

Incidental Gall Bladder Carcinoma in Cholecystectomy Specimens: A Study of 1000 Cases.

Sakshi Garg¹, Geetika Vohra¹, Ramesh K Kundal¹

¹Senior Resident, Department of pathology, Government Medical College, Patiala.

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ABSTRACT

Background: Gallbladder cancer, though generally considered rare, is the most common malignancy of the biliary tract, accounting for 80%–95% of biliary tract cancers. Its carcinogenesis follows a progression through a metaplasia–dysplasia–carcinoma sequence. Gallbladder carcinoma is a relatively uncommon neoplasm which is more common in the seventh decade of life compared to that of cholelithiasis which is in the fourth decade. 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 of gall bladder and biliary tract along with parasitic infections. The objective of the study was to determine the frequency of carcinoma gall bladder in cholecystectomy specimens. **Methods:** This retrospective study was done in the Department of Pathology, Government Medical College, Patiala. 1000 cholecystectomy specimens were included in this study. The specimens collected were grossed and examined histopathologically. **Results:** Out of 1000 cases, 8 were acute cholecystitis and 973 were chronic cholecystitis (773 chronic calculous cholecystitis and 200 chronic acalculous cholecystitis), 6 cases were of xanthogranulomatous cholecystitis, 9 cases of carcinoma, 1 case of adenomyomatosis, 3 specimens got autolysed and therefore excluded from the study. **Conclusion:** Frequency of carcinoma gallbladder discovered incidentally after cholecystectomy is low (0.9%) in our patients.

Keywords: Cholelithiasis, carcinoma gallbladder, histopathology, cholecystitis.

INTRODUCTION

Gallbladder carcinoma is a relatively uncommon neoplasm that shows female predominance possibly related to a higher incidence of cholelithiasis in women. More common age of Gall bladder cancer presentation is in the seventh decade of life compared to that of cholelithiasis which is in the fourth decade.^[1,2] Gall bladder cancer is associated with gall stones (80%), porcelain gall bladder (10–20%) and stone in choledochopancreatic duct junction.^[3] Size of the gall stones may also be possible risk factor for Gall bladder cancer.^[4,5] Recent clinical and epidemiological studies have pointed a link between gall stone disease, Gall bladder cancer, as well as other hepatobiliary diseases and previous infection with *Helicobacter* species.⁶ Commonly Gall bladder cancer arises in the fundus (60%) of the gall bladder and metastasis to liver, lymph nodes and other organs is frequent. Histologically most common Gall bladder cancers

are adenocarcinoma with variable degrees of differentiation.^[7] Failure to detect early disease contributes to a poor prognosis. The objective of the study was to determine the frequency of carcinoma gall bladder in cholecystectomy specimens particularly with reference to cholelithiasis.

MATERIALS AND METHODS

This retrospective study was done in the Department of Pathology, Government Medical College, Patiala. 1000 cholecystectomy specimens were included in this study.

Distribution of patients with gall bladder disease was calculated in different age groups and mean age was assessed. The analysis was carried out on SPSS-16.

RESULTS

Table 1: Frequency of gall bladder disease in different age groups

Age Groups(Years)	No. of patients	Percentage (%)
0-25	33	3.3
26-45	358	35.8
46-65	535	53.5
66-75	65	6.5
76 +	9	0.9
Total	1000	100

Name & Address of Corresponding Author

Dr. Geetika Vohra
Senior Resident,
Department of Pathology,
Government Medical College,
Patiala.

The frequency of gall bladder carcinoma in the 1000 cholecystectomy specimens was 0.9%. Out of the 1000 cases, 535 patients (53.55%) with gall bladder disease were present in 46–65 years of age group followed by the age group of 26–45 years [Table 1].

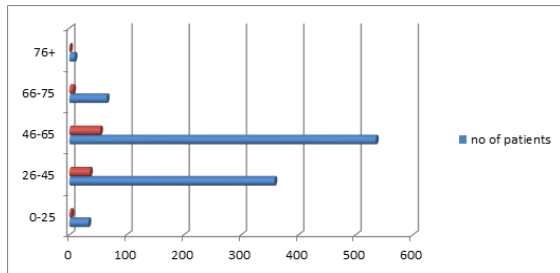


Table 2: Frequency of gall bladder carcinoma in different age groups.

Age Groups(Years)	No. Of Patients	Percentage (%)
0-25	0	0
26-45	1	11.1
46-65	3	33.33
66-75	4	44.44
76 +	1	11.11
TOTAL	9	100%

Table 3: Gender distribution of gall bladder cancer

Age Group	No. Of Patients	Gender
0-25	0	NIL
26-45	1	FEMALE
46-65	3	FEMALE
66-75	4	FEMALE
76 +	1	FEMALE

Table 4: Spectrum of Gall bladder disease in cholecystectomy specimens

Gall bladder disease	No of cases	Percentage
Acute cholecystitis	8	0.8%
Chronic calculous cholecystitis	773	77.3%
Chronic acalculous cholecystitis	200	20%
Xanthogranulomatous Cholecystitis	6	0.6%
Autolysed	3	0.3%
Adenocarcinoma	9	0.9%
Adenomyomatosis	1	0.1%
Total	1000	

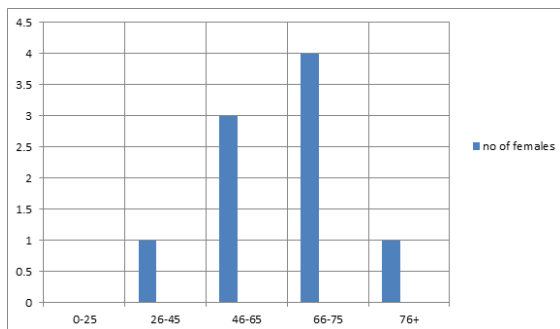


Figure 1: Age

Adenocarcinoma gall bladder was most commonly seen in age group of 66 -75 years (44.44 %)

followed by age group of 45-65 (33.33%). Gall stones were found grossly in 5 of 9 cases of histopathologically proven carcinoma gall bladder cases.

All gall bladder adenocarcinoma were seen in females (100%).

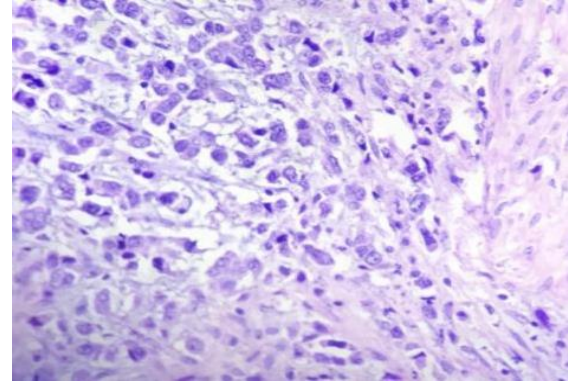


Figure 2: Microphotograph adenocarcinoma gall bladder

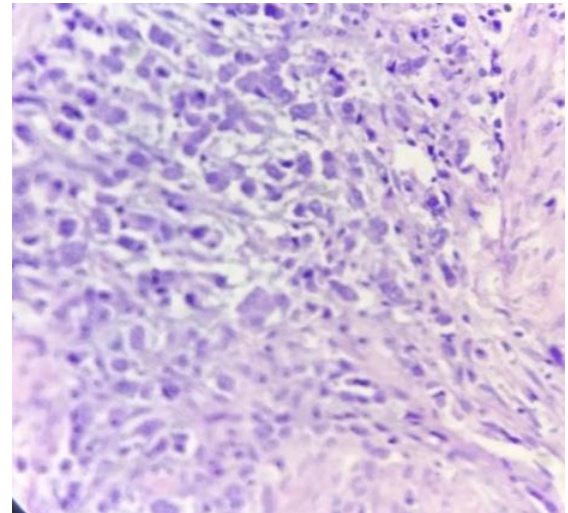


Figure 3: Microphotograph adenocarcinoma gall bladder

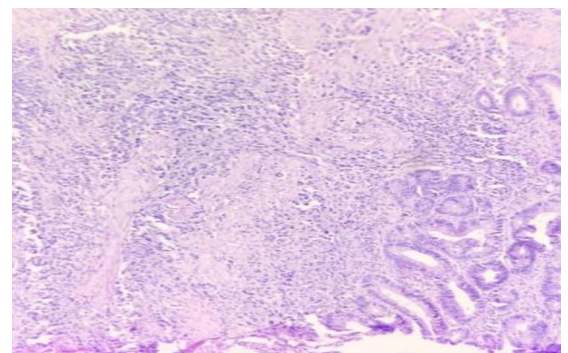


Figure 4: microphotograph adenocarcinoma gall bladder

DISCUSSION

Incidental GBCs are defined as carcinomas of gallbladder diagnosed during or after

cholecystectomy done for benign diseases of gallbladder. The incidence of Incidental GBCs is reported to be 0.2%–2.1% in various studies. Out of 1000 cases of cholecystectomy specimens, the incidence of IGBC in the present study was 0.9%. The frequency of Carcinoma Gall bladder among study population in a study by Junejo A. et al,^[8] was 10.86% (15 out of 138). In a study by Abdul Ghani Soomro et al,^[11] on 521 cases, carcinoma gall of bladder was found in 19 cases (3.64%), Most were adenocarcinoma. Incidental carcinoma was also revealed in 1.9 % of the cases in study by Sangwan et al⁹. However in a study by Vidya Jha et al,^[10] the incidence of IGBC was 0.06% only. We found the presence of gallstones in 5 of 9 (55.5%) of IGBCs. In a study by Vidya Jha, Preeti Sharma et al¹⁰ on 29482 cases, out of 20 cases of IGBC (14/20) 70% were associated with gallstones. Difference in rate of incidence of gallbladder stones and GBC among various studies might be due to different ethnic groups, race, and religion and size of the study group.

IGBC was more commonly seen in females and in the elderly age group which was in concordance with the previous literature.^[12,13] Cholelithiasis is a well-known risk factor for gallbladder cancers.^[5,12-15] Also in the present study, chronic calculous cholecystitis was the most frequent Histopathological entity reported among cholecystectomy specimens. This is in concordance with the data reported in previous studies by Sangwan et al⁹ and Vidya Jha et al.^[10] The male: female ratio for patients in this study was 7:1. This is close to that reported in study by Sangwan et al⁹, where females were predominating over males with a ratio of 6.07:1. However in a study by Junejo A. et al,^[8] the ratio was 2.3. The difference might be due to smaller study group in their study (of 138 cases)

CONCLUSION

Incidental gall bladder carcinomas reported in the present study was 0.9%. . Gallstones were reported in 55.5 % cases of IGBCs. It was more commonly seen in females and in the elderly age group. Chronic calculous cholecystitis was the most frequent Histopathological entity reported among cholecystectomy specimens in the present study.

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