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clinical practice

Incidental gallbladder carcinoma: our experience

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SUMMARY: **Incidental gallbladder carcinoma: our experience.**

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Aim. *Gallbladder carcinoma is an uncommon cancer with a poor prognosis. In the era of laparoscopic cholecistectomy for treatment of benign diseases incidental gallbladder carcinoma has dramatically increased and now constitutes the major way patients present with gallbladder cancer and allows to detect cancer at early stages with a better prognosis. In this single-center study we report our experience with gallbladder carcinoma incidentally diagnosed during or after laparoscopic colecistectomy performed for cholelithiasis.*

Methods. *From January 2003 to December 2011 a total of 1193 patients underwent cholecistectomy at General Surgical Unit III of University of Bari. The patients were 458 males and 735 females, mean age was 52 years (range 19-91). In 6 of 1188 patients adenocarcinoma was present in the pathologic specimens (0,5%).*

Results. *Of 1188 patients in whom laparoscopic cholecistectomy was attempted adenocarcinoma was diagnosed histopathologically in 6 cases (0,5%). There was no suspicion of malignancy to any of them. Intraoperatively, gallbladder wall appeared abnormal in one patients and frozen section analysis revealed adenocarcinoma. In the remaining 5 cases routine histopathological studies revealed the diagnosis of gallbladder carcinoma. One patient had T1 tumor, two had T2 and three had T3 tumor.*

Conclusions. *In the present study the rate of incidental gallbladder carcinoma was 0,5%, according to the published English language literature. The risk factors widely related to the gallbladder cancer are advanced age and gallstones disease. The therapeutic approach to gallbladder cancer was applied according to the stage of tumor, but in our study this was possible only in two patients with T2 and T3 tumor since high risk and important comorbidities were the main causes for the refusal of 3 patient out of 5. Only the T1 patient underwent simple cholecystectomy. Similar to other reports in this single-center study the diagnosis of incidental gallbladder carcinoma was found to be of 0,5%, thus the diagnosis of gallbladder stones is an indication to the cholecystectomy.*

KEY WORDS: Incidental - Gallbladder - Carcinoma - Laparoscopy.

Introduction

Gallbladder carcinoma is an uncommon cancer with a poor prognosis and is the most common biliary tract malignancy and the fifth most common gastrointestinal cancer. Women are affected three times more commonly than men and in patients older than 40 years of age. Gallbladder carcinoma is more common in Chile, Poland, India, Japan and Israel. The most important risk factor for the development of gallbladder cancer is cholelitiasis even if the etiological relationship between gallstones and GBC is not clear, larger stones being associated with greater risk. Other risk factors are female sex, obesity, increasing age, typhus carrier, porcelain gallbladder and a single, large, sessile (> 10 mm. in size) polyp (1). Patients with GBC are around 15-20 years older than patients with gallstones, suggesting that the intraepithelial evolution takes over 10 years. In the era of laparoscopic cholecistectomy for treatment of benign diseases incidental, gallbladder carcinoma has dramatically increased and allows to detect cancer at early stages with a better prognosis (2-4). In fact the diagnosis of a malignancy on pathological examination after simple cholecistectomy for presumed benign disease is estimated to vary from 0,3 to 2% and often needs additional surgery to obtain radical treatment (5-7). In this single-center study we report our experience with gallbladder carcinoma incidentally diagnosed during or after laparoscopic colecistectomy performed for cholelithiasis.

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Patients and methods

From January 2003 to December 2011 a total of 1193 patients underwent cholecistectomy at General Surgical Unit III of University of Bari. The patients were 458 males and 735 females, mean age was 52 years (range 19-91). In 5 patients the diagnosis was of gallbladder cancer preperatively, in all the remaining 1188 patients the diagnosis was cholelitiasis. A typical laparoscopic cholecistectomy was performed in 1173 patients and in 4 of these the procedure was converted to open for technical reasons; in 20 patients the surgical procedure was laparotomic (including the patients with preoperative diagnosis of gallbladder cancer). In 6 of 1188 patients adenocarcinoma was present in the pathologic specimens (0,5%). Tumor staging was determined according to the 6th edition of the TNM staging system of the UICC (8). Post-operative follow-up was done with clinical examination and determination of CA 19-9 and CEA levels while ultrasounds and computed tomography scans were performed regularly. Follow-up data were obtained for all patients by establishing contact with them.

Results

Of 1188 patients in whom laparoscopic cholecistectomy was attempted adenocarcinoma was diagnosed histopathologically in 6 cases (0,5%). The median age in this group was 73 years (range 66-82) and was significantly higher than the median age in the group of remaining patients ($p < 0.001$) and there were 4 males and 2 females. All patients with adenocarcinoma incidentally diagnosed presented with symptoms of acute cholecystitis and there was no suspicion of malignancy to any of them. Intraoperatively, gallbladder wall appeared abnormal in one patients and frozen section analysis revealed adenocarcinoma. In the remaining 5 cases routine histopathological studies revealed the diagnosis of gallbladder carcinoma. Pathological staging was carried out according to the UICC/TNM 6th edition (8). One patient had T1 tumor, two had T2 and three had T3 tumor (Table 1). Of T3 tumor patients only two underwent further surgery to perform liver-bed excision and regional lynphadenectomy; the remaining patients denied any further treatment. Only the T1 patient underwent follow-up. The follow-up time ranged from 3 to 48 months, there were no operative deaths, 3 patients were lost to follow-up after 6 months. The 2 patients underwent second look died 3 and 8 months after surgery; the T1 patient was alive at 48 months. Port site metastases were not present in any of our patients.

Discussion and conclusions

Gallbladder carcinoma is a highly malignant tumor with a poor prognosis; the incidence of incidentally diagnosed gallbladder cancer has increased with the increasingly widespread acceptance of laparoscopic cholecystectomy (9-11). In the present study the rate of incidental gallbladder carcinoma was 0,5%, according to the published English language literature (12,13). The risk factors widely related to the gallbladder cancer are advanced age and gallstones disease, since all patients were admitted with diagnosis of acute cholecystitis. The majority of our patients were diagnosed postoperatively with pathological examination. In fact in our study only in one case the appearance of abnormal gallbladder wall was confirmed by the frozen section analysis, since a long history of gallstones usually results in a thickened gallbladder wall that does not appear strikingly different than that of gallbladder carcinoma. The therapeutic approach to gallbladder cancer was applied according to the stage of tumor, but in our study this was possible only in two patients with T2 and T3 tumor since high risk and important comorbidities were the main causes for the refusal of 3 patient out of 5. Only the T1 patient underwent simple cholecistectomy without any additional surgery with a long survival (13,14). No port sites metastasis were observed in our series. Similar to other reports in this sin-

TABLE 1 - PATIENTS CHARACTERISTICS AND FOLLOW-UP.

Case	Age	Sex	Preoperative diagnosis	Grading	Stage	Second look	Outcome
1	66	F	Acute cholecystitis	SD	T3	LBres + LND	† 3 m
2	67	F	Acute cholecystitis	SD	T2	denied	lost
3	69	M	Acute cholecystitis	SD	T2	high risk	lost
4	80	M	Acute cholecystitis	MD	T1	-	alive at 48 m
5	82	M	Acute cholecystitis	SD	T3	denied	lost
6	79	M	Acute cholecystitis	MD	T3	LBres + LND	† 8 m

F: female. M: male. SD: poorly differentiated adenocarcinoma. MD: moderately differentiated adenocarcinoma. LBres: liver bed excision. LND: lymph node dissection.

gle-center study the diagnosis of incidental gallbladder carcinoma was found to be of 0,5%, thus the diagnosis of gallbladder stones is an indication to the cholecystectomy, since the gallbladder cancer runs a short course with a poor prognosis and the use of a meticulous laparoscopic technique is important either for the diagnosis at an early stage of the tumor or the avoidance of complications of the disease.

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