

## INCIDENTAL GALLBLADDER CANCER

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### ABSTRACT

Gallbladder cancer is a rare but highly malignant tumour with poor prognosis. It has marked ethnic and geographical variations. In India, it is most prevalent in northern and north-eastern population. It is twice more common in women than in men and is the commonest digestive cancer in women in northern India. The incidence of incidentally diagnosed gallbladder cancer (GBC picked up on histopathological examination only) has increased because of increasing number of patients undergoing cholecystectomy. All post cholecystectomy gallbladder specimens should be opened and examined carefully by the operating surgeon and be sent for histopathological examination.

### KEYWORDS

Incidental, Gallbladder Cancer, Gall Stones.

**HOW TO CITE THIS ARTICLE:** Sharma A, Khan RU, Johri G. Incidental gallbladder cancer. J. Evid. Based Med. Healthc. 2016; 3(42), 2050-2052. DOI: 10.18410/jebmh/2016/457

**INTRODUCTION:** Gallbladder Cancer is a highly malignant tumour and despite advances in medicine, it continues to remain an aggressive tumour with a dismal outcome. The prevalence of Gallbladder Cancer (GBC) varies considerably between geographical areas. Some populations show higher incidence like Native Americans, South Americans, people from Poland and Northern India.<sup>1</sup> Worldwide, GBC is the fifth most common digestive malignancy and most common biliary cancer.<sup>2,3</sup> GBC diagnosed for the first time on histology of GB removed with a presumed diagnosis of gallstone disease is known as incidental GBC (IGBC).

The term IGBC should not be used when GBC is suspected on pre-operative imaging (Ultrasonography [US] or CT scan), during surgery or on opening the GB specimen.<sup>4</sup> An incidental gallbladder carcinoma is found in 0.2%-3% of all cholecystectomies and 0.09%-2% of all laparoscopic cholecystectomies.<sup>5,6</sup> However, GBC is suspected preoperatively in only 30% of all patients.<sup>2</sup>

**MATERIAL AND METHODS:** Retrospective analysis of all cholecystectomies done for various indications was done from Jan 2014 to Dec 2015 at our hospital IIMS & R, Lucknow.

#### Inclusion and Exclusion Criteria:

A total of 822 patients were admitted with gallstone related complaints during the study period. 110 patients had suspicion of GB malignancy preoperatively and were managed accordingly and were excluded from this study.

Patients with clinical or radiological suspicion of gallbladder malignancy or gallbladder polyp detected on ultrasound were also excluded from the study. Remaining 702 patients were included in the study.

#### RESULTS:

- There were 108 males and 594 females in the study group.
- Mean age was 37.2 years and age range was 22 – 72 years.
- 7 cases of incidental CAGB were noted.
- All seven cases were females.
- Mean age was 55.2 years.
- Only one patient was found to have T1a tumour.
- 4 patients had T1b tumour, while 2 patients had T2 tumour.

**DISCUSSION:** GB Carcinoma was first described in 1777 by Maxmillan de Stol.<sup>7</sup> although relatively uncommon, it is the most common cancer affecting the biliary system. A large variation in geographical distribution is seen, so much so that it seems to be endemic in certain areas. Different authors have studied the role of routine histopathology of Gallbladder specimen after cholecystectomy and in some geographic areas, it may not be necessary to obtain a histopathological examination after a cholecystectomy to reduce the burden; however, some studies have also studied the role of selective histopathological examination after cholecystectomy.

A study from Thailand also studied the role of routine histopathology in gallbladder specimens and suggested histopathological examination to be helpful in patients with empyema and age more than 60 years.<sup>8</sup> However, in high prevalence areas like India, routine histopathology of gallbladder specimen should always be carried out.

**Risk Factors for GBC:** Many factors are known to associate with the development of GB Cancer.

Financial or Other, Competing Interest: None.  
Submission 29-04-2016, Peer Review 17-05-2016,  
Acceptance 21-05-2016, Published 24-05-2016.

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DOI: 10.18410/jebmh/2016/457

Risk of GBC is increased in patients with anomalous pancreaticobiliary junction, cholelithiasis, cholelithiasis with typhoid carriers, calcified or porcelain gallbladder, adenoma of gallbladder.<sup>9</sup> Out of these, gallstones are an important risk factor for GBC. Concretions can be seen in up to 85% of patients with GBC.<sup>10</sup> To further strengthen the association of gallstones and GBC, the rate of GBC correlate with that of high incidence areas of gallstones such as north Indian population. Gallstones of size more than 3 cm have strong correlation with risk of developing GBC.<sup>11,12</sup> Cholesterol gallstones which result from distinct local mucosal irritation and chronic inflammation are associated with higher risk of GBC.

Xanthogranulomatous cholecystitis, although is associated with the development of gallbladder cancer but it is not considered a precancerous lesion.<sup>13</sup> Other important risk factors are gallbladder polyps,<sup>14</sup> choledochal cysts,<sup>15</sup> and diabetes.<sup>16</sup> The only factor that is negatively associated with GBC is cholesterolemia in which the incidence of GBC is less than that of the normal population.<sup>17</sup> The incidence of gallbladder carcinoma was found to be of 0.9%, in our study, similar to the incidence in other studies in published literature.<sup>18,19</sup> All seven of our patients were admitted with a diagnosis of benign gallbladder disease. A gallbladder wall thickened due to the presence of longstanding gall stones can look quite similar to wall thickening due to gallbladder carcinoma and the two may be hard to differentiate.

**Treatment:** The treatment of GBC essentially remains surgical.

**Management of Gallbladder Cancer:** Surgical resection is the only potentially curative treatment for GBC. Resectable disease is found in only 10–30% of GBC patients.<sup>1,20</sup> The standard surgical procedure is radical cholecystectomy, which is also referred to as extended cholecystectomy.<sup>21</sup> It includes en bloc removal of gallbladder and 2 cm or greater wedge resection of gallbladder bed (segments IV and V) and lymph node dissection of all the lymph nodes along the portal structures, gastrohepatic ligament, retroduodenal, peripancreatic and celiac axis lymph nodes. Resection of extrahepatic bile ducts followed by hepaticojejunostomy should be reserved for patients with positive cystic duct margin.

Simple cholecystectomy is sufficient only for T1a lesions and is curative. Apart from T1a lesions, all other lesions should be subjected to Radical cholecystectomy.<sup>22</sup> Of the patients who have resectable disease, the most important determining factor is the T stage of the tumour.<sup>23</sup> Extent of liver resection in GBC remains controversial and some authors recommend anatomical Segment IV B and V resection whereas more extensive resections in the form of right hepatectomy and trisegmentectomy is also recommended by a few. IGBC following a laparoscopic cholecystectomy warrants a full thickness excision of all port sites because of high incidence of port site recurrence due to bile and tumour spillage during index surgery.

The increased intraperitoneal pressure by the CO<sub>2</sub> pneumoperitoneum can spread and redistribute cancer cells within the peritoneal cavity.<sup>19</sup> A systemic and detailed algorithm for management of incidental GBC was published from India.<sup>24</sup>

**CONCLUSION:** Gallbladder cancer carries a poor prognosis and it is important to diagnose cases in early stage for a better outcome. In high incidence areas, surgeons treating gallstone disease should have a low threshold for obtaining a CT scan in suspicious cases for adequately diagnosing GBC preoperatively. Also, the role of routine histopathology of all gallbladder specimens cannot be emphasised more.

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