Frequency of Incidental Carcinoma Gall Bladder in Laparoscopic Cholecystectomy

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Abstract

Background: To determine the frequency of incidental carcinoma gallbladder in cases of laparoscopic cholecystectomy.

Methods: In this descriptive study all the patients presenting with diagnosis of cholelithiasis were included. They were operated by laparoscopic cholecystectomy and histopathologic studies were done to detect any evidence of malignancy.

Results: Out of 500 cases of laparoscopic cholecystectomies done for cholelithiasis over a period of 5 years, only one case of adenocarcinoma (0.2%) was detected. The tumour was limited to mucosa. There was no evidence of involvement of lymph nodes or metastasis.

Conclusions: Despite the common notion that carcinoma gallbladder is common in our region, the present study clearly showed a low frequency of incidental carcinoma gallbladder in patients undergoing laparoscopic cholecystectomy.

Key Words: Cholelithiasis, Incidental Carcinoma Gallbladder, Laparoscopic Cholecystectomy

Introduction

Carcinoma of gallbladder is common cancer of the biliary tract and has a particularly high incidence in Chile, Japan and Northern India. Though no definite data is available regarding its incidence in Pakistan but our region is included in areas where incidence of carcinoma gallbladder is high.

Risk factors for carcinoma gallbladder include genetic susceptibility, gender, presence of gallstones, chronic biliary infections, diet and some anatomical anomalies. The basic investigation for diagnosis of cholelithiasis is ultrasound which is also helpful in diagnosis of carcinoma gallbladder though early stage disease, limited to mucosa is sometimes missed. Median survival of patients with gallbladder cancer is 6 months, and the prognosis and survival depends on the stage of the disease. The usual type of gallbladder carcinoma is an adenocarcinoma (85%), but squamous and mixed squamous-adenocarcinoma also occur.

Overall the median survival of patients with gallbladder cancer is 6 months, and the prognosis and survival depends on the stage of the disease. Due to presence of minimal symptoms, most of the cases are detected in advanced stages unless disease is detected during screening for another pathology or it is detected as an incidental finding during cholecystectomy for cholelithiasis.

With the advent of laparoscopic cholecystectomy, the number of cases being operated for cholelithiasis have increased due to ease of operation so large number of specimens are available for histopathology and detection of carcinoma of gallbladder. Presence study was conducted to determine the frequency of incidental carcinoma gallbladder in laparoscopic cholecystectomy and to critically appraise the common perception that incidence of carcinoma gallbladder is high in this region.

Patients and Methods

This study included a total of 500 patients of cholelithiasis. Patients diagnosed as case of gallbladder carcinoma pre-operatively or having hilar lymphadenopathy were excluded from the study. Patients suffering from acute cholecystitis and empyema were given emergency management including intravenous fluids, pain killers, antiemetics, and third generation cephalosporins to stabilize the patients. All patients were operated in same admission, abandoning the old policy of Interval cholecystectomy.

Standard four port technique was used in all cases. Clipless cholecystectomy technique was employed in chronic cholecystitis. Day care laparoscopic cholecystectomy was done in patients without any comorbid diseases and other wise fit. Drains were routinely placed in all cases.

Results

Age of the patients ranged from 20 to 70 years
A single case of malignancy was detected in a 45 year old female, who had a history of cholelithiasis for 10 years (Table 1). Disease was limited to mucosa (T1 stage). Detailed investigations for staging purpose when performed showed no evidence of lymph node involvement or metastasis (N0, M0).

The management of biliary tract cancer has changed dramatically in the last 20 years, emphasis shifted to more radical surgical procedures like extended cholecystectomy and even lobectomy than the traditional use of chemotherapy.  

In present study, out of 500 cases of laparoscopic cholecystectomy, evidence of malignancy was found only in one case (2%). This is in sharp contrast to literature which showed high frequency of carcinoma gallbladder in our region.  

In one study reported asymptomatic gallbladder cancer to be found in 0.96% of cases which is higher than our experience and it is expected, due to high incidence of disease in the region. In one study based upon Turkish population, it was only 0.09%. A recently published study, reported frequency of 0.2%, which is similar to our study. It is seen in our study that frequency of carcinoma gallbladder is lower in our study than expected from reported high incidence of disease in this part of world.

### Table 1: Gender Distribution (n=500)

<table>
<thead>
<tr>
<th>Gender</th>
<th>No(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>108(21.6)</td>
</tr>
<tr>
<td>Female</td>
<td>392(78.4)</td>
</tr>
<tr>
<td>Total</td>
<td>500(100)</td>
</tr>
</tbody>
</table>

### Table 2: Histopathologic Findings

<table>
<thead>
<tr>
<th>Type</th>
<th>No(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Cholecystitis</td>
<td>33(6.6)</td>
</tr>
<tr>
<td>Chronic Cholecystitis</td>
<td>460(92.0)</td>
</tr>
<tr>
<td>Gangrenous Cholecystitis</td>
<td>6(1.2)</td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>1(0.2)</td>
</tr>
</tbody>
</table>

### Discussion

Carcinoma of Gallbladder is a rare finding in western world but in comparison, its rate is much higher in eastern countries like India and Pakistan where people do not have much knowledge of the fatal diseases of biliary tract. Gallbladder cancer is the fifth most common gastrointestinal cancer and is incidentally found in 1-2% of gallbladders after laparoscopic cholecystectomy. Anomalous pancreaticobiliary ductal junction is believed to be one of the risk factors for gall bladder carcinoma. Gall bladder malignancy is predominantly a disease of females, however there is a regional variation in female to male ratio 3:1. This ratio is reported in one of the local studies.

It is difficult to diagnose carcinoma gallbladder precisely at a relatively early preoperative stage, and occasionally even at an advanced stage, due to minimal symptoms and signs associated with carcinoma gallbladder though the number of cases detected has increased at asymptomatic level due to increased use of ultrasound for common abdominal pathologies. Ultrasonography is most sensitive and specific diagnostic tool in detecting gall bladder malignancy, it has a very high diagnostic accuracy in early and advanced gall bladder malignancy. In many cases, the condition could not be confirmed, before removal.  

### Conclusion

Despite the international literature showing high frequency of carcinoma gallbladder in this part of world, our local experience did not correspond to it and reveals a low frequency of incidental carcinoma gallbladder in laparoscopic cholecystectomy cases.

### References

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