Original Article

Histopathologic Evaluation of lesions of Gall Bladders in 320 Cholecystectomies

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***ABSTRACT*:**
Background: Various lesions occur in the gall bladder. The present study was conducted to determine lesions of gall bladder histopathologically. **Materials & Methods:** The present study was conducted on 320 cases of cholecystectomies in both genders. Specimens were fixed in 10% formalin and gross examination was done. Sections were processed and then stained with Hematoxylin and Eosin stain. **Results:** Out of 320 cases, 120 were seen in males and 200 in females. Cholelithiasis was seen in 170 cases, acute cholecystitis in 80, adenocarcinoma in 14, cystadenocarcinoma in 12, abscess in 3, ulcer in 20, cholesterosis in 10, adenoma in 6 and cholesterol polyp in 5 cases. The difference was significant (P< 0.05). The maximum lesions were seen in age group 20-30 years (160) followed by 30-40 years (60), 40-50 years (34), 50-60 years (34), 60-70 years (12) and >70 years (5). **Conclusion:** Author concluded that among gall bladder lesions, the most common was cholelithiasis and there was female predominance.
Key words: Cholecystitis, Gall bladder, Hematoxylin

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INTRODUCTION

Gallbladder is the organ which stores and concentrates bile and helps in digestion of fat. The most common pathology found in gallbladder is cholelithiasis followed by cholecystitis. Gallstone afflict 10% -20% of adult population in developed countries. Various lesions occur in the gall bladder. The most common is gall stones. Gall bladders with gall stones frequently show chronic cholecystitis. Chronic cholecystitis often shows muscular hypertrophy, lymphocytic infiltration, and fibrosis. Benign and malignant tumors also occur in the gall bladder. Anatomically gall bladder is divided into three sections the fundus, body and neck.[1]

Cholelithiasis leads to a variety of histopathological changes in gallbladder mucosa such as acute and chronic inflammation, cholesterolosis, hyperplasia and carcinoma. Cholelithiasis is commonly associated with carcinoma gallbladder in up to 40%-100% and is the most frequently associated factor independent of age or sex.[2]

Most patients were unaware of disease and remain asymptomatic for life. The current changes in lifestyles of individuals pertaining to indulgement in unhealthy fat rich food, lack of exercise, obesity and sedentary lifestyles have once again focused our attention to gallstones and diseases of gallbladder. Now a day a laparoscopic cholecystectomy is the treatment of choice and done routinely for gallstone diseases. It is difficult to diagnose distinctly benign and malignant lesions of gallbladder before surgery without histopathological examination.[3] The present study was conducted to determine lesions of gall bladder histopathologically.

MATERIALS & METHODS

The present study was conducted in the department of general pathology. It comprised of 320 cases of cholecystectomies in both genders. The study protocol was approved from institutional ethical committee.

General information such as name, age, gender etc. was recorded. Cholecystectomy specimens were fixed in 10% formalin and gross examination was done. Three full thickness sections were obtained from fundus, body and neck of the gallbladder. Sections were processed and then stained with Haematoxylin and Eosin stain. The stained sections were examined microscopically for a variety of morphological changes in the diseased gallbladder. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of cases

	Total- 320	
Gender	**Males**	**Females**
Number	120	200

Table I shows that out of 320 cases, 120 were seen in males and 200 in females.

Table II Lesions of gall bladder

Lesions	Number	P value
Cholelithiasis	170	0.05
Acute cholecystitis	80	
Adenocarcinoma	14	
Cystadenocarcinoma	12	
Abscess	3	
Ulcer	20	
Cholesterosis	10	
Adenoma	6	
Cholesterol polyp	5	
Total	320	

Table II, graph I shows that cholelithiasis was seen in 170 cases, acute cholecystitis in 80, adenocarcinoma in 14, cystadenocarcinoma in 12, abscess in 3, ulcer in 20, cholesterosis in 10, adenoma in 6 and cholesterol polyp in 5 cases. The difference was significant (P< 0.05).

Graph I Lesions of gall bladder

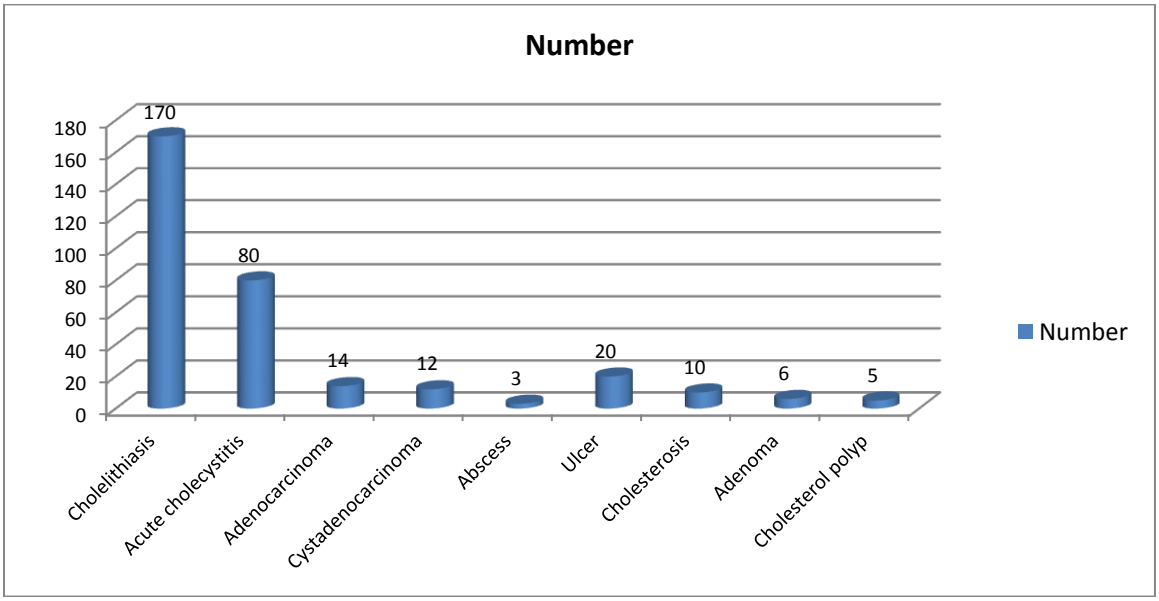

Table III Age wise distribution of cases

Age group (Years)	Number	P value
20-30	160	0.01
30-40	60	
40-50	34	
50-60	35	
60-70	12	
>70	5	
Total	320	

Table III shows that maximum lesions were seen in age group 20-30 years (160) followed by 30-40 years (60), 40-50 years (34), 50-60 years (34), 60-70 years (12) and >70 years (5). The difference was significant (P< 0.05).

DISCUSSION

Gallbladder is one of the most commonly encountered specimens in the surgical pathology laboratory. A majority of these specimens show rather mundane changes associated with chronic cholecystitis, however minority will harbor a highly lethal carcinoma. Often underappreciated, the gallbladder may be affected by a variety of pathological processes that have specific clinical correlates. Reactive changes within cholecystitis may mimic dysplasia. The number of cholecystectomy has increased more than 50% in the last decade. Gallbladder carcinoma is a rare condition. It is commonly diagnosed as an incidental histological finding following cholecystectomy for gallstone disease.[4]

On routine histopathologic examination of cholecystectomy specimens, the most commonly found pathology is cholelithiasis. Among other pathologies, cholecystitis, both acute and chronic is common.[5] Cholesterolosis, hyperplasia, metaplasia , dysplasia and malignant conditions are the less common pathological entities. Cholecystitis associated with cholelithiasis is common disease particularly found in fertile and fatty females in their 4th and 5th decades of age. It can also affect both male and children.[6] The present study was conducted to determine lesions of gall bladder histopathologically.

We found that out of 320 cases, 120 were seen in males and 200 in females. The maximum lesions were seen in age group 20-30 years (160) followed by 30-40 years (60), 40-50 years (34), 50-60 years (34), 60-70 years (12) and >70 years (5).

Khanna et al[7] found that the age of patients ranged from 18 years to 93 years with a mean of 64.75±14.43 years. Male to female ratio was 213:327. Of these, 518 cases (96%) had gall stones. Eight (1.5%) were acute cholecystitis, 508 (94.1%) were chronic cholecystitis, 12 (2.2%) were adenocarcinomas, 1 (0.2%) was cystadenocarcinoma, and 11 (2.0%) were normal gall bladders. The frequency of histological lesions were acute gangrenous inflammation (1.5%), Rokitansky-Aschoff sinuses (65%), microliths or inspissated bile in RAS (20%), adenomyomatous changes (3.0 %), focal abscess formations (2.2%), focal xanthogranulomatous changes (2.8%), mucosal ulcers (11.3%), cholesterosis (11%), cholesterol polyp (6%), pyloric gland metaplasia (54%), adenoma (1.3%), xanthogranulomatous cholecystitis (1%), invasive adenocarcinoma (2.2%) and cystadenocarcinoma (0.2%).

Mukhopadhyaya et al[8] found that out of 129 patients, 108 were females and 21 were males. Histopathological findings depicted that chronic cholecystitis (34.11%) was the most prevalent. Besides these, hyperplasia, metaplasia, dysplasia and gall bladder carcinoma were observed in 10.07 %, 22.48 %, 5.42 % and 3.87 % of the patients respectively. Study also showed that female patients were more prone to premalignancy and malignancy.

Sistla et al[9] found that gallstones and associated diseases were more common in women within 4th to 5th decade, with a maximum number of patients being 41 to 50 years. Histopathologically the most common diagnosis was chronic cholecystitis followed by acute or chronic cholecystitis. There were 6 cases of acute cholecystitis, 5 cases of cholesterolosis, 2 cases of Xanthogranulomatous cholecystitis and one case each on empyema and carcinoma.

CONCLUSION

Author concluded that among gall bladder lesions, the most common was cholelithiasis and there was female predominance.

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