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Case Report
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Gallbladder Clear Cell Carcinoma: A Case Report

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Abstract

Introduction: Worldwide, the highest incidence rates (up to 7.5 per 100,000 in men and 23 per 100,000 in women) occur among populations in the Western part of South America (Chile and Peru), in North American Indians, in Mexican Americans, and in northern India. The best characterized risk factor for the development of gallbladder cancer is chronic inflammation associated with gallstones. Metastatic clear cell carcinoma in the gallbladder is extremely rare, with reported frequencies of less than 0.6% in large autopsy reviews.

Case Presentation: Fifty four year old female, with no prior medical conditions presented with a 10 days history of upper abdominal pain. Last 4 days ago right abdomen upper quadrant pain, vomiting. Routine hematological leukocytosis and biochemical tests were CRP increased. An abdominal ultrasound revealed the gallbladder is enlargement, about 6.0 cm × 3.0 cm like the mudstone in the gallbladder. GB wall thickening/double. Common bile duct is dilated 1.2 cm. Computerized tomography imaging: Moderate thickening with surrounding mild edematous changes in wall of the gallbladder. Size of the GB is moderated dilated with diffuse sludges. IHBD is no dilated; CBD is mild dilated 1.2 cm and no sign of biliary tract obstruction. An open cholecystectomy, upon pathologic investigation, the morphologic and immunophenotypic features supported a diagnosis of clear cell variant of gallbladder carcinoma.

Discussion: Gallbladder cancer was first described in 1777. Clear cell gallbladder carcinoma was first reported in 192. Clear cell carcinoma represents on average over 90% of all malignancies of the kidney. Approximately 20% to 30% of patients with clear cell carcinoma have metastatic disease at presentation and nearly 50% of patients with advanced disease die within 5 years of diagnosis.

Conclusion: Clear cell carcinoma very rare disease. Our team diagnosed during surgery and histological analysis. As a result of the surgery patient was completely healed and discharged from hospital. After from hospital discharged, we sent to national cancer center.

Keywords: Clear cell carcinoma; Gallstone disease; Open cholecystectomy; Intraoperative cholangiogram; Gallbladder tumor

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Introduction

Incidence of 6500 cases annually in the United States, gallbladder cancer is the fifth most common gastrointestinal tract malignancy in this country. Incidence increases with age and is two to six times higher in women than in men [1,2,3]. Worldwide, the highest incidence rates (up to 7.5 per 100,000 in men and 23 per 100,000 in women) occur among populations in the Western part of South America (Chile and Peru), in North American Indians, in Mexican Americans, and in northern India [4,5]. The best characterized risk factor for the development of gallbladder cancer is chronic inflammation associated with gallstones [6,7]. Although only 0.5% to 3% of patients with cholelithiasis will develop gallbladder cancer, gallstones are present in 70% to 90% of patients diagnosed with gallbladder cancer [8,9]. However, the 20 year risk of developing cancer for patients with gallstones is less than 0.5 percent for the overall population and 1.5 percent for high risk groups. Polypoid lesions of the gallbladder are associated with increased risk of cancer, particularly in polyps larger than 10 mm [4,10,11]. The calcified "porcelain" gallbladder is associated with more than a 20 percent incidence of gallbladder carcinoma [1,3-5,8]. When diagnosed, about 25 percent of gallbladder cancers are localized to the gallbladder wall, 35 percent have regional nodal involvement and/or extension into adjacent liver, and approximately 40 percent have distant metastasis. Metastatic tumors to the gallbladder are uncommon. The most common metastatic tumors to the gallbladder are metastatic melanomas and metastatic carcinomas from stomach, pancreas, ovary, bile ducts, colon and breast [1]. Metastatic clear cell carcinoma in the gallbladder is extremely rare, with reported frequencies of less than 0.6% in large autopsy reviews [5,6]. Clear

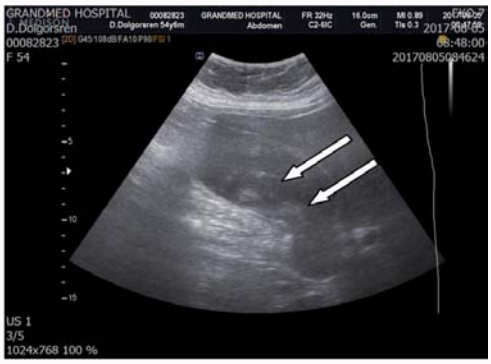

Figure 1: Abdominal ultrasound.

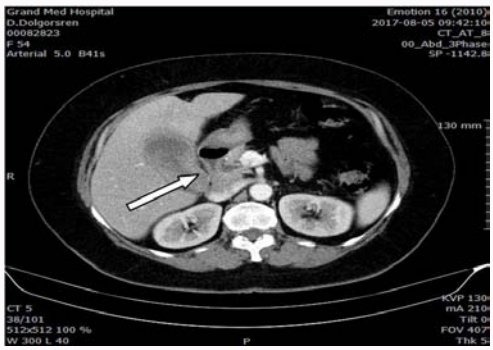

Figure 2: Contrast CT abdomen/frontal.

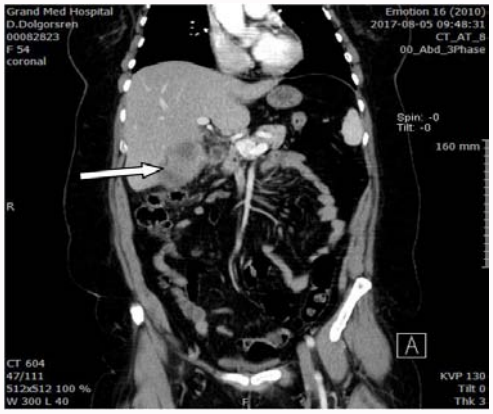

Figure 3: Contrast CT abdomen/coronal.

cell carcinoma is a rare tumor accounting for 3% of all malignancies in adults and 85% of primary renal tumors. The most frequent sites of metastasis are lung (55%), regional lymph nodes (34%), liver (33%), bones (32%), adrenal (19%), contralateral kidney (11%) and CNS (6%) [3,11,12].

Case Presentation

Patient was a 54 year old female. Patient was right upper abdominal pain and epigastric middle pain. Nausea and vomiting, pain was started 10 days ago, after ate dumplings. No history of previous any gastrointestinal disease. The physical examination: Tenderness in right hypochondrium. Lump in the hypochondrium. Murphy's sign was positive.

The patient's in blood test increased white blood cell and C-reactive protein (Table 1). No cancer tumor markers were performed at the time.

Radiology examination

Abdominal ultrasound examination: Gallbladder is enlargement, about 6.0 cm × 3.0 cm like the mudstone in the gallbladder. GB wall thickening/double, common bile duct is dilated 1.2 cm (Figure 1).

Abdominal contrast CT examination: Moderate thickening with surrounding mild edematous changes in wall of the gallbladder. Size of the GB is moderated dilated with diffuse sludges. IHBD is no dilated CBD is dilated 1.2 cm and no sign of biliary obstruction and normal parenchymal contour and thickness of both kidneys. No renal masse (Figures 2-4).

Treatment

We were emergency surgery of under general anesthesia open cholecystectomy and intraoperative cholangiogram. During surgery gallbladder was distended and gallbladder wall very thickness, hardness (Figures 5-7). In cholangiogram common bile duct no obstructive sign (Figure 8 and 9).

Histology examination: Undifferentiated carcinoma on the background of chronic cholecystitis. Done consultation from Campus medicus Europa.

Campus medicus Europa: This is rare case of a clear cell carcinoma in the gallbladder with a high mitotic activity. A metastatic renal cell carcinoma has to be ruled out (Figure 10).

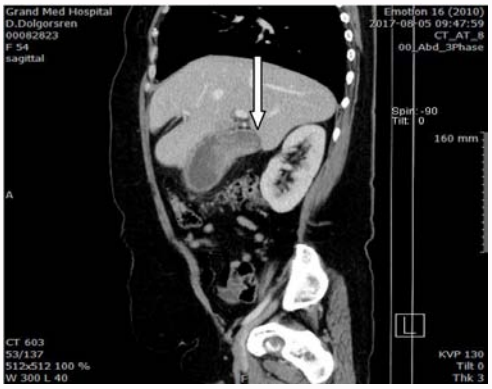

Figure 4: Contrast CT abdomen: Gallbladder wall thickness.

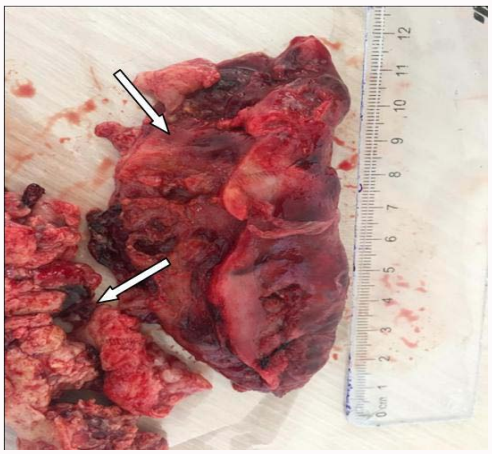

Figure 5: Gallbladder carcinoma with stone.

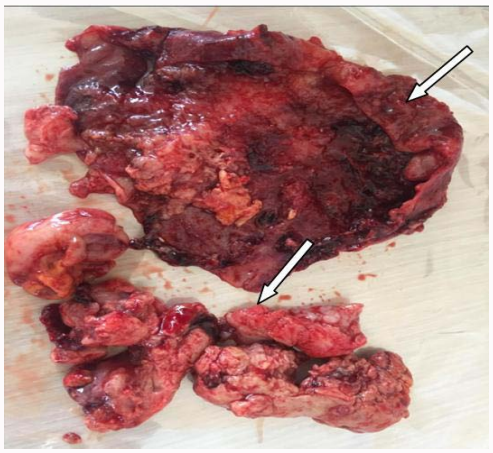

Figure 6: Gallbladder carcinoma.

Figure 7: Gallbladder carcinoma.

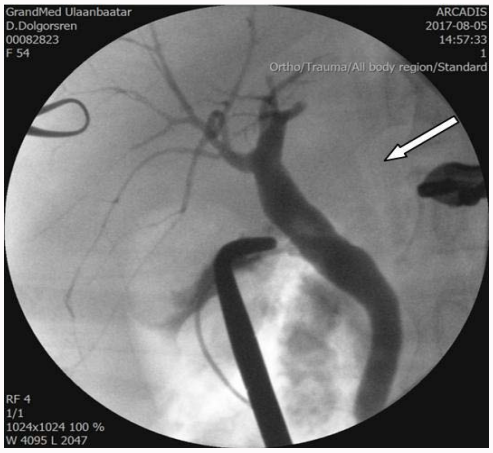

Figure 8: Intraoperative cholangiogram/by contrast.

Discussion

Gallbladder cancer was first described in 1777 [3,5,6,11]. Clear cell gallbladder carcinoma was first reported in 1926 [1,3,6]. Clear cell carcinoma represents on average over 90% of all malignancies of the kidney [5,6,8]. Approximately 20% to 30% of patients with clear cell carcinoma have metastatic disease at presentation and nearly 50% of patients with advanced disease die within 5 years of diagnosis [1,12].

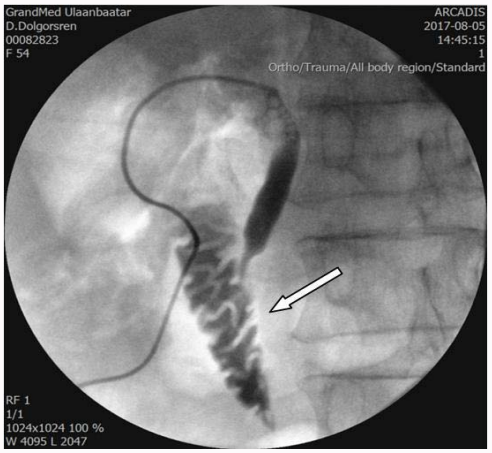

Figure 9: Intraoperative cholangiogram/by contrast.

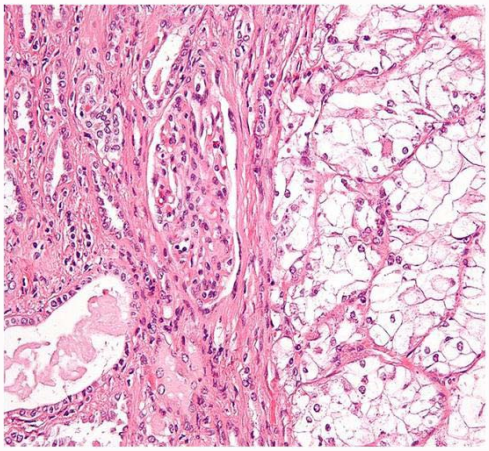

Figure 10: Clear cell carcinoma in the gallbladder with a high mitotic activity.

The risk factors for gallbladder cancer are the presence of a stone larger than 2 cm in diameter inside the gallbladder, polyps larger than 1 cm in diameter inside the gallbladder, choledochal cysts, typhoid and opisthorchis disease, primary sclerosing cholangitis, porcelain gallbladder, and excessive consumption of red meat and tobacco [5,6]. High risk factors include of gallbladder cancer associated with 80% to 90% in cholelithiasis [8,3]. Laboratory tests of tumor markers, such as CA19-9 and CEA, usually were positive [1,8,10-13]. Surgical treatment of gallbladder cancer varies by case. Stage of the disease, tumor localization and whether it was the first identified tumor or recurred tumor are important factors that will decide surgical method [1,4,11]. While in some appropriate patients, cholecystectomy is sufficient, some cases may require major operations such as hepatectomy, resection of the bile duct and pancreaticoduodenectomy [5,12,13]. In stage I (T1, N0) gallbladder cancer cases have reported a 100% 5-year survival with only cholecystectomy [4,13]. Prior to establishing that clear cell carcinoma is a primary gallbladder cancer, it is appropriate to clinically investigate possible secondary focuses, in particular the kidneys in terms of metastasis [1,3]. Global incidence of RCC continues to grow steadily with the increase in incidentally discovered lesions during imaging studies [8,12]. Up to 50% to 60% of RCCs may be incidentally found in asymptomatic patients at abdominal imaging studies performed for other indications [4,5]. Recent advances in the understanding of the genetic basis of RCC have provided unique insights into the underlying histologic and biological diversity of renal

cancer [2,4,5,7]. Renal cell carcinoma is considered a byproduct of genetic events that may involve gain of function of proto oncogenes, loss of function of cancer suppressor genes, or both [1,6,11]. Different histologic subtypes of renal cell carcinoma have characteristic clinical, genetic, and biological profiles [12,13]. Clear cell carcinoma is the approximately 70% to 75% of all renal cell carcinomas [10-13]. Acute cholecystitis as a clinical presentation is associated with poor prognosis [12]. The five-year survival rate following cholecystectomy for RCC is 35% to 50%. According to Chung et al. 63% of patients with one gallbladder metastasis have a two year survival, while in the case of multiple metastases this rate decreases to 23% following cholecystectomy [9-12].

Conclusion

Clear cell carcinoma very rare disease, our team diagnosed during surgery and histological analysis. As a result of the surgery patient was completely healed and discharged from hospital. After from hospital discharged, we sent to national cancer center.

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