Incidental Finding of Gall Bladder Carcinoma–A Retrospective Study in a Tertiary Care Hospital of Eastern India, West Bengal

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Abstract

Introduction: Gall bladder carcinoma is the most common biliary tract malignancy worldwide.[1]Aggressive biological nature of the tumor results in rapid spread of the tumor to adjoining vital structures since the GB is located in an anatomically busy area.[1]The tumor is thus, often unresectable at presentation.In this retrospective study we aimed to establish the overall rate of unsuspected gallbladder carcinoma in all cholecystectomy specimens in a tertiary care hospital in the eastern part of India.

Material and Method: In our study we have reviewed the clinical records of consecutive 731Cholecystectomy specimens during the last 5 Years (2014May-2019April) .A uniform procedure of history taking,physical examination, investigation and treatment adopted for all the patients.Diagnosis of Incidental gall bladder carcinoma was confirmed on microscopic examination.

Results: During the last 5 years, 731 cholecystectomies were performed in this tertiary care hospital. Out of them 65.43% was from female population whereas 34.57% were from male. Median age of the patient population is around 55± 9.34 years.Most of the approaches were laparotomy.Evaluation of the all pathologic specimen revealed 74 cases of gall bladder carcinoma which comprises 10.12% of all the cholecystectomies done in that aforesaid period.

Conclusions: The findings of Incidental gall bladder carcinoma is a clinical problematic scenario which often misses the eye of a radiologist and comes as a histopathological surprise. Microscopical examination of all cholecystectomy specimen should be done because it is not only the gold standard diagnostic method but also reveals the occult malignancy at the earliest.

Keywords: *Gall bladder carcinoma, Cholecystectomy, Incidental finding, Tertiary care hospital.*

Introduction

Gall bladder carcinoma is the most common biliary tract malignancy worldwide and manifests as either diffuse thickening of the GB wall or as a GB mass arising from the fundus, neck or body of the GB[1].

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The incidence of this malignancy is characterized by marked geographical and ethnic variations[2]. North, East, Northeast and Central India are among the high incidence areas for gallbladder in contrast to South and West India[3].Its clinical presentation is often non-specific resulting in significant delay in diagnosis. It is either detected incidentally at the time of cholecystectomy or when it presents with complications due to local spread of the malignancy in the form of jaundice, hepatomegaly, ascites or duodenal obstruction[4]. Aggressive biological nature of the tumor results in rapid spread of the tumor to adjoining vital structures since the GB is located in an anatomically busy area[5]. The tumor is thus, often unresectable at presentation resulting in an overall dismal

prognosis in India[6]. The overall outcome of incidentally detected carcinoma gallbladder is a matter of debate in variousliteratures.

In this retrospective study we aimed to establish the overall rate of unsuspected gallbladder carcinoma in a tertiary care hospital in the eastern part of India. In our study we have evaluated all cholecystectomy specimens both from open & laparoscopic procedure in our hospital during the last 5 Years (2014-2019) and compared the data to those reported in literature.

Material and Method

In this retrospective study we have reviewed the clinical records of consecutive 731Cholecystectomy specimens during the last 5 Years (2014 May-2019 April). Data has been collected according to patients belonged to both sexes having acute and chronic cholecystitis with frequent cholelithiasis for whom the diagnosis was done based on clinical ground and supported by ultrasonography. A uniform procedure of history taking,physical examination, investigation and treatment adopted for all the patients. Both open and laparoscopic procedures were included. From the collected data we retrivedseventy four (74) patients with unexpected gall bladder carcinoma.

Results

During the last 5 years, 731 cholecystectomies were performed for benign gall bladder disease in R.G.Kar Medical College & Hospital.65.43% was female whereas 34.57% were male.

Most of the patients were in the age group of 50-60 years. Median age of the patient population is around 55± 9.34 years. Minimum age is 31 yrs where maximum age is 79 yrs with a range of 48yrs.

Most of the approaches were laparotomy followed by elective laparoscopic approach followed by emergency open cholecystectomy. Evaluation of the all pathologic specimen revealed 74 cases of gall bladder carcinoma which comprises 10.12% of all the cholecystectomies. All the malignant neoplasmwere unsuspected preoperatively both by clinical and radiological ground. 52 of the 74 patients diagnosed as having gallbladder carcinoma were female and the male: female ratio is 1:4.

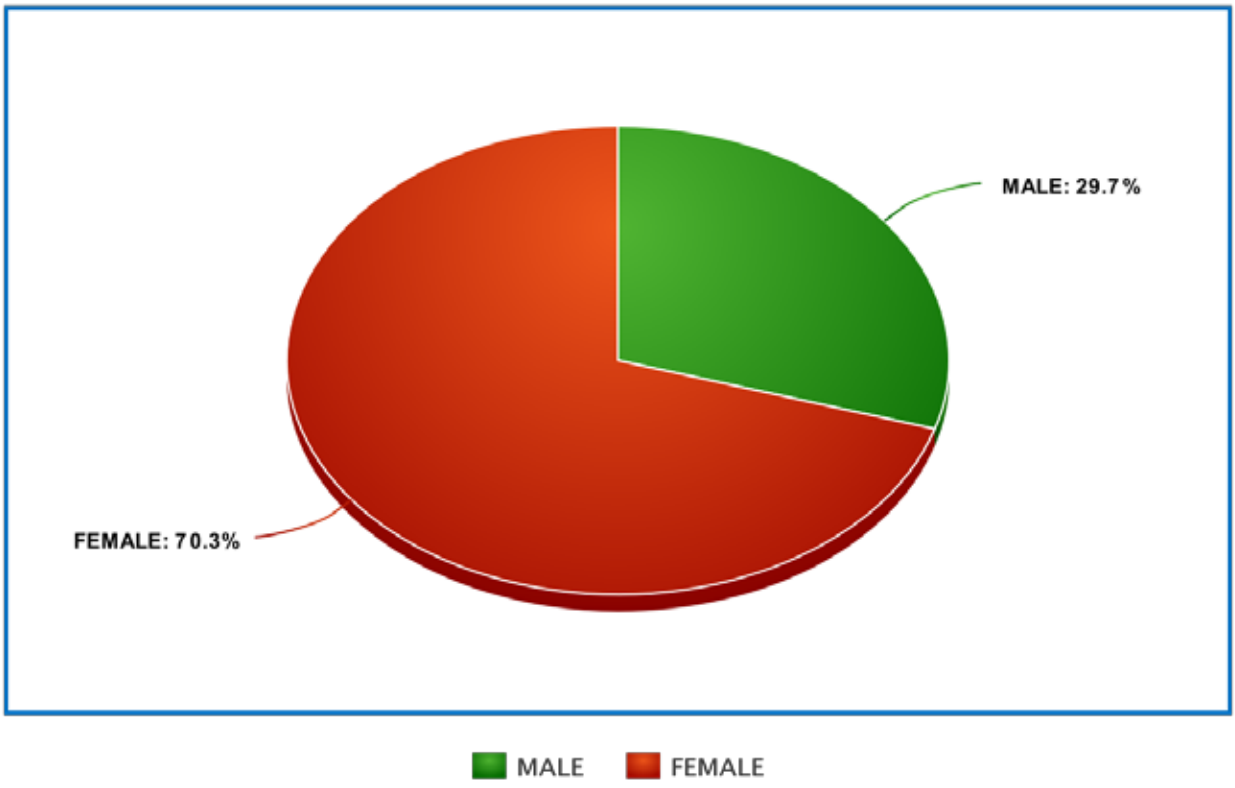

Figure 1: Showing Sex Distribution

Table 1: Shows Baseline Patient's Character

Variable	No. of Patients	Percentage
Gender		
Male	255	35%
Female	476	65%
Age Distribution		
<40 Years	34	4.65%
40-50 Years	196	26.81%
51-60 Years	376	51.43%
61-70 Years	101	13.81%
>70 Years	24	3.28%

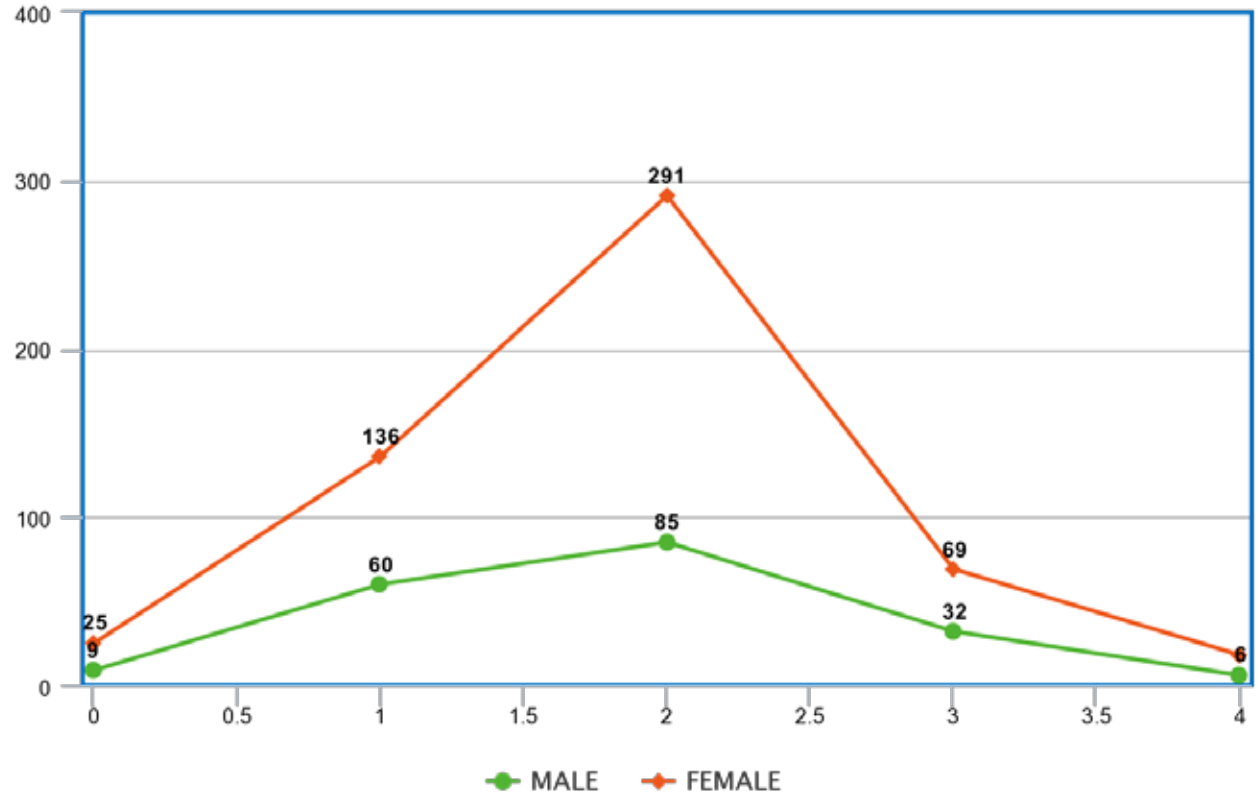

Figure 2: Shows Male Female Distribution According to Age of All Patients at Baseline

Discussion

De stoll in 1771 the first to report gall bladder carcinoma. Although the entity is quite rare it is the most common billiary tract malignancy and usually discovered accidentally[6].

The overall prognosis of patients with gall bladder carcinoma is poor and fatal when it is unresectable. The concern whether routine histopathological examination is needed for all cholecystectomy specimens done for benign gallbladder diseases is still debatable. The Royal College of Pathologists suggests a histopathological examination of all cholecystectomy specimens as IGBC can be easily missed out[7].

Jha et al. shoed that out ofthe 4800 cholecystectomy specimens retrieved, diagnosis of Incidental gallbladder carcinoma was rendered in twenty cases (0.41%). Mean patient age was 50.65 years with a female preponderance[8].

Shrestha R et al. showed that there were 22 cases of primary gall bladder carcinoma out of 668

cholecystectomy cases in a span of 5 years with a incidence of 3.3% and was commonly found in female at 7th decade of their life[9].

Gall bladder carcinoma is diagnosed pathologically in 0.15-8% cholecystectomy specimens in different reported series. The prognosis of the patients in whom it is diagnosed preoperatively is very poor. Most of the patients were diagnosed microscopically in operated specimen. Theoretically this group carries best prognosis[10].

It is important to know preoperatively whether surgeon is dealing with gall bladder carcinoma, as this will lead to more radical preoperative evaluation and surgery. Endoscopic ultrasound might be of help. Suspicion of malignancy rises when sonography displays large polyps (45% risk of gallbladder carcinoma for a polyp>15 mm) or a porcelain gallbladder[11].

Over the past decade considerable progress has been made in several fields relating to the diagnosis and treatment of gall bladder cancer. The increase in the number of cholecystectomies being carried out has resulted in more carcinomas being discovered incidentally, and at an early and treatable stage[12].

In our retrospective study the frequency of gall bladder carcinoma is 10.12% which is higher than the western countries.

In our study the age of carcinoma gall bladder occurs commonly closes corresponds to the age group of different study.

In Indian population the median age at presentation is 51 years with a median range of 50-60 years.

In our study, Most of the patients were in the age group of 50-60 years. Median age of the patient population is around 55± 9.34 years. Minimum age is 31 yrs where maximum age is 69 yrs with a range of 38 yrs.

Gall bladder carcinoma is most common in female. According to Globocan 2018 the ASR per 1 lakh population for male is to female ratio is 1.6:2.5[15].

In our study the male, female ratio is 1:4 which is a bit higher but it is close to different international studies.

The gall bladder malignancy does not have typical clinical feature and it is usual presentation mimics that of benign gall bladder disease.

Pain is the most prevalent symptom as described by WaneboHJ (50%) and Koo (80%)[15].

In our study, Most of the patients present with pain (65%) and other symptoms are nausea and vomiting. The most common signs are tenderness in right hypocondrium, palpable mass and jaundice.

Ultrasonography performed the entire patients. The thickened gall bladder wall detected in 79 patients and dilated common bile duct found in 14 patients. None of the cases suspected for malignancy. So ultrasonography is not a good diagnostic tool for detecting gall bladder malignancy.

Laparotomy and biopsy is the good option and diagnostic accuracy is around 100%.

Conclusion

The unexpected incidental gall bladder carcinoma in our series is 10.12%. Pre operativeultra sonography missed the diagnosis often and laid the physician in a therapeutic dilemma.

Therefore, all the gall bladder specimens should be submitted for microscopic evaluation.

The increase in the number of cholecystectomies being carried out has resulted in more carcinomas being discovered incidentally, and at an early and treatable stage. For in-situ- and T1a-tumours a simple cholecystectomy can be performed resulting in favorable 10-year survival. For T1b- and T2-tumours an additional resection is indicated, resulting in 5-year survival rates of 55-90%. For T3-tumours, only those patients without metastatic disease will benefit from an additional resection[12].

Once the patient presents with symptoms of acute and chronic cholecystitis, should be encouraged to have laparotomy with cholecystectomy or radical cholecystectomy according to per operative view particularly in this demographic location and eventually gall bladder specimen should be sent for histopathological examination.

Ethical Clearance: As it is a retrospective study, no Ethical clearence needed as per our institutional protocol

Source of Funding: Self.

Conflict of Interest: Nil.

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