

Original article:

Histopathological spectrum of gall bladder diseases after laparoscopic cholecystectomy - a retrospective study

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ABSTRACT

Gall bladder diseases are prevalent worldwide and present with a diverse clinical and histopathological spectrum. Gallbladder stones are commonest disorder among gall bladder diseases and are usually asymptomatic. Its frequency in cholecystectomy specimens is not clear. Cholelithiasis is associated with inflammatory as well as neoplastic diseases of the organ. Gallbladder cancer, though generally considered rare, is the most common malignancy of the biliary tract, accounting for 80%–95% of biliary tract cancers. An early diagnosis is essential as this malignancy progresses silently with a late diagnosis, often proving fatal. This study was conducted to find out the histopathological variants and frequency of different lesions in laparoscopic cholecystectomy specimens.

KEY WORDS: Gall stones, Carcinoma Gallbladder.

INTRODUCTION

Laparoscopic cholecystectomy is one of the most commonly done procedures in general surgery. Gall bladder diseases may present with a varied spectrum ranging from congenital anomalies, cholelithiasis, inflammatory and non-inflammatory lesions to non-invasive and invasive neoplasms. Cholelithiasis is a common disorder afflicting 10-20% of adult population. Risk factors include female sex, increasing age, pregnancy, oral contraceptives, obesity, diabetes mellitus, ethnicity, rapid weight loss⁽¹⁰⁾. The histopathological features and incidence of gall bladder lesion varies depending on races, countries, and institutes. It is well known that gall bladder diseases affect mostly women and frequently in middle age. Chronic cholecystitis occurs after repeated episodes of acute cholecystitis and is almost always due to gallstones⁽¹³⁾. It often shows muscular hypertrophy, lymphocytic infiltration and fibrosis. Benign and malignant tumors also occur in the gall bladder. However, frequency of these lesions is yet not clear. This study was undertaken to study the histopathology and frequency of gall bladder lesions in laparoscopic cholecystectomy specimens done over a period of one year from April 2016 to March 2017, in the Department of Surgery at ASCOMS and Hospital, Jammu.

MATERIAL AND METHODS

This is a retrospective study conducted on 360 cholecystectomies done in the department of surgery ASCOMS and Hospital, Jammu over a period of one year from April 2016 to March 2017. The specimens were sent to the department of pathology ASCOMS and Hospital and the reports of histopathological examination were collected.

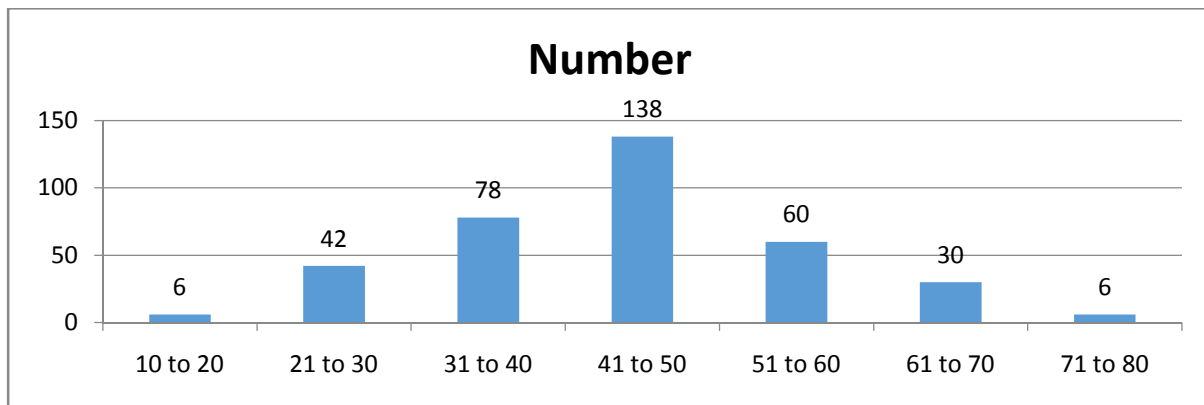
RESULTS AND OBSERVATIONS

TABLE 1:HISTOPATHOLOGICAL FINDINGS(n=360)

FINDINGS	NUMBER	PERCENTAGE
Chronic cholecystitis with cholelithiasis	225	62.5
Follicular cholecystitis	12	3.33
Eosinophilic cholecystitis	6	1.66
Xanthogranulomatous cholecystitis	9	2.5
Empyema Gallbladder	15	4.16
Acute on chronic cholecystitis	45	12.5
Cholesterolosis	42	11.66
Neoplasia	6	1.66

A total of 360 cholecystectomies were done. The age of patients ranged from 16 years to 76 years. Male(93 cases) to female(267 cases) ratio was 1:2.8. Of these, 225 cases (62.5%) had gall stones. The number of cases with acute cholecystitis was 45(12.5%), gall stones with chronic cholecystitis was seen in 225 cases(62.5%), follicular cholecystitis was seen in 12 cases(3.33%), eosinophilic cholecystitis in 06 cases(1.66), xanthogranulomatous cholecystitis in 09 cases(2.5%), empyema gallbladder in 15(4.16%) cases, 42 cases(11.66%) of cholesterolosis and gall bladder carcinoma was seen in 06 cases(1.66%).

Lesions of gallbladder were most common in the 4th and 5th decades, with 78 cases (21.66%) occurring in the 4th decade and 138 cases (38.33%) occurring in the 5th decade (Graph 1). The minimum age of the patient with gall bladder lesion in our study was 16 yrs and maximum age was 76 yrs.



Graph 1

Out of 360 cases we studied, Non- neoplastic lesions constituted 354 cases(98.33%) and neoplastic lesion constituted 6 case(1.66%).

DISCUSSION

Gall bladder disease is frequently encountered pathology in the biliary tract. The estimated prevalence of gall stone disease in India is reported as between 2% and 29%. Gallbladder is one of the organs having a wide spectrum of diseases ranging from congenital anomalies, calculi and its complications, noninflammatory & inflammatory to the neoplastic lesions. So the classification of various histomorphological types of gallbladder lesions is important to categorize into non-neoplastic and neoplastic lesions of gallbladder.

In the present study gallbladder lesions were more common in females than in males with a male to female ratio of 1:2.8 which was similar to other studies carried out by N. T. Damora et al⁽¹⁹⁾, Tadashi Terada et al⁽²³⁾, Dr. Gudeli Vahini et al⁽⁵⁾, Asuquo et al⁽¹⁴⁾, Tantia et al⁽¹⁶⁾, Ashok Yadav et al⁽⁴⁾, Ameet Kaur et al⁽²⁵⁾ who reported a male to female ratio of 1:2.3, 213:327, 1:1.5, 1:5, 1:2.8, 1:2.9, 1:3 respectively. N. T. Damora et al⁽¹⁹⁾ and Khanna et al⁽¹²⁾ reported that majority of non-neoplastic lesions of Gallbladder occurred in 3rd to 5th decades. While Bazoua et al⁽⁹⁾ studied that neoplastic lesions developed in patients of age more than 50 yrs and maximum in age group 50 to 70 years. In this study lesions of gallbladder were most common in the 4th and 5th decades.

Khanna Rahul et al⁽¹²⁾ reported ratio of nonneoplastic to neoplastic lesion was 16:1. Ojed et al⁽¹⁵⁾ reported that 96 % non-neoplastic lesion and 4% neoplastic lesions with ratio of 24:1. N. T. Damora et al⁽¹⁹⁾ reported ratio of non-neoplastic to neoplastic lesion as 19:1. Ashok Yadav et al⁽⁴⁾ reported a ratio of non neoplastic to neoplastic lesions as 19:1. In the present study the ratio of non-neoplastic to neoplastic lesions was 59:1. Asuquo et al⁽¹⁴⁾ reported that out of 18 specimens studied, 9(50%) specimens showed calculous cholecystitis, 8(44.4%) had acalculous cholecystitis and 1(5.6%) had carcinoma of gallbladder. Shrestha et al⁽¹⁸⁾ studied 668 specimens, among them 643(96.3%) had nonneoplastic lesions, 1(0.15%) had gallbladder adenoma of pyloric type, 22 (3.29%) had primary gallbladder malignancy, 2(0.3%) showed metastatic cholangiocarcinoma of gallbladder. D. Chattopadhyay et al⁽³⁾ noted that in 23 post-cholecystectomy specimens 12(52.1%) have gallstones, 7(30.4%) have cholesterol polyps, 3(13%) have adenocarcinoma, 1(4.3%) has normal features of gallbladder on histology. Ameet Kaur et al studied 384 cholecystectomy specimens and found Chronic Cholecystitis in 288 (75%), Follicular Cholecystitis in 8 (2.08%), Eosinophilic Cholecystitis in 3 (0.78%), Xanthogranulomatous Cholecystitis in 4(1.04%), Empyema Gallbladder in 21(5.47%), Acute on Chronic Cholecystitis in 10(2.60%), Cholesterolosis in 47(12.25%) and Neoplasia in 3 (0.78%).

Gallbladder cancer, though generally considered rare, is the most common malignancy of the biliary tract, accounting for 80%–95% of biliary tract cancers. An early diagnosis is essential as this malignancy progresses silently with a late diagnosis, often proving fatal. Its carcinogenesis follows a progression through a metaplasia–dysplasia–carcinoma sequence. Epidemiological studies have identified striking geographic and ethnic disparities – inordinately high occurrence in American Indians, elevated in Southeast Asia, yet quite low elsewhere in the Americas and the world. Age, female sex, congenital biliary tract anomalies, and a genetic predisposition represent

important risk factors that are immutable. Environmental triggers play a critical role in eliciting cancer developing in the gallbladder, best exemplified by cholelithiasis and chronic inflammation from biliary tract and parasitic infections. Mortality rates closely follow incidence; those countries with the highest prevalence of gallstones experience the greatest mortality from gallbladder cancer. Vague symptoms often delay the diagnosis of gallbladder cancer, contributing to its overall progression and poor outcome. Surgery represents the only potential for cure. Some individuals are fortunate to be incidentally found to have gallbladder cancer at the time of cholecystectomy being performed for cholelithiasis. Such an early diagnosis is imperative as a late presentation implies advanced staging, nodal involvement, and possible recurrence following attempted resection. Overall mean survival is just 6 months, while 5-year survival rate is only 5%.

In our study, among all the lesions of gallbladder, 225 cases (62.5%) were diagnosed as chronic cholecystitis with cholelithiasis.

CONCLUSION

Gall bladder diseases have a wide spectrum of presentation both clinically as well as histopathologically. This study showed a female predominance with majority of patients being in 4th to 5th decades. The major histopathological changes are due to gall stones. In this study the most common histopathological diagnosis was chronic cholecystitis. Chronic inflammation, a major risk factor for malignancy, accompanies cholelithiasis and infection. Diagnosis may come at the time of cholecystectomy for gallstones, although preoperative imaging with transabdominal and endoscopic ultrasound is providing an important advance. Surgery represents the only potential cure. Unfortunately, the usual late presentation means an advanced stage with potential nodal involvement and leads to recurrences despite attempted resection.

Thus, early diagnosis is imperative as surgery can be curative. In fact, cholecystectomy in those at risk with even asymptomatic cholelithiasis can prevent the tumor from arising.

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