignant lesions were more common in females than males.

Table 3: Sex Distribution of Gall Bladder Lesions

Lesions	**Male**	**Female**	**Total %**
Benign lesions	00	01	1.8
Malignant lesions	01	02	5.6
Inflammatory lesions	12	37	92.4
Others	01	00	1.8

In our study out of 53 cases, 49 cases (92.4%) were inflammatory lesions, 03 cases (5.6%) were malignant lesions, 1 case (1.8%) was benign lesion and 1 gall bladder was found normal. According to our study inflammatory lesion are more common than neoplastic lesions and in neoplastic lesions malignant tumours are more common than benign tumours.

4. Discussion

Acute cholecystitis was found in 03 (2.8 %) cases. They were characterized by neutrophilic infiltration in the mucosa with edema, hyperemia and fibroblastic proliferation. One case showed acute perforation of the gall bladder[10]. Cholesterosis was identified in 03 cases

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(2.8%), in which grossly the gall bladder filled with dark and thick bile and microscopically it was characterized by infiltration of foamy macrophages in the mucosa. Cholesterol polyp was seen in 01 case (0.9%). It is characterized by a small polypoidal lesion in the wall of the gall bladder. It was frequently multiple but may be single.

A study performed a clinicopathological study of cholecystitis with special reference to analysis of cholelithiasis in all cholecystectomy specimens received in the department of pathology and found that total number of cholecystectomy specimens studied were 78. There were 65 cases of chronic calculous cholecystitis, the highest incidence of these being in the age group of 41-60 years in this male were 28 and females were 50. All patients underwent ultrasonagraphy to confirm the clinical diagnosis[11]. There were 13 cases of acalculus cholecystitis. On morphological analysis, the commonest gall stone was pigment type and the commonest lesion was chronic cholecystitis by histopathology.

N. T. Damor et. al [12] performed a study on histopathology of human gall bladder during the period of April 2010 to October 2011 and found that, out of 100 cases, Non-neoplastic lesions found in 95 cases (95%) and Neoplastic lesion found in 5 cases (5%) with the ratio being 19:1. The commonest histological observation found was chronic calculous cholecystitis in 46 cases (46%) followed by acute calculous cholecystitis in 9 cases (9%). Lesions of gallbladder were more common seen in females with a male to female ratio of 1:2.3. Gallbladder lesions were more commonly found in 4th & 5th decades of the patients.

5. Conclusion

In this study the age of patients ranged from 18 years to 80 years. In our study minimum age of the patient with gall bladder lesion was 6 years and maximum age was 73 years. It shows that inflammatory lesion are more common than neoplastic lesions and in neoplastic lesions malignant tumours are more common than benign tumours. It shows that carcinoma of gall bladder affect more frequently females than males.

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