

A Prospective Study on Incidence of Incidental Gallbladder Carcinoma in Cases of Routine Cholecystectomy on Eastern Indian Population

Parikshita Dalai¹, Swapnarani Behera², Chandan Das³, Jyotirmaya Nayak⁴

¹Associate Professor, Department of General Surgery, SCB Medical College & Hospital, Cuttack, Odisha

²Assistant Professor, Department of Skin & VD, SCB Medical College & Hospital, Cuttack, Odisha

³Senior Resident, Department of General Surgery, SCB Medical College & Hospital, Cuttack, Odisha

⁴Assistant Professor, Department of General Surgery, SCB Medical College, & Hospital, Cuttack, Odisha

Received: 29-01-2023 / Revised: 26-02-2023 / Accepted: 28-03-2023

Corresponding author: Dr Jyotirmaya Nayak

Conflict of interest: Nil

Abstract

Background: The most common malignancy of the biliary tract is carcinoma gallbladder and most of these cases are diagnosed incidentally in patients undergoing Cholecystectomy.

Objectives: Find the incidence of gallbladder carcinoma in patients undergoing routine cholecystectomy.

Methods: A prospective study was carried out in Sri Rama Chandra Bhanja Medical College, Cuttack in the year 2018. The surgical notes hospital records and histopathology reports of 100 patients who underwent routine cholecystectomy were studied.

Results: Out of Fifty cases studied, 3 cases for detected to have gallbladder carcinoma. Males preponderance and mean age of occurrence was nearly 50 years. Both were adenocarcinoma of gallbladder.

Conclusion: Rate of incidental gallbladder carcinoma is 6% in our tertiary care hospital.

Keywords: Malignancy, Cholecystectomy, Who underwent Routine.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Cholecystectomy is the most performed elective abdominal surgery. [1,2] Gall bladder carcinoma is the fifth most common digestive system cancer and the most common biliary tract cancer. [3] Patients with gall bladder carcinoma are typically asymptomatic and are discovered incidentally during imaging or post-operative histopathological examination. 90% of

gallbladder carcinomas are associated with gallstones. [4,5] Gall bladder carcinoma affects only a small percentage of patients with gall stones, with the size of the stone being an important risk factor. [6] Gallbladder carcinoma is usually diagnosed at an advanced stage, with a poor prognosis, due to its indolent nature. [7] The purpose of this study is to determine the frequency of

incidental gallbladder carcinoma in patients undergoing routine cholecystectomy, as well as to investigate the demographic profile and prognosis of these patients. [8]

Materials & Methods

A prospective study was done with 50 routine cases of cholecystectomy performed in 2018 in SCB Medical College and Hospital, Cuttack, India. The inpatients charts were maintained these includes operating notes, all clinical information, histopathological reports and were followed up. The data analysis was done using SPSS version 16. The results were tabulated and interpreted after a thorough review of the literature. Patients who were subjected to open or laparoscopic cholecystectomy following pre operative diagnosis of benign biliary pathology or cholelithiasis were included in the study.

Results & Discussion

A total of 50 cholecystectomies were performed, with the majority of them being acute or chronic cholecystectomies. One

patient had calcified GB removed, one had a polyp removed, and one had a GB perforation repaired. The remaining 47 cases had calculus cholecystitis operated on 6 weeks after the initial acute attack. The most common symptom was pain in the right hypochondrium.

70% had dyspepsia, 20% had epigastric pain, and 5% had nausea or vomiting. Male: female ratio was close to 1:4 for all 50 patients, but GB Carcinoma rate was 2:1, indicating male predominance on Histopathology specimen. The average age for GB Carcinoma was close to or above 50 years. Two of the cases were suspected of having GB carcinoma intraoperatively but not preoperatively. Adenocarcinoma was found in three of the cases. One adenoca case had calcified GB, one had GB perforation, and one had GB stone. Peritoneal collection was minimal to moderate in patients with GB perforation. One of the three cases of incidental carcinoma GB died within a month of diagnosis, and the other two are still alive after a mean follow-up period of 12 months.

Table 1: Distribution of Total cases

	Frequency	Percentage
Cholelithiasis	47	94
Calcified GB	1	2
GB Perforation	1	2
GB polyp	1	2
	100	100

Table 2: Patients with positive incidental Gall bladder carcinoma and outcome

Age/ Gender	Clinical presentation	Lab data	Sonography	Operative open/ lap/ emergency/ elective	Operative findings	Treatment
34/F	Dyspepsia	Within Normal limits	Cholelithiasis	Elective open cholecystectomy	Gall stones	Started chemother apy and followed for 1year

62/M	Rt Hypochondrial pain	Within Normal limits	Calcified GB	Elective open cholecystectomy	Calcified hard GB	Radical surgery
47/M	Rt hypochondrial Pain	Deranged	Inflamed GB	Open emergency Cholecystectomy	Adherent inflamed GB	Died within 30 days

Conclusion

In our study population, the incidence of incidental gall bladder carcinoma was 6%. This study suggests that all cholecystectomy specimens be routinely histopathologically examined to aid in the detection of cases of occult carcinoma GB.

This study also suggests that, while primary gallbladder carcinoma is known for its late presentation and poor survival rates, occult carcinoma GB diagnosed histopathologically of post-cholecystectomy specimens are usually detected at an early stage and thus have a better prognosis.

Reference

- Zhang W, Xu G, Zou X, Wang W, Yu J, Wu G, Incidental gallbladder carcinoma diagnosed during or after a laparoscopic cholecystectomy World J Surg. 2009; 33:2651-56.
- Tantia O, Jain M, Khanna S, Sen B, Incidental carcinoma gallbladder during laparoscopic cholecystectomy for symptomatic gall stone disease Surg Endos. 2009; 23:2041-46.
- Muratore A, Polastri R, Causotti L. Radical surgery for gallbladder cancer: current options. Eur J Sur Oncol. 2000; 5:438-43.
- Dalai P, Sethi P, Muduli N. Incidence of incidental carcinoma gallbladder in cases of routine cholecystectomy in Eastern Indian population JMSCR. 2019; 7(09): 687-691.
- Choi SB, Han HJ, Kim CY, Kim WB, Song TJ, Suh SO, Incidental gallbladder cancer diagnosed following laparoscopic cholecystectomy World J Surg. 2009; 33(12):2657-63.
- Albores-Saavedra J, Henson DE, Tumors of the Gallbladder and Extrahepatic Bile Ducts. Washington DC Armed Forces Institute of Pathology 1986:108 Atlas of Tumor Pathology, Second series Fascicle.
- Jemal A, Tiwari RC, Murray T, Ghafoor A, Samuels A, Cancer statistics 2004 CA Cancer J Clin. 2004; 54:8-29
- Batra Y, Pal S, Dutta U, Desai P, Garg PK, Makharia G, Gall bladder cancer in India: a dismal picture J Gastroenterol Hepatol. 2005; 20(2):309-4.