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A Study of Incidence of Incidental Gall Bladder in Simple Cholecystectomy Specimen by Histopathology, Management and Follow-Up

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ABSTRACT
The most frequent major abdominal operation performed worldwide is a cholecystectomy. The most frequent cancer of the biliary system and the fifth most common cancer of the digestive tract is gallbladder cancer. The clinical signs and symptoms of cholecystitis or cholelithiasis are typically similar to those of gall bladder cancer. Gall bladder cancer (GB) cases that also include stones have a 90% success rate. Stones and ongoing inflammation are risk factors for gallbladder cancer. The present study was a prospective observational study. This Study was conducted from 1years at Department of General Surgery in Siliguri District Hospital. Total 120 patients were included in this study. In our study, 3 (2.5%) patients had CCC, 79 (65.8%) patients had Cholecystitis, 36 (30.0%) patients had Cholelithiasis and 2 (1.7) patients had GB polyp. In our study, 89 (74.2%) patients had Lap cholecystectomy Surgery and 31 (25.8) patients had open cholecystectomy Surgery. In our study, 32 (26.7%) patients had Dyspepsia, 18 (15.0%) patients had Epigastric pain, 14 (11.7%) patients were Nausea/Vomiting and 56 (46.7%) patients had pain RT Hypochondrium. As a result of the widespread usage of LC treatments being performed for benign GB illness, incidental GBC is becoming increasingly prevalent. However, due to the use of ultrasound testing for upper abdominal symptoms indicative of GB illness, this may be declining.

INTRODUCTION

A cholecystectomy is the most common major abdominal operation performed worldwide. Gallbladder cancer is the most common biliary system cancer and the sixth most common digestive tract cancer. The clinical signs and symptoms of cholecystitis or cholelithiasis are sometimes confused with those of gall bladder malignancy. Cases of gall bladder cancer (GBC) with stones had a 90% success rate. Gallbladder cancer is increased by gallstones and chronic inflammation.

The vast majority of cases of GB cancer are identified during or following surgery to treat benign biliary problems or stones. Despite advances in a range of diagnostic procedures, preoperative diagnosis of early GB carcinoma remains extremely difficult. Delay in diagnosis causes the disease to progress, which results in a bad prognosis.

A cholecystectomy is one of the most popular surgical procedures performed around the world to treat benign gallbladder disease. To rule out the presence of gallbladder cancer (GBC), all gallbladder specimens have long been sent for histological investigation. Despite the low incidence of gallbladder cancer (incidental GBC), this typical technique is costly and burdensome on pathology departments. Selective histological inspection has been proposed as a way to save costs and pathologists' workload[1-2]. This comprises the surgeon doing a macroscopic evaluation and submitting those specimens with questionable results to the pathologist. Some people worry that surgeons would fail to identify GBC, which might have devastating results. However, prior research have demonstrated that GBC is infrequently present in gallbladder specimens without macroscopic abnormalities[3,4]. Additionally, if there are no macroscopic abnormalities, the malignancy is typically in an early stage and has little clinical significance because the cholecystectomy that was previously performed was sufficient. The Dutch guidelines for gallstone disease were revised in 2014 and they now recommend selected histological investigation following cholecystectomy[5], however the execution was inadequate[6]. The selected technique was used by less than half of institutions and the demand for greater safety data was made clear.

MATERIALS AND METHODS

Study design: Prospective observational study.

Sample size: 120 patients.

Study place: at Department of General Surgery in Siliguri District Hospital.

Study and follow-up period: 1 year.

Inclusion criteria: Simple cholecystectomy is performed on all individuals with benign biliary disease and gallstones.

Exclusion criteria: Patients with obstructive jaundice-related gallstones, a gallbladder mass, empyema gallbladder, or pre-existing gallbladder cancer were excluded.

The patient's presenting symptoms were right hypochondrial pain, jaundice and dyspepsia. A full medical history, physical examination and pertinent investigations were performed, including blood workups, liver function tests and abdominal ultrasounds.

Patients who require a simple cholecystectomy due to gallstones or another benign biliary ailment have an open or laparoscopic treatment and gallbladder specimens are sent for histological examination.

RESULTS

In our study, 12 (10.0 %) patients were Upto 25 yrs of age, 31 (25.8%) patients were 26-35 years of age, 26 (21.7%) patient were 36-45 years of age, 23 (19.2%) patients were 46-55 yrs of age, 16 (13.3%) patients were 56-65 years of age and 12 (10.0%) patients were Above 65 years of age (Table 1).

In our study, 88 (73.3%) patients were Female and 32 (26.7%) patients were Male.

In our study, 3 (2.5%) patients had CCC, 79 (65.8%) patients had Cholecystitis, 36 (30.0%) patients had Cholelithiasis and 2 (1.7) patients had GB polyp (Table 2).

In our study, 89 (74.2%) patients had Lap cholecystectomy Surgery and 31 (25.8) patients had open cholecystectomy Surgery.

In our study, 32 (26.7%) patients had Dyspepsia, 18 (15.0%) patients had epigastric pain, 14 (11.7%) patients were nausea/vomiting and 56 (46.7%) patients had pain RT Hypochondrium (Table 3).

Table 1: Distribution of age in years and gender

Age (years)	Frequency	Percentage
Upto 25 years	12	10.0
26-35 years	31	25.8
36-45 years	26	21.7
46-55 years	23	19.2
56-65 years	16	13.3
Above 65 years	12	10.0
Total	120	100.0
Gender		
Female	88	73.3
Male	32	26.7
Total	120	100.0

Table 2: Distribution of US and surgery

US	Frequency	Percentage
CCC	3	2.5
Cholecystitis	79	65.8
Cholelithiasis	36	30.0
GB polyp	2	1.7
Total	120	100.0
Surgery		
Lap cholecystectomy	89	74.2
open cholecystectomy	31	25.8
Total	120	100.0

Table 3: Distribution of clinical symptoms

Clinical symptoms	Frequency	Percentage
Dyspepsia	32	26.7
Epigastric pain	18	15.0
Nausea/vomiting	14	11.7
Pain RT hypochondrium	56	46.7
Total	120	100.0

DISCUSSIONS

Gallbladder carcinoma (GBC) is the most prevalent biliary tract cancer and the sixth most prevalent gastrointestinal tract cancer in the world.

The majority of patients are treated at advanced stages for an aggressive illness with late symptoms.

The prognosis is frequently poor, with 5-year survival rates for the more advanced stages reported to be less than 5%. Gallbladder cancer is most common in Chile, Poland, India and Japan.

This cancer has been found to be extremely common in both female Native American Indians (14.5/1000,000) and women in northern India (21.5/100,000).

Cancer in its early stages is frequently detected by coincidence as a result of inflammatory symptoms associated with cholelithiasis or cholecystitis.

Incidental gallbladder carcinoma (IGBC) is a type of gallbladder cancer detected by chance during a cholecystectomy or gallbladder histological examination.

Because of the increasing acceptance of LC and the difficulties involved with preoperative GBC diagnosis, the incidence of IGBC during and after LCs has increased. GBC demographic risk factors include female gender and advanced age.

According to the current study, which was conducted in New Delhi, India, the incidence of IGBC among LC patients was 0.96 percent during a five and a half year period.

GBC is characterised by either long-term asymptomaticism or severely ambiguous symptoms such as fever, anorexia, jaundice, stomach discomfort, vomiting and a gallbladder mass.

GBC is well known for causing chronic gallbladder inflammation and cholelithiasis. Some of the causes of gallbladder mucosal inflammation include infection, medicines (such as isoniazid and methyldopa), congenital anomalies (such as choledochal cysts and the aberrant junction of the pancreaticobiliary ducts) and primary sclerosing cholangitis.

Long-term, chronic inflammation caused by cholelithiasis is thought to contribute to the formation of tumours, carcinogenesis and gallstones in GBC.

However, only 0.3-3% of people with gallstones go on to acquire GBC, even though the majority of GBC patients have a history of cholelithiasis. Gallbladder polyps, a typhoid carrier condition and a porcelain (calcified) gallbladder are some of the other risk factors.

Sujata *et al*.[7], revealed a 45% increased risk of cancer for polyps larger than 15 mm. Pyloric, intestinal, foveolar and biliary lesions were classified as playing a minor role in the pathway of gallbladder carcinogenesis in a more recent study that examined the gallbladder adenomas in 91 patients based on the immunophenotype that was expressed.

Early-stage GBCs have mild ultrasonographic findings that are very similar to acute and chronic cholecystitis. Gallbladder wall thickening, gallbladder or CBD stones, a gallbladder mass and a pericholecystic collection are not symptoms of GBC and could be indicators of cholecystitis.

Xanthogranulomatous cholecystitis, a pseudotumor inflammatory gallbladder condition, has also been shown to radiologically mimic GBC. A pericholecystic collection was discovered in one case of acute cholecystitis.

Typically, surgery on a clogged gallbladder raises the possibility of malignancy. Unusual surgical findings, such as a gallbladder mass, thick adhesions of organs next to the gallbladder and difficulty separating the gallbladder from the liver bed, are all symptoms of a possible cancer.

Another significant characteristic of xanthogranulomatous cholecystitis is a severe, destructive inflammation accompanied by adhesions. In a rare number of patients, certain series have also noted the coexistence of xanthogranulomatous cholecystitis with a GBC.

Ninety eight percent of all gallbladder malignancies are gallbladder carcinomas, which are epithelial in nature. Ninety percent of the gallbladder carcinomas among them are adenocarcinomas.

While the remaining shows intraluminal polypoid development, the majority (68%) are diffusely invading.

The infiltrating carcinomas' submucosal dissemination manifests graphically as localized or widespread nodules, induration, or thickening of the gallbladder wall.

In that subset of patients who were older than 70 years old, who had a long history of stones, or who had a thickened gallbladder wall, Sujata *et al*.[7] advised taking frozen sections because the flat infiltrating GBCs and the GBCs with cholecystitis and numerous stones are difficult to diagnose preoperatively.

Frozen section, however, was not a conclusive diagnostic method and Zhang *et al*.[8] investigation shown that it did not accurately evaluate the depth of GBC invasion.

The authors recommended submitting the entire gallbladder for microscopic examination and getting at least three levels from each paraffin block exhibiting a malignancy to guarantee that the muscularis propria was not invaded.

However, for T2 and T3 gallbladder carcinomas detected following laparoscopic cholecystectomies, a re-exploration with a liver resection and a porta-hepatis lymph node dissection is a drastic surgery that is performed after additional imaging to rule out disseminated illness.

CONCLUSION

My study indicated a 2% incidence rate for incident GBC. As a result of the widespread usage of LC treatments being performed for benign GB illness, incidental GBC is becoming increasingly prevalent. However, due to the use of ultrasound testing for upper abdominal symptoms indicative of GB illness, this may be declining. Because of the high likelihood of residual illness, re-resection is presently the only curative treatment and should be pursued vigorously for pT2 and pT3 but no CBD resection. For pT is and pT1, open or L C therapy is appropriate. Even if the type of hepatic resection does not appear to affect the outcome, it is critical to get surgical margins free of tumour. The prognosis for the most advanced stages is frequently bleak, with reported 5-year survival rates of less than 5%.

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