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Case Report

Squamous cell carcinoma of gallbladder: a rare entity

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ABSTRACT

Adenocarcinoma is the most common variant of gallbladder carcinoma. Adenosquamous carcinoma and pure squamous cell carcinoma are rare variants accounting for only up to 3% of the tumors. Pure squamous cell carcinoma of the gallbladder is reported and its incidence is less than 1%. Usually they present at advanced stage and many of the times these are unresectable. Hence survival in patients with squamous cell carcinoma is less than adenocarcinoma, and carries a bad prognosis. We report a rare case of squamous cell carcinoma gallbladder, which was well differentiated, diagnosed early and resected completely. Postoperatively patient is planned for adjuvant chemotherapy.

Keywords: Squamous cell carcinoma, Gallbladder malignancy, Extended cholecystectomy

INTRODUCTION

Gallbladder cancer (GBC) is the fifth most common gastrointestinal tract malignancy in the United States.[1] Approximately 95% of primary gallbladder cancers are adenocarcinoma. Other includes small cell cancer, squamous cell carcinoma (SCC), lymphoma and sarcoma. Patients with GBC are usually asymptomatic and few may have anorexia, abdominal pain, nausea and vomiting. Computed tomography and ultrasonography help in diagnosis. Surgical intervention offers long-term survival. The efficacy of radiotherapy and chemotherapy is debatable, although it may have some role in palliative management. We present a rare case of squamous cell carcinoma gallbladder with local infiltration to hepatic flexure of transverse colon.

CASE REPORT

A 70 years old male patient presented with complaints of pain in right hypochondrium for one month. There was no history of fever, loss of appetite, loss of weight or jaundice. He was nonalcoholic and had no history of smoking. On examination, firm to hard, tender mass of size 3×3 cm was palpable in right hypochondrium, which was moving with respiration. Contrast enhanced computed tomography (CECT) of abdomen was done which showed gallbladder growth of size 8×8 cm with infiltration of Segment V of liver and proximal transverse colon (Figure 1). Patient underwent positron emission tomography (PET) scan which did not show any other metastasis. Patient underwent diagnostic laparoscopy followed by laparotomy. There was no evidence of peritoneal or hepatic metastases. Hence patient underwent radical cholecystectomy with segment IV and V hepatic resection and segmental resection of colon with removal of periportal, perihepatic, retro duodenal lymph nodes (Figure 2 and 3). We noticed bile leak from the drain on second postoperative day. Hepatobiliary iminodiacetic acid (HIDA) scan was done, revealed linear flow of tracer from the level of confluence of hepatic ducts to a small fluid collection in the right subhepatic region and into the drain tube placed at that site. Endoscopic retrograde cholangiopancreatography

(ERCP) was attempted to stent the common bile duct. Papillary opening could not be identified due to presence of multiple periampullary diverticulae.

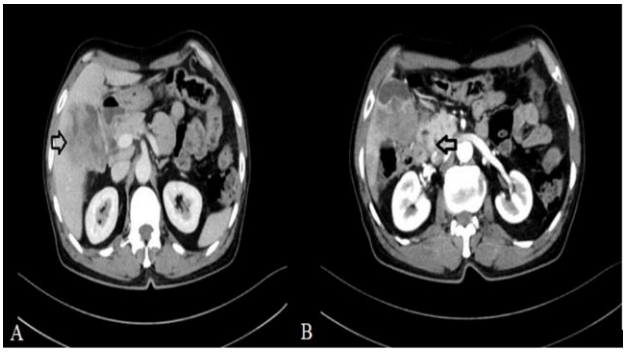

Figure 1: Contrast enhanced CT abdomen showing carcinoma gall bladder infiltrating into (A) liver bed (arrow) and (B) transverse colon (arrow).

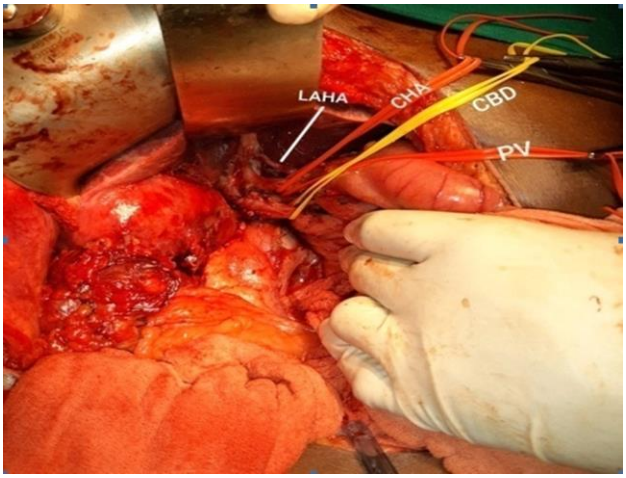

Figure 2: Intra operative image showing vital structures (LAHA: left aberrant hepatic artery, CHA: common hepatic artery, CBD: common bile duct, and PV: portal vein).

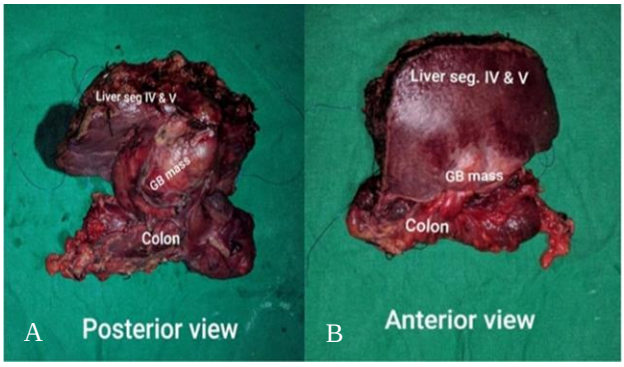

Figure 3: Resected specimen: (A) anterior and (B) posterior views.

Hence patient was managed conservatively. Slowly over a period of 1 week the drain output reduced and patient was discharged. Post-operative biopsy was suggestive of well differentiated squamous cell carcinoma without any lymph node involvement (Figure 4). Patient was followed up postoperatively and was planned for chemotherapy. Patient was being under continuous follow-up for two years without any evidence of recurrence.

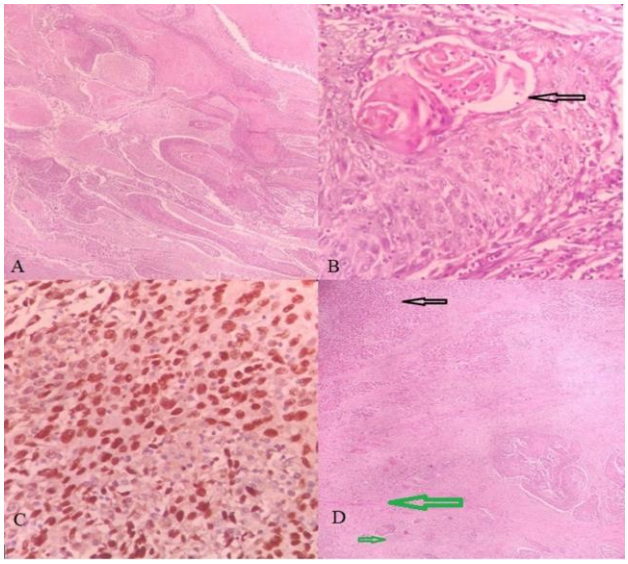

Figure 4: Squamous cell arcinoma of gallbladder (A) showing keratin pearls. Haematoxylin and eosin stain, X200. (B) Magnified view of keratin pearls, haematoxylin and eosin stain, X400. (C) Immunohistochemical stanning with p63 and (D) squamous cell carcinoma of gallbladder (black arrow) with adjacent liver (green arrow). Haematoxylin and eosin stain, X200.

DISCUSSION

Gallbladder cancer is rare disease. It is more common in females than males.[2] Incidence of gallbladder cancer in United States is 2/100,000 women and 1/100,000 men.[3] It is more common in lower socioeconomic group. The incidence is greater in South American countries and in Asian countries, especially India and Japan.[4] In India, Delhi has the highest gallbladder cancer incidence rates for women.[5] Age, gender, obesity predisposes to the development of carcinoma gallbladder. Chronic cholecystitis and cholelithiasis are the most important risk factors for the development of gallbladder carcinoma.[2] Anamolous pancreaticobiliary duct junction, typhoid carriers, porcelain gallbladder and cholecystoenteric fistula are other risk factors associated with gallbladder malignancy.[6] In our patient we did not find any significant risk factor for the development of GBC.

Histologically the most common variant is adenocarcinoma 90%. Other rare variants included are adenosquamous carcinoma 4%, squamous cell carcinoma 1.4%, adenosarcoma 1.6%, neuroendocrine tumors 3% and melanoma <1%.[7] The etiology of the SCC subtype of

gallbladder cancer is unknown. Several theories have been proposed. According to one theory adenocarcinoma undergoes squamous metaplasia and squamous cells over grow, eventually replace all of the adenocarcinoma elements and forms pure SCC.[8] There is another theory describes a formation of squamous cell carcinoma from progression of metaplasia dysplasia-carcinoma sequence.[9] In agreement with the latter theory, Roa et al reported that approximately 12% of gallbladder cancer has squamous metaplastic cells evident in adjacent mucosa.[10] Squamous cell carcinoma has high rate of proliferation and local invasion compared to other types hence usually diagnosed at an advanced stage.[11] In our case, the tumor infiltrated the liver and the right colic angle. Charbit et al reported that the growth rate of the squamous component (doubling time 81 days) was twice as fast as the adenocarcinomatous component (doubling time 166 days).[12] The exact mode of spread of these tumors is not clearly known. These tumors spread especially by direct local infiltration with a lesser incidence of metastases to the locoregional lymph nodes or distant organs. However, there are reports of squamous cell carcinoma gallbladder having lymph nodal metastasis.[13,14]

Gall bladder carcinoma is often asymptomatic. However few patients may present with abdominal pain, jaundice, weight loss and anemia. Diagnosis of SCC of gallbladder is mainly incidental in the post cholecystectomy specimen. Tumor markers which may be used are carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (CA19-9). Elevation of these tumor markers in patients with gallbladder carcinoma, are often indicative of poor prognosis.[15] However in our patient none of the markers were increased. Preoperative diagnosis is mainly made by imaging. Ultrasonography (USG) abdomen may show presence of discontinuous mucosa with local infiltration. CECT and magnetic resonance imaging (MRI) abdomen tells about the local extent of the disease.[16] PET scan has been used for better staging and diagnosis of the undetected metastasis.[17] Fine needle aspiration cytology (FNAC) of the gallbladder carcinoma is not indicated.

Surgery is the treatment of choice especially when resection with wide margins is possible.[18] However, the reported resectability rate of these tumors in different series was around 50%. For the locally advanced tumor extensive surgery should be considered.[6,14] Extent of lymphadenectomy is still the matter of debate. Our patient had undergone radical cholecystectomy with segment IV and V hepatic resection with segmental resection of hepatic flexure with end to side colo-colic anastomosis.

Post-operative biopsy was reported. Patient was planned for adjuvant chemotherapy with gemcitabine. However, many studies have shown that adjuvant therapy either chemotherapy or chemoradiotherapy does not have any major role in the management.[19]

CONCLUSION

Squamous cell carcinoma of the gallbladder is a rare variety. This variant has high incidence of rapid growth and involvement of local organs. Well differentiated variety of squamous cell carcinoma has slow growth and may not have distant metastases. Surgical excision is the main line of treatment. Adjuvant chemotherapy or chemoradiotherapy may not have significant benefit with overall poor prognosis.

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