



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**A STUDY ON PREVALENCE OF CARCINOMA GALLBLADDER AND ITS PREDICTIVE FACTORS IN OPERATED CASES OF CHOLELITHIASIS**

**KEY WORDS:**

**Dr. Sagara Mahapatra**

Junior Resident Department of General Surgery Hitech medical college and hospital Pandara, Rasulgarh, Bhubaneswar-751025, Odisha

**Dr. Jatashankar Mohapatra\***

Department Of General Surgery Hitech medical college and hospital Pandara, rasulgarh, Bhubaneswar-751025, Odisha \*Correspondence Author

**ABSTRACT**

**INTRODUCTION:-** Gall bladder cancer is the fifth most common cancer involving the gastrointestinal tract, but it is the most common malignant tumour of the biliary tract worldwide. As the disease clinically resembles benign gall-bladder disease, it is detected late in its course. Primary carcinoma of the gallbladder is an unexpected histopathological finding in 1-3% of the resected specimens after elective cholecystectomy for presumably benign gallbladder disease.

**MATERIALS AND METHODS:-** 200 patients with cholelithiasis diagnosed by USG who underwent cholecystectomy are enrolled in the study (Jan2017 to Nov2019).

**RESULTS:-** In our study, all 200 patients with cholelithiasis underwent cholecystectomy .5 cases (2.5%) were diagnosed with CaGB. Among these 5,3 (60%) were females and 2(40%) were males. Among these 5,3 (60%) were from urban areas and 2 (40%) were from rural areas.

**CONCLUSION:-** No clinical, biochemical and radiologic parameters was suggestive of CaGB in patients who underwent cholecystectomy for chronic cholecystitis. Suspicion of incidental CaGB should be borne in mind. Female and urban population with chronic cholecystitis are more prone to CaGB.

**INTRODUCTION:-**

Gall bladder cancer is the fifth most common cancer involving the gastrointestinal tract, but it is the most common malignant tumour of the biliary tract worldwide. As the disease clinically resembles benign gall-bladder disease, it is detected late in its course. Primary carcinoma of the gallbladder is an unexpected histopathological finding in 1-3% of the resected specimens after elective cholecystectomy for presumably benign gallbladder disease.

According to Indian Cancer Registry (2015), Kamrup urban district showed the highest AAR (8.8) followed by Delhi (5.3) and Cachar district (5.2) in Males and Kamrup urban district showed the highest AAR(17.1) followed by Delhi(11.8), Cachar(10.2) and Papumpara (10.2) in Females . The commonest factors seen in gallbladder carcinogenesis is gallstones. **Cholelithiasis** found to be associated with GBC in 40-100% of cases in various series.[5] Gallstones affect 10%-15% of the adult population in developed societies[3]. Hart et al,(1972) reported that 74 percent of females and 26.7 percent of the males had a previous history of gallstone disease, while on **pathological examination of resected specimen, gallstones** were found in 69 percent of males and 83 percent of females, suggesting a high incidence of silent gallstones among male carcinoma patients[6].

The overall prognosis has remained poor with a 5-year survival of 5-10 percent due to the late detection of the disease. Still a **preoperative diagnosis** of early carcinoma of gallbladder is rarely made ,where the 5-year survival is 91-100 %[7].

Hence, this study will be done to find out the **prevalence of GBC** and its **predictive factors** .

**MATERIALS AND METHODS:-**

- **STUDY POPULATION:-** All cases of cholecystectomy for cholelithiasis irrespective of age and sex during the study period.
- **PERIOD OF STUDY:-** January 2017 to November 2019
- **STUDY DESIGN:-** Cross-sectional study

**METHODOLOGY:**

- Predesigned and pretested questionnaire to be used to obtain data.

- Detailed history taking and clinical examination to be done.
- Investigations like routine biochemical, USG examination to be done.
- Post-cholecystectomy (Gallbladder) specimen will be sent for histopathological study to pathology lab, HMCH.

**INCLUSION CRITERIA:**

- All patients with gallstone disease preoperatively diagnosed by USG.
- Informed consent to be a part of the study

**EXCLUSION CRITERIA:**

- Diagnosed case of gall bladder carcinoma.
- USG evidence of focal thickening of gall bladder.

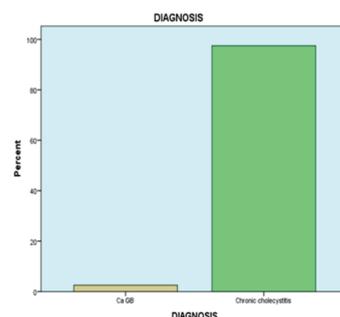
**PROCEDURE:-**

Patients underwent (both open and laparoscopic cholecystectomy under general anaesthesia. Post-cholecystectomy (GB specimen) was sent for HPE.

**OBSERVATIONS:-**

**Table 1 :diagnosis Description OfThe Study Population**

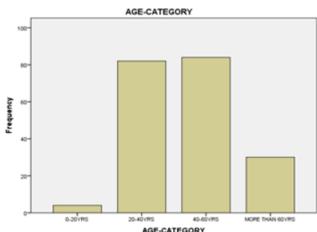
DIAGNOSIS					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ca GB	5	2.5	2.5	2.5
	Chronic cholecystitis	195	97.5	97.5	100.0
	Total	200	100.0	100.0	



**Fig 1 :diagnosis Description OfThe Study Population**

**Table 2 :age Description OfThe Study Population**

AGE-CATEGORY					
		Frequency	Perce nt	Valid Percent	Cumulativ e Percent
Valid	0-20YRS	4	2.0	2.0	2.0
	20-40YRS	82	41.0	41.0	43.0
	40-60YRS	84	42.0	42.0	85.0
	MORE THAN 60YRS	30	15.0	15.0	100.0
	Total	200	100.0	100.0	

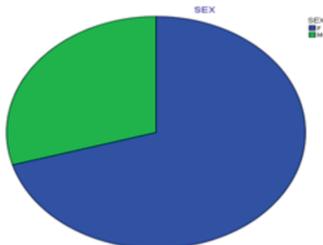


**Fig. 2: Age Distribution OfThe Study Population**

Minimum age is 6yrs and maximum age is 78yrs,mean age 44.18yrs.

**Table 3:sex Description OfThe Study Population**

SEX-DISTRIBUTION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	141	70.5	70.5	70.5
	M	59	29.5	29.5	100.0
	Total	200	100.0	100.0	

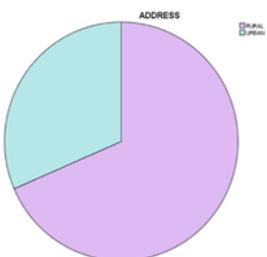


**Fig. 3: Sex Distribution OfThe Study Population**

Among 200 patients 29.5% are male and 70.5% are female. So, female patients are more than male patients.

**Table 4 :address Description OfThe Study Population**

ADDRESS					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RURAL	137	68.5	68.5	68.5
	URBAN	63	31.5	31.5	100.0
	Total	200	100.0	100.0	



**Fig. 4: Address Distribution OfThe Study Populat**

This was a Cross-sectional study. It was done to know the prevalence of gall bladder carcinoma amongst the patients of Gall Stone Disease. We have analysed data from January 2017 to November 2019. We further proceed to analyse the histologically declared Incidental Carcinoma Gall bladder

and determine any specific epidemiological, clinical, biochemical parameters that might prove predictive of Carcinoma Gall Bladder in general population from chronic cholecystitis.

The cases were subjected to a structured interview in indoor& out-patient department of surgery. The analysis was then performed under the direct supervision of the General Surgeon and Pathologist. Subsequently all information recorded in the proforma were verified. The results were compared with data obtained from different geographical region. A total of 200 chronic cholecystitis patients who satisfied the inclusion criteria were incorporated as the study group.

Inapparent (also called occult or incidental) GBC is defined as GBC unrecognized before or at operation and detected for the first time on histopathological examination of the gallbladder, which has been removed for presumed gallstone disease.<sup>132</sup>

**DEMOGRAPHIC PROFILE**

200 chronic cholecystitis patients were included in study population.

Minimum age was 6 years, maximum age was 78 years and mean age 44.18 years. The mean age of study population was 53.48yrs (minimum=27 years, maximum= 81 years). This finding is going parallel with previous studies. Shukla et al (1985) reported mean age of the Ca GB patients to be 50 years (Range 40-60 years), the mean age of 1,728 patients from 29 series, reported upon since 1960 was 65.2 years with incidence of carcinoma of the gallbladder of 0.1,1.5,8.9,19.6,37.0 and 32.0 percent in third, fourth, fifth, sixth, seventh and eighth decades respectively.<sup>7</sup>

Among 200 chronic cholecystitis patients 29.5 % are male and 70.5 % are female. The seemingly greater number of female could be explained by the fact that cholecystitis is most common in female. Thus in a hospital-based study, women patients form a majority.

Piehler JM and Crichlow RW showed that "Carcinoma of the gallbladder is predominantly a disease of elderly females of 2,998 patients from 51 series reported over last 20 years, there were 2,292 females (75%) and 706 males (25%), a female to male ratio of 3.2:1<sup>7</sup>. In the study by IARC under SEARCH program gallbladder cancer was found to be commonest among women (56%) with cancer of the Ampulla of the Vater coming second with 30 percent". According to our study Ca GB is common in female population because chronic cholecystitis is common in female population.

Among 200 patients 90% patients were Hindu, 7% were Muslim & 3% were Christian. The greater percentage of Hindu patients is due to the fact that Hindu population is more than Muslim & Christian in India.

Among 200 patients 67% patients were housewife, 16.5% were service holder, 9% were Retd. Person, 3% were doing desk job, 2.5% were students, 1.5% were manual labourers, 0.5% were farmers. This could be explained by the Indian socioeconomic status and literacy rate.

**CONCLUSION:-**

In this study the incidence of incidental Ca GB was 2.5 % of chronic cholecystitis patients who underwent surgical intervention. Incidental Ca GB was predominantly a disease of elderly female patients. The mean age was 44.18 years and 60% of incidental Ca GB cases were female. No clinical biochemical or radiological parameters were suggestive or predictive of incidental Ca GB. It was detected for the first time on post cholecystectomy settings on histological examination of gall bladder, termed as Incidental Carcinoma,

or inapparent carcinoma, or occult carcinoma Gall Bladder. Among the incidental Ca GB patients, four patients had laparoscopic cholecystectomy.

In this study 200 patients of chronic cholecystitis were analyzed. In the process 5 patients were diagnosed with incidental GB after cholecystectomy for chronic cholecystitis. In our study the incidence of incidental Ca GB was 2.5%.

Unfortunately no clinical, biochemical or radiological parameter was suggestive or predictive of Ca GB in patients who underwent cholecystectomy for chronic cholecystitis.

In view of the findings from this study it may be concluded that chronic cholecystitis remains a significant surgical entity in our population. However the suspicion of incidental Ca GB should be borne in mind. This is important as laparoscopic cholecystectomy is being increasingly used for treatment of chronic cholecystitis. Also if there is preoperative spillage of biliary contents there are possibilities for the very early disease becoming a disseminated disease. However as the incidence of incidental Ca is 2.5% in the study and no significant parameters could be found that can detect the condition. The operating surgeon should have high index of suspicion regarding this not so uncommon and uniformly fatal GI malignancy.

#### REFERENCES:-

1. Shukla VK ,Khandelwal C ,Roy SK, et al: Primary carcinoma of the gallbladder. A review of 16 years period at University Hospital. *J Surg Oncol* 28:32-32, 985.
2. Collier NA, Carr D, Hemingway A, et al: Preoperative diagnosis and its effect on the treatment of carcinoma of the gallbladder. *Surg Gynecol Obstet* 59: 46570984
3. Stinton LM, Shaffer EA Epidemiology of gallbladder disease : cholelithiasis and cancer. *Gut and Liver*. 2012;6(2):172-87.
4. National cancer Registry program. Annual report 2012-2014. ICMR ,New Delhi, 2015.
5. Piehler JM ,Crichlow RW. Primary carcinoma of the gallbladder . *Surg Gynecol Obstet* 147:929-42, 1978.
6. Hart J , Shani M. Modan B. Epidemiological aspect of gallbladder an biliary tract neoplasm. *Am J Pub Health* 62:36-39, 1972.
7. Destoll M. Rationis medendi in nosocomino practico unindobonensi , part 1, Vienna, Bernardi, 1777.