Elevated CA 19-9 Levels in a Jaundiced Patient with Mirizzi Syndrome Suggesting Biliary Tract Carcinoma

Department of Surgery, College of Medicine, Hanyang University, Seoul, Korea

Jae Bong Ahn, Kyeong Geun Lee, Hwon Kyum Park, Kwang Soo Lee

Carbohydrate Antigen (CA) 19-9 is a gastrointestinal cancer-related antigen which shows a high positivity in pancreato-biliary malignancies. However, high levels of serum CA 19-9 is occasionally found in benign disease of the liver, pancreas and biliary tract, especially in cases with gall stone disease in which the high rate of its elevation has been reported in acute stage. We report a case of gall stone patient causing Mirizzi syndrome whose initial level of CA 19-9 was more than 1,000 U/ml, which highly suggested biliary tract carcinoma. A 71-year-old man was admitted with the chief complaint of mild epigastric discomfort and jaundice for about 2 weeks. He was diagnosed as asymptomatic gallbladder stone 5 years ago. The laboratory data were as follow: white blood cell count of 3,500/ul, alkaline phosphatase: 304 U/l, total bilirubin: 14.7 mg/dl, direct bilirubin: 8.7 mg/dl, AST/ALT: 48/62 U/l, CA 19-9: >1,000 U/ml. Initial abdominal CT scan showed collapsed gallbladder with wall enhancement and 1.5 cm sized mid bile duct stone with marked dilatation of both intrahepatic and common bile duct. At the same day ERCP was done: huge bile duct stone with acute cholangitis and distal bile duct stricture which could not been ruled out as bile duct carcinoma. The ENBD tube was inserted for decompression of acute cholangitis. The next MRCP study showed chronic cholecystitis with distal cystic duct stone causing Mirizzi syndrome. At laparotomy, the patient was found to have severe inflammation in the area surrounding the collapsed gallbladder and bile duct. Upon opening the dilated common bile duct cholangioscopy was done and a stone was noted and removed, And a polypoid mass was found above the cystic duct level. Segmental resection of bile duct including the mass was done and the frozen section of the mass and both surgical margin were no malignant tumor. Final pathological diagnosis was xanthogranulomatous inflammation of bile duct with fibroepithelial polyp and chronic cholecystitis with focal xanthogranulomatous inflammation. In jaundiced patients with biliary obstruction, a diagnosis of malignancy cannot be made solely on the basis of increased concentration of CA 19-9, even when there is a high clinical suspicion and when imaging studies point to a possible malignant pathological process.