

# Primary Squamous Cell Carcinoma of Gall Bladder: A Case Report

Shamima Ferdousi<sup>1</sup> and Sadia Armin Khan<sup>2</sup>

<sup>1</sup>Department of Pathology, Ibrahim Medical College, Dhaka, Bangladesh

<sup>2</sup>Department of Surgery, Ad-din Women's Medical College, Dhaka, Bangladesh

### Abstract

Squamous cell carcinoma of the gall bladder is rare. It accounts for less than 12.7 % of all cases of gall bladder cancer. Pure squamous cell carcinoma is even less common with a reported incidence of 3.3%. We present a case of 70 years-old man with decreased appetite, vomiting and fever associated with right upper quadrant pain for two months. Ultrasonography of the abdomen revealed a distended gallbladder with multiple calculi along with large hyperechoic area of sludge. Provisional diagnosis was cholelithiasis with empyema of gall bladder. Cholecystectomy was done. Histopathological examination revealed well to moderately differentiated squamous cell carcinoma of the gall bladder without evidence of metastasis.

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### Introduction

Squamous cell carcinoma (SCC) of the gall bladder is rare and accounts for about 12.7% of all cases of gall bladder cancer.<sup>1-4</sup> Pure squamous cell carcinoma is even less common with a reported incidence of 3.3%.<sup>1-4</sup> SCC of the gall bladder usually runs an ill defined clinical course and is frequently detected at an advanced stage because of its tendency to infiltrate the adjacent organs and silent rapid growth pattern.<sup>1,2</sup> Survival of the patients with squamous cell carcinomas/adenosquamous carcinomas has been reported to be significantly worse than that of adenocarcinomas of the gallbladder.<sup>3</sup> We report a single case of squamous cell carcinoma of the gallbladder that was clinically diagnosed as calculus cholecystitis with sludge empyema of gallbladder.

### Case report

A 70-year-old male presented at the outpatient clinic of department of surgery at Ad-din Women's Medical College with complaints of pain in right hypochondrium for 2 months. It was associated with decreased appetite, vomiting and fever. His past medical and family

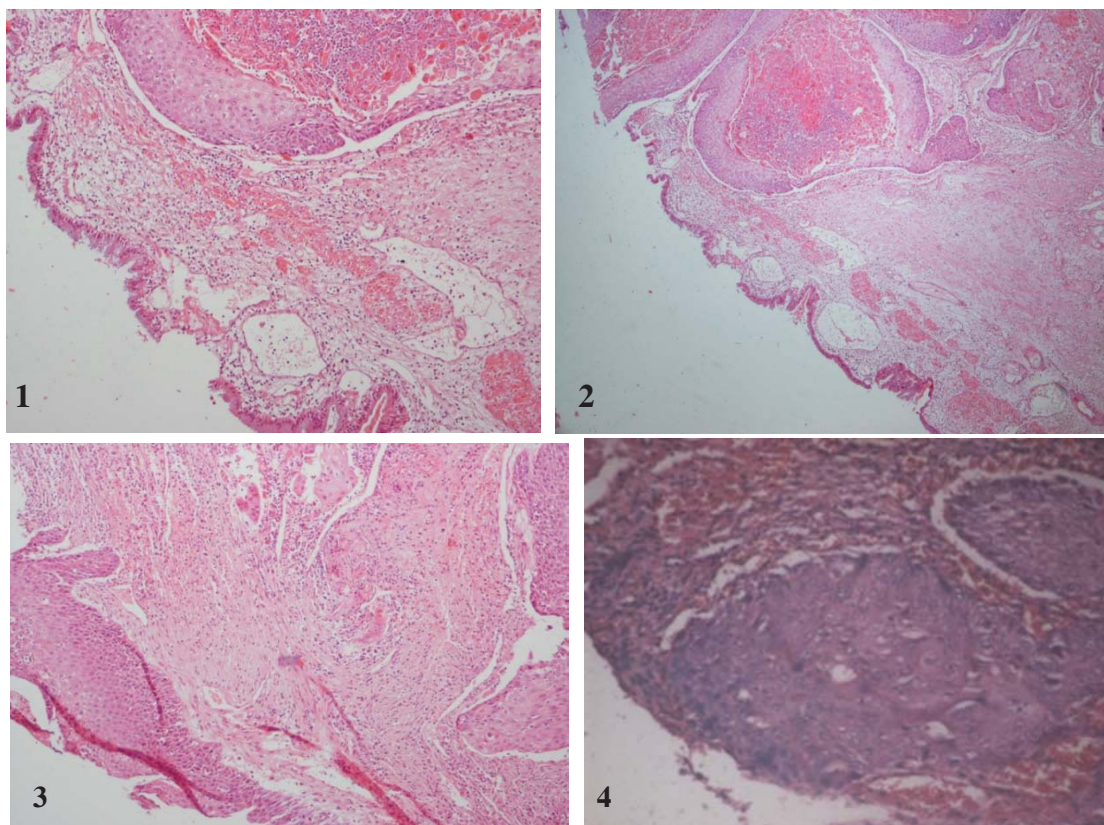
histories were noncontributory. Physical examination revealed presence of icterus and tenderness in right hypochondrium. There was no organomegaly. Pulse rate and blood pressure were normal. Routine blood tests such as total and differential white blood cell count, random sugar, urea nitrogen (BUN) and creatinine were within normal limits. Liver function tests showed elevated serum bilirubin of 7 mg/dl with normal alkaline phosphatase levels.

Ultrasonography (USG) of abdomen revealed a distended gallbladder with the wall thickness of 6 mm and of a large hyperechoic mass measuring 4.5x3 cm within the gallbladder sludge. On this basis, a clinical diagnosis of calculus cholecystitis with sludge empyema of gallbladder was considered and the patient was admitted for surgery. Cholecystectomy was performed which revealed cholelithiasis of gall bladder with a friable mass, possibly carcinoma. No obvious involvement of hepatic flexure, common bile duct and extrahepatic biliary tree was observed.

Postoperatively patient improved clinically and was discharged in good condition.

### Address for Correspondence:

Dr. Shamima Ferdousi, Associate Professor and Head, Department of Pathology, Ibrahim Medical College, 122, Kazi Nazrul Islam Avenue, Shahbag, Dhaka-1000, Bangladesh, e-mail: [shamimaferdousi@yahoo.com](mailto:shamimaferdousi@yahoo.com)



**Fig.1-4:** 1 & 2 Anaplastic squamous cells arranged in sheets and nests with area of extensive keratinization invading through the wall of gall bladder; 3 Tumor cells show individual cell keratinization; 4 Tumor cells showing angiolymphatic invasion.

The gall bladder measured 7x5 cm with wall thickness of 8 mm. Lumen showed friable mass measuring 4x2 cm with multiple yellow colored cholesterol stones. Multiple tissue samples from representative areas were processed by hematoxylin and eosin stain (H&E). Microscopic examination demonstrated well to moderately differentiated large flat squamous cells with keratinized foci and tumor cells exhibiting intercellular bridges [Fig. 1, 2, & 3]. Few mitotic cells and angiolymphatic invasion was present [Fig. 4]. The carcinoma perforated the gallbladder wall and extended up to the serosa. Surrounding gall bladder mucosa showed features of chronic cholecystitis. Histopathologic examination revealed a well to moderately differentiated squamous cell carcinoma of gall bladder confined to the serosa.

#### Discussion

Squamous cell carcinoma of the gall bladder is a rare and aggressive form of gall bladder cancer. It usually

presents as an invasive growth and spreads by local invasion. Patients who develop squamous cell carcinoma of the gall bladder have a poorer long-term prognosis than those with adenocarcinoma of the gall bladder.<sup>1-4</sup> Carcinoma of the gall bladder commonly presents between the 4<sup>th</sup> and 6<sup>th</sup> decades of life,<sup>4</sup> while our patient was 70 years old.

Gallbladder cancers are asymptomatic at early stages. When symptomatic, the presentation is similar to biliary colic or chronic cholecystitis. If signs of biliary colic or chronic cholecystitis are present in an elderly patient in combination with decreased appetite and weight loss, carcinoma of the gall bladder should be considered as a differential diagnosis.<sup>5</sup> Squamous cell cancer is characterized by rapid growth, early metastatic dissemination and diffuse local and regional infiltration. Despite local and regional infiltration, peritoneal seeding is rare. Hepatic metastases are more frequent in squamous cell carcinoma than adenocarcinoma of the gall bladder.<sup>4</sup>

Embryologically the gallbladder originates from the foregut.<sup>6</sup> Therefore, most gallbladder carcinomas are heterogeneous during neoplastic transformation. As a result, pure squamous cell carcinoma of the gall bladder is a rare entity. It can arise from the squamous metaplasia or squamous differentiation of a pre-existing adenocarcinoma or from the basal layer of the epithelium.

Gallbladder stones appear to be a major risk factor in the carcinogenesis of carcinoma of any type but more so for squamous cell carcinoma. Approximately 90% of squamous cell carcinoma cases invariably have cholelithiasis.<sup>7</sup> A previous study of seven patients with squamous cell carcinoma of gall bladder reported cholesterol stones in all the seven cases.<sup>8</sup> Our case also revealed cholesterol stones. Other pathologies that have been associated with increased risk of gall bladder carcinomas include polypoidal lesions, adenomas, calcified porcelain gall bladder, cholecysto-enteric fistulae, ulcerative colitis, adenomyosis, polyposis coli and anomalous connection between CBD and pancreatic duct. Mutations affecting decreased expression of c-erbB2 gene product have also been identified as a contributing factor.<sup>9</sup> Radical resection is the mainstay of treatment for locally invasive squamous cell carcinoma and offers a chance for cure.

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