

CASE REPORT

Squamous Cell Carcinoma of the Distal Common Bile Duct

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ABSTRACT

Context Squamous cell carcinoma of the biliary tree is rare. Although few cases of squamous cell carcinoma of the intrahepatic bile-duct and gallbladder have been reported, until today, only four cases of squamous cell carcinoma of the extrahepatic bile duct have been reported in the literature.

Case report We present a case of squamous cell carcinoma of the distal common bile duct presenting with obstructive jaundice in a 60-year-old male which was successfully managed by a Whipple's pancreaticoduodenectomy.

Conclusion Squamous cell carcinoma of the distal bile duct without lymph node metastasis can be managed by pancreaticoduodenectomy alone.

INTRODUCTION

Squamous cell carcinomas of the biliary tract are rare tumors [1, 2]. Most cases have been associated with hepatolithiasis, recurrent pyogenic cholangitis, clonorchiasis, etc. which are known to cause squamous metaplasia of the biliary epithelium. In most of the reports published, the tumor involved the intrahepatic bile ducts [1, 3, 4], gallbladder [1, 5] or the ampulla [6, 7]. Until today, only four cases of squamous cell

carcinoma of the extrahepatic biliary tree have been reported [1, 2]. Due to the rare nature of the diagnosis, little information is available regarding the optimal management of these tumors. We report a case of a *de novo* squamous cell carcinoma of the distal bile duct in a 60-year-old male who was successfully managed by a Whipple's pancreaticoduodenectomy.

CASE REPORT

A 60-year-old male who had had recurrent episodes of cholangitis and obstructive jaundice for one year. During the first episode he was evaluated with an ultrasonogram which showed a dilated bile duct as far as the ampulla without any mass lesion in the pancreas. A side view endoscopy revealed a normal papilla. He underwent endoscopic retrograde cholangiopancreatography (ERCP) and stenting with a 7 Fr plastic stent. The ERCP showed a smooth stricture of the distal bile duct with a normal pancreatic duct. Brush cytology obtained from the distal bile duct did not reveal any abnormal cells. During the next six months, the patient remained asymptomatic and did not report for further evaluation or stent removal/change. Six months later, he again presented at our center with cholangitis and jaundice. He again underwent ERCP and change of the blocked biliary stent. ERCP was showed a short segment smooth stricture of the distal common bile duct. Brush cytology was again

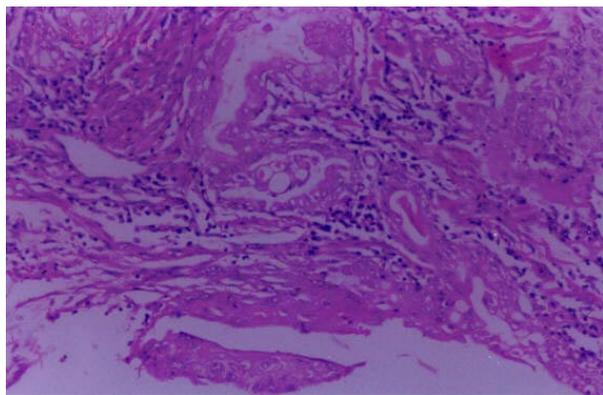


Figure 1. Bile duct epithelium with squamous metaplasia and dysplasia suggestive of squamous cell carcinoma.

negative for malignancy. The patient was advised to undergo further evaluation with magnetic resonance cholangiopancreatography (MRCP) in order to identify the cause of the biliary stricture; however, this could not be done as the patient was lost to follow-up. Three months later, he again presented with a recurrence of cholangitis and jaundice associated with marked weight loss and anorexia. Another side view endoscopy showed a bulky ulcerated ampulla with a blocked biliary stent. The blocked stent was removed and a nasobiliary tube was inserted; a biopsy was taken from the ampulla. The biopsy showed a well-differentiated squamous cell carcinoma originating from the distal common bile duct. A computerized tomographic scan of the abdomen was done which suggested a thickening of the distal bile duct wall with a dilated bile duct and main pancreatic duct. The liver was normal and there was no sign of ascites or peri-pancreatic lymphadenopathy. The patient was managed with antibiotics and a nasobiliary drain for 2 weeks in order to control the cholangitis, improve renal and liver functions and correct coagulopathy. Two weeks later, he underwent Whipple's pancreaticoduodenectomy. At surgery, a mass 2-cm in diameter was found in the distal bile duct. The liver was normal and there was no sign of ascites or lymphadenopathy. The postoperative course was uneventful and the patient was discharged on the tenth post-operative day.

Histopathological examination of the specimen suggested a 2 cm squamous cell carcinoma involving the distal common bile duct (Figures 1 and 2). The proximal and middle parts of the common bile duct were free. There was no lymphovascular invasion and none of the thirteen lymph nodes removed had metastasis (pT2N0M0, AJCC 1997 [8]).

DISCUSSION

Adenocarcinoma is the most common malignancy of the biliary tract. Other histological variants such as adenosquamous carcinoma [9, 10], undifferentiated tumors [11], neuro-endocrine tumors [12], signet-ring-cell carcinoma [13], carcinosarcoma [14], metastatic tumors [15, 16], and squamous cell carcinoma have also been described. The incidence of squamous cell carcinoma of the biliary tract is very low with most cases involving the gallbladder and intrahepatic biliary radicals. Our case is probably the fifth reported case of primary squamous cell carcinoma of the extrahepatic bile duct.

Not much is known about the etiology of this tumor. Most reported cases of squamous cell carcinoma of the biliary tree have been associated with ascariasis [17], liver fluke infestation [18], intrahepatic lithiasis [18], Caroli's disease, choledochal cyst, choledocholithiasis [18] and primary

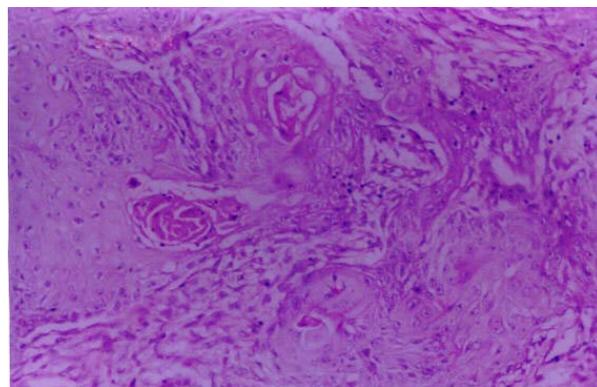


Figure 2. Invasive established squamous cell carcinoma of the common bile duct wall with keratin pearl.

sclerosing cholangitis [18]. It is possible that chronic inflammation leads to squamous metaplasia which subsequently undergoes malignant transformation. In our case, none of the known predisposing factors were present. An experimental study in murine model has shown that adenocarcinoma may sometimes transform into adenosquamous and ultimately to squamous cell carcinoma [19]. In such squamous cell carcinomas, the surrounding area usually shows an area of adenosquamous change. Intra-hepatic squamous cell carcinomas have a poor prognosis as these tumors usually present in an advanced stage. However, in our case, because of the biliary obstruction and surgical obstructive jaundice, the tumor was detected while it was confined to the bile duct. The role of chemotherapy or radiotherapy in these types of cancer is not known. Hence, surgical resection if possible, is the treatment of choice for these tumors.

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Keywords Bile Duct Neoplasms; Carcinoma, Squamous Cell; Cholangiocarcinoma; Jaundice, Obstructive

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