

Port site and peritoneal metastases after laparoscopic cholecystectomy for incidentally found gallbladder carcinoma

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Abstract

Gallbladder cancer is found in about 1–2% of patients after laparoscopic cholecystectomy and it is difficult to diagnose preoperatively. Laparoscopic cholecystectomy may disseminate gallbladder cancer to peritoneum and even port sites. Here, we present a case of a 59-year-old female patient operated for gallstone disease and her histopathology was suggestive of well-differentiated gallbladder carcinoma (T1N0M0). Patient presented to us with port site and distant peritoneal metastases after 3 months.

Key Words: Gallbladder carcinoma, laparoscopic cholecystectomy, metastases

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INTRODUCTION

Laparoscopic cholecystectomy is the gold standard treatment for patients with symptomatic cholelithiasis. Gallbladder carcinomas are found in 1–2% of cholecystectomies performed and many of these are unsuspected preoperatively. Gallbladder carcinoma is the fifth most common cancer of gastrointestinal tract and most common cancer of biliary tract, has three times higher frequency in females than in males, and is characterized by early metastasis and extremely poor prognosis (5-year survival of 5%).^[1] Treatment of gallbladder cancer diagnosed after laparoscopic

cholecystectomy is an important issue since the neoplasm is of advanced stage. Here, we present a case of an incidentally found gallbladder carcinoma after laparoscopic cholecystectomy.

CASE REPORT

A 59-year-old female patient presented with recurrent biliary colic and nausea. Her past medical history was not significant. Her physical examination was unremarkable. Ultrasonography of abdomen revealed cholelithiasis with no indication of tumor and normal common bile duct. Her liver function tests and other biochemical investigations were normal. Laparoscopic cholecystectomy was carried out with standard four trocar technique (two 10 mm and two 5 mm). Operative findings were edematous thick-walled gallbladder with severe inflammation in Calot's triangle. There was no evident spillage of bile inside peritoneum. There was no macroscopic evidence of tumor in the excised gallbladder mucosa. However, histological examination revealed well-

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differentiated adenocarcinoma confined to lamina propria, diagnosed having T1 gallbladder cancer with negative margins including cystic duct stump and no areas of deeper invasion. Considering her stage of gallbladder cancer, simple cholecystectomy was sufficient. The patient presented to us after 3 months with painful swelling at umbilicus and jaundice. Her abdominal ultrasonography revealed mass lesion 9 × 10 cm in the gallbladder fossa with two subcutaneous nodules, one at the umbilical port and the other at the midclavicular port. Her CT scan examination revealed similar findings with other peritoneal nodules. Patient refused further investigation and treatment.

DISCUSSION

Gallbladder cancer is a very aggressive tumor malignancy and is reported to occur in 0.2–1.5% of cholecystectomies. Clinical presentation of gallbladder cancer is similar to gallstone disease. Our patient with adenocarcinoma of gallbladder cancer presented with a clinical picture similar to gallstone disease. Early detection of cancer was not possible in our patient. Advanced age, female gender, and a long history of gallstone disease are well-recognized risk factors for gallbladder cancer. The opinion that frozen sections should be performed whenever there is a suspicion for cancer during laparoscopic cholecystectomy is common among surgeons. Intraoperative assessment of gallbladder in our patient was unfruitful. Long history of gallstones usually results in thickened gallbladder wall that does not appear strikingly different from gallbladder cancer, especially during laparoscopic procedure with limited visibility. However, threshold for the performance of frozen sections should be as low as possible.^[2]

Presence of a port site and peritoneal metastasis so early after the procedure suggest tumor inoculation during the procedure. This complication is not specific to cholecystectomy alone. Tumor seeding has been described after laparoscopic removal of other gastrointestinal carcinoma such as colon^[3] and esophagus.^[4] However, with well-known difficulties in preoperative diagnosis of gallbladder cancer and widespread use of laparoscopic cholecystectomy, such a complication is more likely. A possible explanation is that gallbladder cancer has a remarkable propensity to seed and grow within peritoneal cavity, which may account for its ability to grow along the laparoscopic port sites. Growth in these sites may be further exacerbated by bile spillage during laparoscopic cholecystectomy. Abdominal wall metastasis is reported to occur 3



Figure 1: CT scan image showing umbilical port site metastasis, distant peritoneal metastasis, and mass in GB fossa

weeks to 8 months after the procedure [Figure 1]. Tumor seeding has been described not only at the site of umbilical and epigastric ports but also in 5-mm trocar insertion site and peritoneum as in our case. Frequent changes of contaminated instruments and their passage through the other ports, as well as entrapment of exfoliated tumor cells at incision sites during deflation, can be responsible for tumor seeding at these sites.^[5] Damage to the gallbladder wall and extensive use of electrocautery are the two problems commonly involved in mechanism of port site and peritoneal metastasis. It seems that a meticulous technique is of utmost importance in avoidance of intraperitoneal dissemination and port site metastasis.

In conclusion, gallbladder cancer runs a short course with a poor prognosis. Use of meticulous laparoscopic technique and a high degree of vigilance are important for diagnosis and avoidance of early complications of disease.

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