

Incidental Gallbladder Carcinoma in Cholecystectomy SpecimensSunil Kumar Dangi¹, Ankita²¹MBBS, MS (General Surgery), MCh Surgical Gastroenterology, Assistant Professor Surgical Gastroenterology²MBBS, MD Pathology, Associate Professor, Pathology Sardar Patel Medical College Bikaner Rajasthan

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Conflict of interest: Nil

Abstract:**Background:** This study was aimed at detecting the incidence of gall bladder carcinomas which were diagnosed incidentally during or after laparoscopic cholecystectomies which were done for symptomatic gall stone disease.**Methods:** Prospective observational study was conducted on 50 consecutive patients who underwent simple cholecystectomy for symptomatic gall stones and benign gall bladder diseases.**Results:** A total of 50 laparoscopic cholecystectomies were performed at our institute during the study period of Jan 2024 to Dec 2025. In 1(2.00%) case, incidental carcinoma of gallbladder was discovered.**Conclusion:** Laparoscopic cholecystectomy which is performed for benign gall bladder disease rarely results in a diagnosis of unexpected gallbladder cancer if carefully done pre operative USG. The histopathological examination of the specimens, with special attention to the depth of invasion, range of the mucosal spread and the lymphovascular involvement is critical in diagnosing the incidental malignancies as well as for the subsequent management of the cases.**Keywords:** Incidental, Gall bladder, Carcinoma.**DOI:** 10.25258/ijcpr.18.3.200

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Introduction

Cholecystectomy is the most common major abdominal procedure performed worldwide. Gallbladder cancer is the most frequently encountered malignancy of the biliary system. There is a wide variation in reported epidemiology and burden of the disease. Western studies report an annual incidence of 1-2 gallbladder cancer cases per 100,000 population. In India gallbladder cancer is one of the most common gastrointestinal malignancies with the highest incidence reported in the northern parts of the country, especially along the Gangetic plains. Delhi, the capital of the country, reports an age adjusted incidence of gallbladder cancer of 10.6 patients per 100,000 population, which is incidentally the world's highest rate for women suffering from this cancer. [1]

Most of the cases of incidental GB carcinomas are diagnosed after the surgery is performed, for stones or benign gall bladder diseases. Despite advancements in various diagnostic procedures, preoperative diagnosis of early GB carcinoma is very difficult in some cases, Advanced stage of the disease because of delayed diagnosis, leads to its poor prognosis.

Materials and Methods**Study design:** Prospective observational study**Sample size:** 50 consecutive patients.**Inclusion criteria:** All patients undergoing simple cholecystectomy for gall stones and benign biliary diseases.**Exclusion criteria:** Patients with pre-diagnosed Gallbladder malignancy, Gallbladder mass, Empyema Gallbladder and Gallstones associated with obstructive jaundice were excluded.**Data collection:** A detailed history and clinical examination were performed on patients presenting with right hypochondrial pain, jaundice, and dyspepsia, vomiting.

Necessary laboratory investigations including complete blood count, liver function tests and ultrasound of abdomen were performed.

Patients who were diagnosed as having gallstones and other benign biliary diseases which required simple cholecystectomy were subjected to open/laparoscopic cholecystectomy and gall bladder specimen were collected for histo - pathological study.

Patients with positive histology for carcinoma were called up and managed appropriately depending

upon the stage of the disease and were followed up to study duration.

Data Analysis: To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Microsoft

excel and statistical software SPSS was used and data was analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test.

Observations and Results

Table 1: Socio-demographic profile

Mean age in years	36.23±11.36 years
Male : Female	11:39

Mean age of patients was 36.23±11.36 years .22.00 % patients were male and 78.00% patients were female.

Table 2: USG finding of study subjects

USG	No. of Patients	Percentage
Acalculus cholecystitis	1	2
Acute Calculus Cholecystitis	36	72
Chronic cholecystitis	12	24
GB Polyp	1	2

In USG finding 72.00% patients were having calculus Cholecystitis and 24% patients finding in USG was chronic cholecystitis.

Table 3: Type of surgery in study subjects

Types of Surgery	No. of Patients	Percentage
Lap Cholecystectomy	48	96
Open Cholecystectomy	2	4
Total	50	100

Out of 50, 96% surgery done was Lap Cholecystectomy.

Table 4: Histopathological finding of study subjects

Histological Findings	No. of Cases	Percentage
Acute calculus cholecystitis	6	12.00
Acute cholecystitis	2	4.00
Acute on chronic cholecystitis	1	2.00
Adenocarcinoma GB	1	2.00
Adenomatous hyperplastic GB	1	2.00
Chronic cholecystitis	39	78.00
Total	50	100

Maximum 78.00% patients were having chronic cholecystitis. The most common lesion identified as chronic cholecystitis (78.00%) followed by 12.00% cases of acute calculus cholecystitis and Acute cholecystitis (4.00%).

Discussion

Gallbladder malignancy is a rare entity, however, is common in the gastrointestinal tract. Most are diagnosed at advanced stage with dismal prognosis having 5 years survival rate of less than 5.0%.[3] Detection at early stage has excellent prognosis increasing up to 90.0-100.0% 5 years survival rate.[4] However, early detection is not possible due to delayed onset of symptoms or is masked off by chronic cholecystitis, and is usually detected during simple cholecystectomy as incidental finding.[5]

Our study revealed the incidence rate of primary gallbladder malignancy to be 2.00%. Different international studies [6-7] have reported different incidences ranging from 0.17% to 12.4%. Pradhan

et al, [8] showed incidence rate of 2.6% for primary gallbladder malignancy in Nepal. Difference in incidence rate among various studies might be due to exclusion of inoperable GB malignancy in some and variation in prevalence of gallstone disease in different ethnic group, race and regions. Similar findings were encountered in studies by Aatur et al, [2] Hsieh et al [6] and Tanti et al. [9] The higher incidence of overall gallbladder disease in females (three times more in our study) explains the more frequent occurrence of GB malignancy in them. In contrast to benign diseases, malignancies were found to increase with increasing age.

Gallstones were associated in 90.0% of GB malignancies. Cholelithiasis is a well-established risk factor for the development of gallbladder carcinoma. According to Daphna et al, [10] gallstones are present in 70.0-92.0% of affected patients. Gallstones cause chronic irritation and inflammation of the gallbladder, which leads to mucosal dysplasia and subsequent carcinoma that

takes a long duration for promotion of tumour proliferation and hence the occurrence of malignancy in the elderly age group.

Conclusion

Laparoscopic cholecystectomy which is performed after carefully evaluation with abdominal USG for benign gall bladder disease rarely results in diagnosis of unexpected gallbladder cancer. The microscopic examination of the specimens, with special attention to the depth of invasion, range of the mucosal spread and the lymphovascular involvement, is critical in diagnosing the incidental malignancies as well as for the subsequent management of the cases.

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