Squamous Cell Carcinoma of the Gallbladder

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Background

- Gallbladder cancer is the fifth most common cancer of the gastrointestinal tract and the most common primary cancer of the hepatobiliary tract, comprising 80-90% of primary hepatobiliary malignancies [1, 2]
- Lee et al reported that from 1985 to 2005, the incidence of gallbladder cancer in the United States was 0.9 per 100,000 males and 1.6 per 100,000 females, accounting for 0.16% and 0.39% of all cancers, respectively [3]
- Although treatment options are improving, gallbladder cancer continues to have a poor prognosis, with an overall mean survival of six months after diagnosis, and a 5-year survival of 5% [4]
- The gallbladder's lack of submucosa contributes to the aggressive nature of the disease, with high rates of metastatic invasion [3]
- Laboratory associations include anemia, hyperbilirubinemia, elevations in serum alkaline phosphatase, carcinoembryonic antigen, and/or CA 19-9
- Types of gallbladder cancer include adenocarcinoma, papillary carcinoma, squamous cell carcinoma (SCCGB), neuroendocrine tumors, small cell cancer, lymphoma and sarcoma with adenocarcinoma being the most prevalent histopathologic subtype [5, 6].
- SCCGB is among the rarest of gallbladder malignancies, representing less than 3% of all gallbladder cancers [7,8,9]

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Case 1

- 61-year-old female presented with five days of altered mental status, jaundice, and abdominal pain
- Initial laboratory work showed evidence of biliary obstruction, severe hypercalcemia, and severe leukocytosis
- Computer tomography scan (CT) (figure 1) and magnetic resonance cholangiopancreatography (MRCP) (figure 2) showed an infiltrating mass at the gallbladder neck and hepatic hilum resulting in severe intrahepatic biliary ductal dilation with metastatic adenopathy along with concern for spine and pelvis metastasis
- Endoscopic ultrasound (EUS) with fine needle aspiration (FNA) was positive for invasive poorly differentiated squamous cell carcinoma (figure 3)
- Immunohistochemical stain for cytokeratin 5/6 (CK5/6) was positive which marks squamous cell carcinoma by showing high molecular weight keratin (figure 4)
- The patient expired during the hospital admission

Figure 1.



Figure 2.



Figure 3.

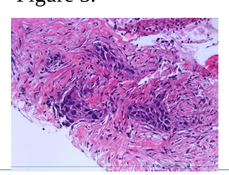
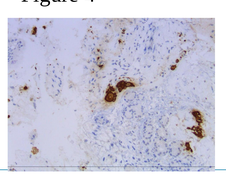
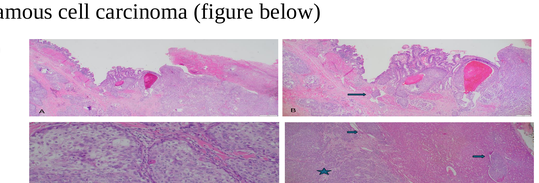


Figure 4



Case 2

- 74-year-old male presented with right upper quadrant abdominal pain for one month
- Liver enzymes and inflammatory markers were within normal limits
- CT scan and gallbladder US showed a significantly distended gallbladder with wall thickening and a focal mass like area present in the body of the gallbladder
- HIDA scan showed non-visualization of the gallbladder worrisome for acute cholecystitis
- The patient underwent laparoscopic cholecystectomy with laparoscopic wedge liver biopsy
- Pathology was significant for moderately differentiated invasive squamous cell carcinoma (figure below)
- The patient elected for hospice care and was lost to further follow up



Presentation

- Displays a 3:1 female predominance
- Often presents after the 5th decade of life
- Most frequently presents as right upper quadrant pain followed by a right hypochondrial mass and jaundice
- Complete surgical resection offers the only chance for cure in gallbladder cancer, although surgical treatment is only an option for 10-30% of cases due to the significant portion of patients who present with unresectable disease at diagnosis

Conclusions

- SCCGB are extremely rare tumors, and the pathogenesis is not well understood. These cancers can closely resemble gallbladder adenocarcinomas but are thought to grow quicker. Although treatment options are improving, SCCGB continues to have a very poor prognosis. More research should be done to gain a better understanding of the disease process and possible curative treatment options.

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