

Squamous cell carcinoma of the gallbladder: an unusual presentation

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Citation

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Abstract

Squamous cell carcinoma (SCC) of the gallbladder is a rare and aggressive affection and is responsible for up to 2% of the malignant neoplasms of this organ. While SCC commonly presents as abdominal lump and/or jaundice, some cases with unusual presentations have been reported in literature. Squamous cell carcinoma of the gall bladder may present rarely as empyema or acute cholecystitis. We report here a rather unusual presentation of a case of a squamous cell carcinoma of the gallbladder in a 60-year-old male presenting as pyoperitoneum.

INTRODUCTION

While adenocarcinoma of gallbladder is the common histologic type of gallbladder cancer (80%) (1), Squamous cell carcinoma of the gallbladder is a rare, constituting only 2% of all gallbladder cancers. Thought to arise either from preexisting squamous epithelium or squamous differentiation of adenocarcinoma cells, these tumors have a more aggressive course than adenocarcinoma. We treated a 60-year-old man presenting with pyoperitoneum with gaseous distension of bowel loops due to ileus. Intraoperatively, a growth was found in the gall bladder which was infiltrating nearby tissues and a bile leak was present.

CASE REPORT

A sixty-year-old man presented with complaints of generalized pain in the abdomen for the last month. The pain was associated with low-grade fever, breathlessness and constipation. On examination, there was generalized moderate distension of the abdomen with mild generalized tenderness in the abdomen. Bowel sounds were sluggish. No signs of peritonitis were present.

Routine haematological and biochemical examinations were normal except for a low hemoglobin percentage.

Ultrasonography of the abdomen showed a mild peritoneal collection with dense internal echoes with right-sided pleural effusion. Bowel loops were distended giving a poor sonological window. X-ray of the abdomen in erect posture showed multiple air-fluid levels in small bowel as well in

colon. On USG-guided aspiration of peritoneal fluid, frank pus was aspirated.

Figure 1

Figure 1

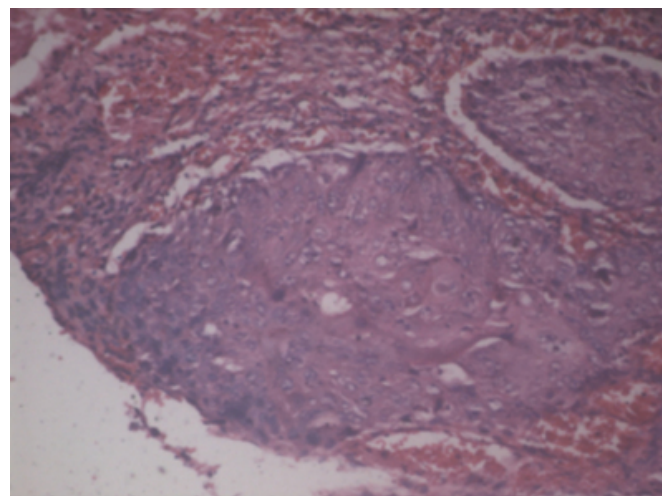
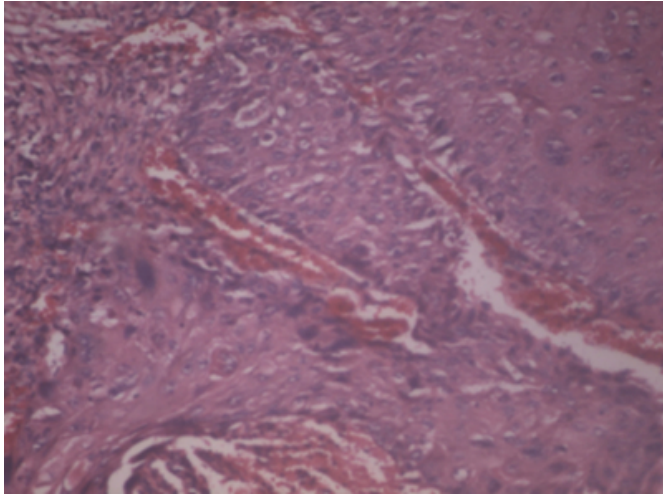


Figure 2

Figure 2



Figures 1 and 2: Histopathology of the specimen showing a malignant epithelial neoplasm disposed in solid nests, sheets along with haemorrhage and necrosis. Individual cells are round to oval to polygonal having high nuclear-cytoplasmic ratio, inconspicuous nucleoli and a moderate amount of eosinophilic cytoplasm.

The clinical signs and symptoms in conjunction with the investigative findings suggested the diagnosis of pyoperitoneum with ileus.

The patient underwent an exploratory laparotomy through a midline incision. A pus collection was seen in the peritoneal cavity with septate collections present in the subhepatic area. A mass was seen arising from the gallbladder fossa and infiltrating into the liver bed, along the hepatoduodenal ligament and into the hepatic flexure; however, the lumen of the colon was not compromised. The gall bladder could not be delineated and was completely replaced by the growth. The mass was fixed to the surrounding tissues. Two white-colored stones were noticed protruding through the mass. After removal of these gallbladder stones, bile was found trickling from the mass. The growth had caused gallbladder perforation leading to bile leak into the peritoneal cavity and causing pyoperitoneum. Pus was cleared from the abdominal cavity and the cystic duct was cannulated through the site of the leak and drained externally. Tissue sampling was done for biopsy.

Histopathology of the specimen showed a malignant epithelial neoplasm disposed in solid nests, sheets along with haemorrhage and necrosis. Individual cells are round to oval to polygonal having high nuclear-cytoplasmic ratio,

inconspicuous nucleoli and a moderate amount of eosinophilic cytoplasm. These findings were suggestive of well-differentiated squamous cell carcinoma.

DISCUSSION

Primary squamous cell carcinoma is well recognized as a separate entity of gallbladder cancer in the World Health Organization classification of the tumor of the gallbladder and extrahepatic bile ducts (1).

Mixed adenosquamous carcinoma is another entity where both squamous and glandular elements exist in the same tumor, and is reported more frequently than the pure primary squamous cell carcinoma variety (3). Both varieties constitute about 5% of all the carcinomas of gallbladder (4).

Secondary squamous cell carcinoma, whether directly invading the gallbladder from neighboring structures or carried from distant organs, is relatively more common than the primary tumor arising from the bladder (5).

It characteristically presents invasive growth, a low tendency towards lymph node metastases and a high incidence of local infiltration and hepatic metastases, presenting a worse prognosis than adenocarcinoma of the gallbladder (5,6).

Its rapid growth, early metastatic dissemination and diffuse local and regional infiltration characterize the biological behavior of the lesion. Such tumors tend to grow laterally along the fossa of the gallbladder, forming large infiltrative masses and invading the liver and adjacent organs (stomach, duodenum and transverse colon) by direct expansion (5,6) as described in our case. Despite this local and regional infiltration, they usually do not present metastases in lymph nodes, and seeding in the peritoneum is rare (7). Nevertheless, hepatic metastases are more frequently found in SCC than in adenocarcinoma of the gallbladder (5,6,7).

Most studies accept that the squamous cells originate from pre-existing metaplastic squamous epithelium; some others believe that SCC of the gallbladder originates from squamous differentiation of the adenocarcinoma cells, via expression of mixed phenotypes within a single tumor (5,6,7). Characteristically, the duplication time for SCC is half that of adenocarcinoma, such that the growth of SCC cells may overtake and substitute that of adenocarcinoma (5,6).

Disease is suspected when the lesion reaches a large size and is locally advanced. The surgical options available depend mainly on the degree of local and regional involvement and

consist of cholecystectomy with resection of a wedge of adjacent liver tissue or direct liver resection allied with regional lymphadenectomy and skeletization of the hepatic hilum (6,8).

Resection of the organs involved as part of the radical operation is justified in cases of localized lesions, without metastases or peritoneal dissemination. Hepato-pancreatic duodenectomy was introduced as a radical treatment option for SCC of the gallbladder because of the type of dissemination seen in squamous cell carcinomas (8). However, its long-term benefits have not yet been satisfactorily documented.

Adjuvant postoperative radiotherapy and chemotherapy may be used, although their results are inconsistent and only palliative (5,6).

The extent of the tumor at the time of diagnosis is the most important parameter in determining survival (6,7). The majority of the patients die around six months after diagnosis when radical surgery is not performed (5,8). Early diagnosis is the most important parameter for improving the

survival indices among patients with SCC of the gallbladder.

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