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Case Report

Adenosquamous carcinoma of gallbladder – A rare but aggressive entity

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ABSTRACT

Adenosquamous and squamous cancer of the gallbladder are rare cancers with an incidence of only 5-10 % of total gallbladder malignancies. A 40-year female with complaints of nausea, pain in the abdomen, vomiting for 1 year, and jaundice for 2 years presented to the OPD. CECT revealed a gall bladder fossa mass with choledocolithiasis and dilated common bile duct, hepatosplenomegaly, and mesenteric lymphadenopathy. Histopathological examination showed as adenosquamous cancer of the gall bladder. When compared to adenocarcinoma, squamous cell carcinoma is a highly malignant neoplasm presenting at an advanced stage. Histologically, adenosquamous carcinomas show an admixed malignant glandular and squamous component. The squamous component is reported to grow twice as fast as the adenocarcinoma component. Squamous differentiation of malignancy in the gallbladder is a rare occurrence with poorer prognosis because the tumor tends to be bulky and locally infiltrative at presentation.

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INTRODUCTION

Biliary tract malignancies have been on the increase in recent times, and adenocarcinoma is the most common subtype.[1] Adenosquamous and squamous cancer (ASC) are rare histological types of gallbladder (GB) cancer, with an incidence of only 5-10% of total gallbladder malignancies.[2] Clinical presentation, behavior, and prognosis of these tumors are quite different from conventional adenocarcinomas, suggesting that these rare tumors are more aggressive in comparison to adenocarcinoma and often infiltrate the

adjacent viscera. Patients with ASCs commonly have a large mass replacing the gallbladder fossa. Adenosquamous carcinoma comprises a mixture of glandular and squamous elements and is described as a tumor where the squamous component is between 25 and 99%.[3] Pure squamous carcinoma of the gallbladder is rarer than adenosquamous carcinoma. The overall five-year survival rate is less than 5%, with a median survival of fewer than six months.[4] Because of the lack of specific signs and/or symptoms for GB cancer, the deep anatomical location of the organ, late clinical presentation, and diagnosis, it is often diagnosed in the late stage. [5]

Here, we are presenting a case report of adenosquamous carcinoma of the gallbladder, a rare but very aggressive cancer.

CASE REPORT

A 40-year female with complaints of nausea, pain in the abdomen, vomiting for 1 year, and jaundice for 2 years presented to the OPD. CECT-GB fossa was advised, and it showed a mass in the gallbladder with choledocholithiasis and dilated CBD. (fig. 1b) Hepatosplenomegaly and mesenteric lymphadenopathy were also present. The patient underwent surgery, and the sample was received in the pathology department.

The resected gall bladder with part of the liver and attached hepatic flexure of large intestine was received. The cut section of the gallbladder showed an ulceroproliferative mass measuring 7.5x7 cm involving the body and fundus of the gallbladder. (fig 1a) Seven lymph nodes were also received.

Representative areas from the gallbladder mass showed an infiltrating tumor composed mainly of sheets of malignant squamous cells with extracellular keratinization (fig 2b), with few areas showing atypical columnar cells arranged in small glands with a high nuclear cytoplasmic ratio with irregular nuclear membranes. (fig. 3a) Lymphovascular invasion and perineural invasion were not identified. The section from the attached liver tissue showed changes of chronic hepatitis and fatty change. The attached hepatic flexure of large intestine was histologically unremarkable. Out of 7 lymph nodes retrieved, 2 lymph nodes were positive for tumor deposits. (fig. 3b)

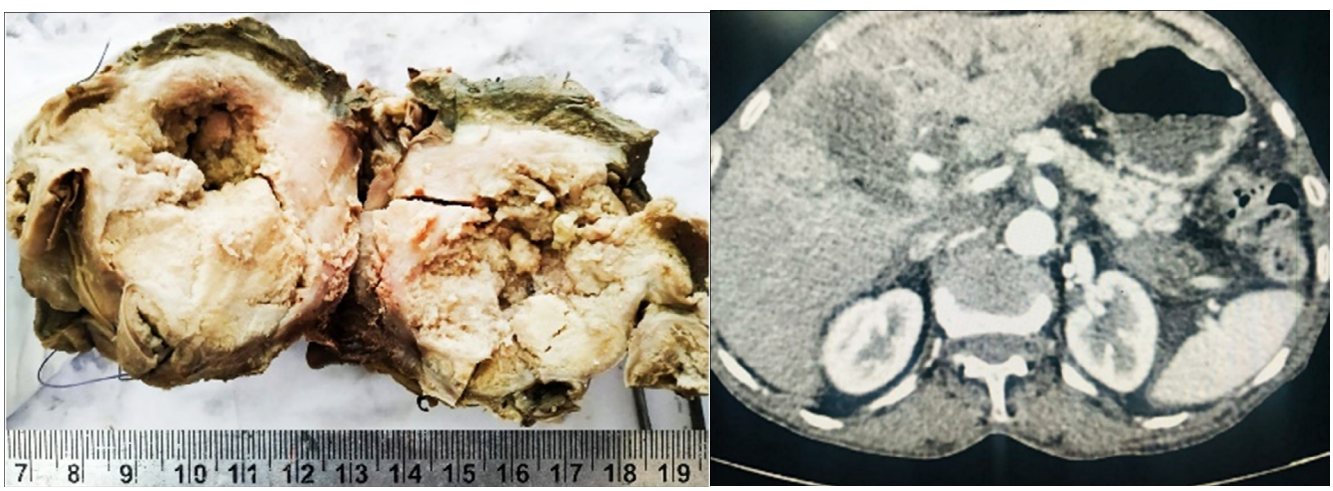

Figure 1: *(a) Gross image showing cut section of gallbaldder with ulceroproliferative growth; (b) CECT of abdomen showing mass in the gallbladder*

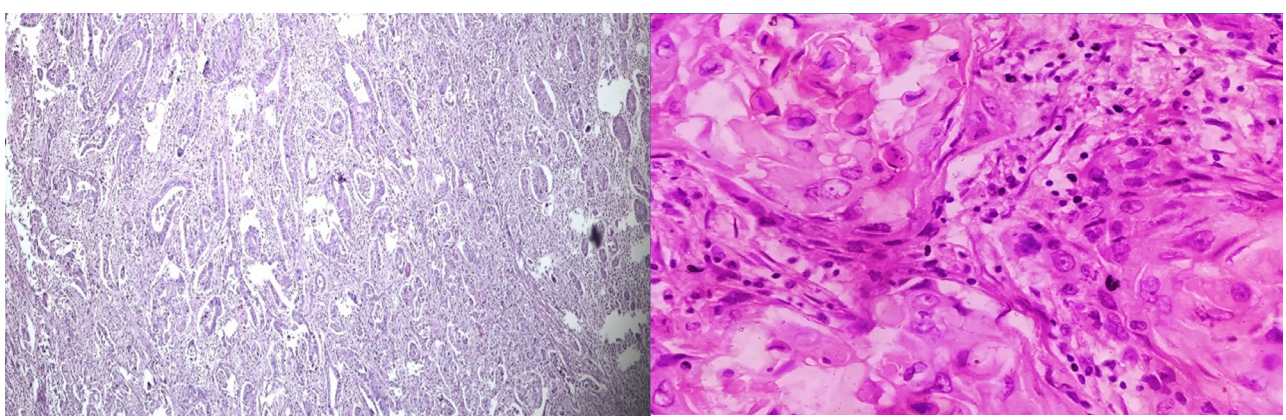

Figure 2: *(a) Infiltrative tumor in gallbladder wall, (H&E stain; 40x); (b) Squamous cells with keratinization (H&E stain, 100x).*

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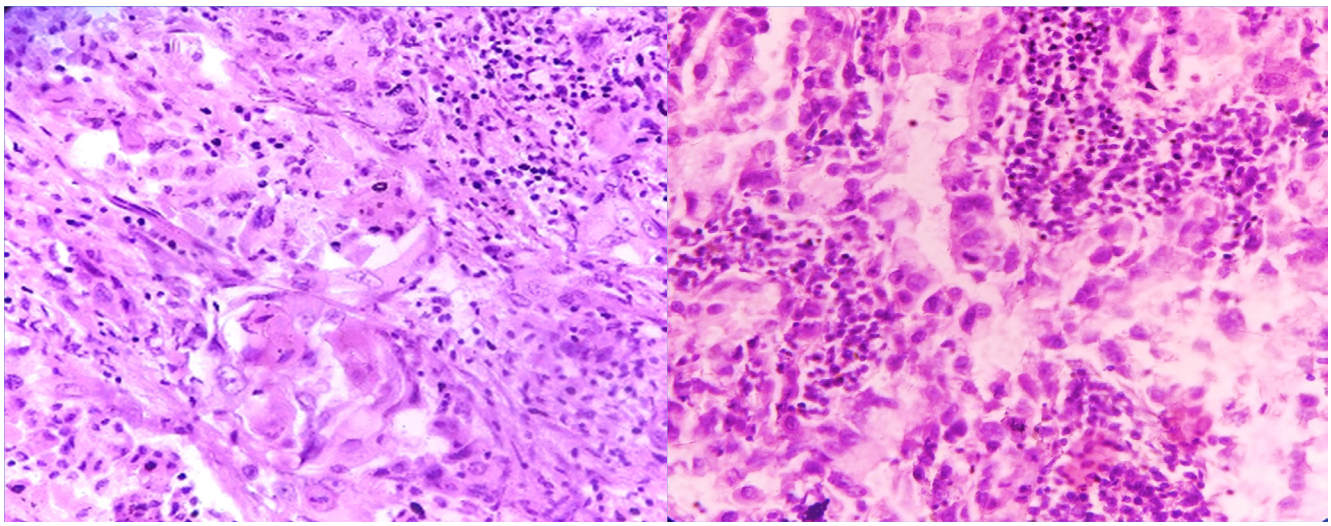

Figure 3: *(a) Adenocarcinoma component, (H&E stain, 100x); (b) Lymph node metastasis, (H&E stain, 100x).*

So, considering morphology, a final diagnosis of gallbladder adenosquamous carcinoma was given. Patient was kept on follow-up, but unfortunately succumbed after 6 months due to local extension of the disease.

DISCUSSION

Adenocarcinoma is the most common type of malignancy of the gallbladder; squamous differentiation in the gallbladder is a rare occurrence. In comparison to adenocarcinoma, SCC presents at an advanced stage in the majority of cases.

GB carcinoma affects all ethnicities and geography, but the incidence is the highest in Northern India, Pakistan, East Asia, Eastern Europe, and South America.[6] The present case report is also from North India.

Histologically, ASCs show an admixed malignant glandular and squamous component. The squamous component is reported to grow twice as fast as the adenocarcinoma component.[7] Squamous component in the present case was around 15- 20 %. This explains the frequency of bulky tumors and adjacent organ involvement in patients with adenosquamous/ squamous-cell carcinoma of the gallbladder. The primary spread of squamous cell carcinoma of the gallbladder is usually by direct extension to neighboring organs such as the liver, stomach, duodenum, pancreas, and colon, with metastasis to lymph nodes or other organs. Some studies suggest that ACS/ SCC also has a higher likelihood of local lymph node involvement at the time of diagnosis.[8] However, others state that adenocarcinoma has more metastatic spread potential compared to squamous.[11] Hence, more studies are required to clarify these claims.

Different treatment strategies are based on patient condition, tumor staging, etc. Early-stage tumors with liver invasion can be treated with liver resection together with cholecystectomy, followed by systemic or regional chemotherapy. Patients treated with radical resection of the tumor were found to have better outcomes compared to resection of the primary tumor.[8] Prognosis depends upon factors such as histologic type, histologic grade, and stage of the tumor. The efficacy of adjuvant radiation therapy (RT) in the treatment of GB carcinoma is not established. After surgical resection, postoperative external beam RT can reduce local recurrence; however, its effect on overall survival has not been proven due to a lack of clinical trials.[9] However, immunotherapy, like in other cancers, can play a role in GB carcinoma; one such case was published with successful treatment with a PDL1 inhibitor.[10]

CONCLUSIONS

Adenosquamous and squamous cell carcinomas of the gallbladder often present with large, bulky tumors with involvement of adjacent organs. Knowledge of these variants by a pathologist and careful sonographic examination may help to decrease the mortality associated with this disease by early detection. The prognosis for patients with adenosquamous/ squamous-cell carcinoma of the gallbladder is poorer compared with the prognosis for patients with adenocarcinoma because the tumor tends to be bulky and locally infiltrative at presentation.

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