



A STUDY OF OCCURENCE OF INCIDENTAL CARCINOMA OF GALL BLADDER IN OPERATED CASES OF GALL STONE DISEASE

Dr. Virender Chaurasia	PG-JR-3 rd year, Department of General Surgery, Teerthanker Mahaveer Medical College and Research center, Moradabad.
Dr. Ashok Kumar Singh	Professor, Department of General Surgery, Teerthanker Mahaveer Medical College and Research center, Moradabad.
Dr. Utkarsh Mittal	PG- JR-3 rd year, Department of General Surgery, Teerthanker Mahaveer Medical College and Research center, Moradabad.
Vipul Goel	PG-JR-3 rd year, Department of General Surgery, Teerthanker Mahaveer Medical College and Research center, Moradabad.

ABSTRACT **Introduction:** The issue of incidental gall bladder carcinoma was elaborated in 1771, by Maximilian Stoll at Vienna for the first time. Cholecystectomy has a most peculiar and commonest indication which is cholelithiasis and the prevalence rate is high in North India and where it varies from 2 to 29 %. The region of North India has a higher risk for the incidence of gall bladder carcinoma. The survival rates of those patients who are undergoing a resection for incidental gall bladder carcinoma are more or less similar to the patients who are undergoing the primary radical surgery.

Materials And Methods: Study will be conducted on 155 patients, undergoing lap/open cholecystectomy, attending the surgical OPD and emergency of TMMC&RC, Moradabad. Informed consent will be taken from all the subjects. Findings of Routine & relevant investigation (example - Ultrasonography of abdomen / CECT Abdomen / MRCP of abdomen) will be noted. Intraoperative findings will be noted. Histopathology report findings will be noted. Analyzed and discussed under following variables – 1. Demographic profile (age, sex) 2. Histopathology report

Results: The age group 36 to 45 years is a mostly affected age group, the most common diagnosis is chronic cholecystitis and it is also noticed that females are mainly affected from gallbladder carcinoma.

Conclusion: Prognosis of incidental gallbladder carcinoma can come up with better results when it is being diagnosed during the early stages.

KEYWORDS :

INTRODUCTION:

The issue of incidental gall bladder carcinoma was elaborated in 1771, by Maximilian Stoll at Vienna for the first time.¹ Being the 5th most common type of cancer, gall bladder cancer actually was gastrointestinal tract cancer, however it is even one of the most common worldwide malignant tumors present in the biliary tract. Previously, it was being considered to be an incurable disease since there was an extremely poor prognosis.¹

After gall bladder malignancy gets clinically presented the benign gall bladder disease looks similar to the former one, and many other times it is actually masked by the chronic cholecystitis. In spite of the diagnosis rule, preoperative diagnosis of gall bladder carcinoma acts as an exception which happens in less than 20% of the cases. That is why, for maximum of the patients surgery is usually carried out in order to find the gall bladder tumors and it instantly takes place at that time while the operation is being carried out for any biliary tract disease or taking out the gall bladder stones.

The prognosis is very poor in terms of the patients for whom it gets diagnosed preoperatively since there are some unresectable ones at the time of presentation and for 15 to 30% of the cases no evidence of malignancy. It is being identified during or prior to the time of operation and so the disease gets noticed post the operation period that too microscopically.²

Cholecystectomy has a most peculiar and commonest indication which is cholelithiasis and the prevalence rate is high in North India and where it varies from 2 to 29 %. The region of North India has a higher risk for the incidence of gall bladder carcinoma. The annual incidence rate of gall bladder carcinoma in North India is 21.5 / 100000 , which is 7 times more than the South India region. The female to male ratio was 3.1 : 1 which shows that the number of females gets affected more than male.³ Preoperatively the gallbladder carcinoma gets suspected in only 30% of the overall patient and the remaining 70% of the gallbladder carcinoma cases usually gets discovered by the pathologist incidentally. Also gall bladder carcinoma is being counted among 0.2 to 2.9 % of the patients incidentally who undergoes the laparoscopic cholecystectomy.³

The incidental gall bladder cancer is also known as in apparent/

missed/ occult GDC. The patients suffering from cholelithiasis have 2 to 24 times the risk of developing gall bladder carcinoma than the patients who do not have gallstones.

The patients present in the stage T1b and beyond the stage needs to go through the staging and then they can be treated with the help of radical resection, if negative cystic margin is present in the patients of incidental gall bladder carcinoma having T1S and at T1a stage then it can be treated through a simple cholecystectomy only. Usually the gall bladder malignancies which are organized in the cholecystectomy specimens are more or less confined in the muscular quote of T1 tumors or in which inside the layer of T2 tumors since they are not obviously understood in the imaging studies. So, this study is going to observe the occurrence of incidental carcinoma of gall bladder in operated cases of gall stone disease

MATERIALS AND METHODS

A prospective, observational study will be conducted on 155 patients, undergoing lap/open cholecystectomy attending the surgical OPD and emergency of TMMC&RC, Moradabad. Duration of the study was from Dec. 2019 to Oct. 2021.

INCLUSION CRITERIA:

1. Patients with proven gall stone disease on radiological investigation(s) Example – Ultrasonography of abdomen.
2. Patients >18 years of age
3. All patients who consented to (a) undergo elective cholecystectomy (b) participate in the study and are fit to undergo surgery.
4. All patients who had definitive surgery done within 72 hours from the onset of symptoms or 6 weeks after the last attack of acute cholecystitis / acute pancreatitis secondary to gall stone disease.
5. Pregnancy second trimester.

EXCLUSION CRITERIA:

- Gall bladder malignancy suspected or diagnosed pre operatively.
- Patient diagnosed pre operatively to be having conditions with increase chances of gall bladder malignancy example –
 1. Porcelain gall bladder
 2. Gall bladder polyps > 1 cm
 3. choledochal cysts

4. Due to any reason where surgery has performed subtotal cholecystectomy. 5. Patients previously or presently diagnosed to be having any other intrabdominal / systemic malignancy (example – melanoma , lung cancer).

METHODOLOGY

All the relevant patients coming to surgery OPD and TMU emergency will be included in study based on inclusion and exclusion criteria. As per proforma, detailed case history will be recorded and physical examination will be carried out. Findings of Routine & relevant investigation (example - Ultrasonography of abdomen / CECT Abdomen / MRCP of abdomen) will be noted. Intraoperative findings will be noted. Histopathology report findings will be noted. After Compiling all the data A STUDY OF OCCURENCE OF INCIDENTAL CARCINOMA OF GALL BLADDER IN OPERATED CASES OF GALL STONE DISEASE will be analyzed and discussed under following variables –

1. Demographic profile (age, sex)
2. Histopathology report.

RESULT

Table 1:- Represent The Frequency Distribution Of Cases According To Gender.

SEX	No. of cases	Percentage
Female	107	68.6
Male	49	31.4
Total	156	100.0

Table1 shows the frequency distribution of cases according to Gender, where maximum subjects were found as Female i.e. 68.60%

Table 2: - Represent The Frequency Distribution Of Cases According To Histopathology.

Histopathology	No. of cases	Percentage
acute cholecystitis	49	31.4
adenomatoid hyperplasia	5	3.2
cholelithiasis	18	11.5
chronic cholecystitis	81	51.9
MODERATELY DIFFERENTIATED ADENOCARCINOMA	1	0.6
WELL DIFFEENTIATED ADENOCARCINOMA	2	1.3
Total	156	100.0

Table 2 and shows the frequency distribution of cases according to Histopathology, where maximum subjects were found in lap chronic cholecystitis i.e. 51.9%

Table 3: - Represent The Frequency Distribution Of Cases According To Age Interval

Age Interval	No. of cases	Percentage
≤25year	12	7.7
26 to≤35 year	36	23.1
36 to ≤45 year	54	34.6
46 to ≤55 year	33	21.2
>55 year	21	13.5
Total	156	100.0

Table 3 shows the frequency distribution of cases according to Age Interval, where maximum subjects were found in 36 to ≤45 Year i.e. 34.6%

Table 4: - Association Between Histopathology And Age Interval.

Histopathology	Age interval (in year)					P. Value
	≤ 25	26 to ≤35	36 to ≤45	46 to ≤55	≥55	
acute cholecystitis	8 (16.3)	12 (24.5)	19 (38.8)	7 (14.3)	3 (6.1)	
adenomatoid hyperplasia	0 (0)	0 (0)	0 (0)	1 (20)	4 (80)	
cholelithiasis	0 (0)	4 (22.2)	6 (33.3)	5 (27.8)	3 (16.7)	
Chronic cholecystitis	4 (4.9)	20 (24.7)	29 (35.8)	19 (23.5)	9 (11.1)	
MODERATELY DIFFERENTIATED ADENOCARCINOMA	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0.0001

WELL DIFFERENTIATED ADENOCARCINOMA	0 (0)	0 (0)	0 (0)	0 (0)	2 (100)	
Total	12 (7.7)	36 (23.1)	54 (34.6)	33 (21.2)	21 (13.5)	

Table 4 shows the association between Histopathology and Age Interval, where it was found to be significant as the P-Value is < 0.05

DISCUSSION:

All over 115 cases were being considered for our survey out of which 68.3 % were female and outnumbered the number of male which was 31.7%. Most of the researchers actually identified that the number of females suffering from gallbladder carcinoma is higher than that of the number of males. According to the research carried out by Tantia et al., 70% of the cases were females in their research study.⁴

Histopathology of the cases have shown that chronic cholecystitis was the main category of histopathology which consisted of the maximum number of patients and it consisted of 51.9%. Keeping in accordance with the results of our study, the researchers Pawlik et al., also came up that the main category of histopathology got identified as chronic cholecystitis and in their research it accounted within 62.3 % of the cases.⁵

Following this there was the Representation of the frequency distribution of the cases as per the age interval which shows that the main age group of the Discussion, patients who get mostly affected is from 36 to 45 years and it consisted of 34.6 % of the cases. The second most affected age group was 26 to 35 years which consisted of 23.1 % of the cases and the third most effective age group was 46 to 55 years which consisted of 21.2 %. However, it seems that the age group that is less than 25 years is the least affected since it had the least number of patients which consisted of 7.7%. Previously it was assumed that the elderly age group was mainly affected from gallbladder carcinoma. But since the last decade several researchers have shown that the middle age people usually get affected from gallbladder carcinoma and the mean age group is 30 to 45 years. The result of the researchers, Wernberg et al., was almost similar to our results as in their study the commonest age group that got mainly affected with value of 42.7% what's the age group 31 to 40 years and it was followed by 41 to 50 years having a value of 34.9%.⁶

The staging of the carcinoma in gallbladder was found out through AJCC and for one case it was in pT1 stage whereas for 6 cases it was in pT2stage. At the time of follow-up in 22 months' six cases where we found who were alive and one of the patients died because of tumor metastasis.⁷

Even though this research paper has some limitations like time constant because of which the sample size chosen could not be kept a large and varied one but still we have been able to cover all the important segments of the research which was needed to bring in front the desired result.

SUMMARY

Usually the incidental gallbladder carcinoma primarily gets suspected for the first time during the time of cholecystectomy which gets confirmed at the time of histopathology. This research paper tries to find out the occurrence of the incidental carcinoma amongst the operated cases of gallstone disease. This paper considered several parameters like demographic clinical findings as well as presentation and some histopathological reports along with relevant preoperative investigations. It has been found out that advanced age groups mainly from 36 to 50 years and the female gender group are actually the demographic risk factors in which gallbladder carcinoma gets identified. Even though gallbladder carcinoma is actually known because of the poor prognosis, the tumors which are being diagnosed instantly get found during an early stage and also have a better prognosis.

REFERENCES

1. Celen, S., Günsereen, K. Ö., Özlülürden, Y., Mete, A., Tuncay, Ö. L., & Yavaşcaoglu, İ. (2019). Does neutrophil-lymphocyte ratio show recurrence in patients who underwent curative resection for non-muscleinvasive bladder cancer. *J Surg Med*, 3(4), 324-7.
2. Agrawal, S., & Kapoor, V. K. (2006). Thick-walled gallbladder. *The National medical journal of India*, 19(1), 37-38.
3. Tian, Y. H., Ji, X., Liu, B., Yang, G. Y., Meng, X. F., Xia, H. T., ... & Dong, J. H. (2015). Surgical treatment of incidental gallbladder cancer discovered during or following laparoscopic cholecystectomy. *World journal of surgery*, 39(3), 746-752
4. Tantia, O., Jain, M., Khanna, S., & Sen, B. (2009). Incidental carcinoma gall bladder

- during laparoscopic cholecystectomy for symptomatic gall stone disease. *Surgical endoscopy*, 23(9), 2041-2046.
5. Pawlik, T. M., Gleisner, A. L., Vigano, L., Kooby, D. A., Bauer, T. W., Frilling, A., ... & Capussotti, L. (2007). Incidence of finding residual disease for incidental gallbladder carcinoma: implications for resection. *Journal of Gastrointestinal Surgery*, 11(11), 1478-1487.
 6. Waghmare, R. S., & Kamat, R. N. (2014). Incidental gall bladder carcinoma in patients undergoing cholecystectomy: a report of 7 cases. *J Assoc Physicians India*, 62(9), 793-6.
 7. Wernberg, J. A., & Lucarelli, D. D. (2014). Gallbladder cancer. *Surgical Clinics*, 94(2), 343-360.