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UNUSUAL CAUSE OF BILIARY OBSTRUCTION IN AN ASYMPTOMATIC PATIENT

Radio-Diagnosis

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ABSTRACT

Benign tumors arising from the extra hepatic biliary tree are very rare, and are reported to occupy 6% of all tumors of the bile ducts. In benign tumors, adenoma and papilloma are the most common ones. Adenomas of the extra hepatic biliary tree usually present clinically with features of obstructive jaundice or chronic right upper quadrant pain. Herein, we report a case of a 77-year-old woman with right lower limb weakness secondary to left subdural hemorrhage being diagnosed incidentally with extra and intrahepatic biliary obstruction secondary to distal common bile duct lesion on radiological examination. It was initially misinterpreted as a common bile duct calculus. This diagnosis was of utmost importance because of the malignant potential of these benign tumors. Our study sheds light on the common pitfall in radiological diagnosis in such case between calculus and mass lesion and how to avoid it.

KEYWORDS

Common bile duct mass lesion, benign tumor of common bile duct, extra hepatic biliary duct dilatation, villous adenomatous polyp.

INTRODUCTION

Benign tumors of the biliary tree can be bifurcated into epithelial and non-epithelial tumors. The World Health Organization (WHO) classification of benign epithelial tumours of the extrahepatic bile ducts includes tubular, papillary and tubulopapillary adenomas, biliary cystadenoma and papillomatosis (adenomatosis). Adenomas makes two-thirds of all benign biliary tumors.

Villous adenoma are benign tumours with malignant potential which can affect any site in gastrointestinal tract. They usually involve the rectum and anal canal, less frequently the small bowel and very rarely the biliary system. As described by Loh Kah Poh et al., extrahepatic bile duct adenoma are aggressive benign tumours and should be diagnosed and treated as soon as possible.

CASE REPORT

A 77-year-old woman was admitted with history of headache and right lower limb weakness secondary to left subdural hemorrhage. She had past history of intermittent abdominal pain since 6 months. No history of yellowish discoloration of sclera, itching or vomiting. No history of bowel or bladder disturbance, bleeding per vaginum, significant weight loss/ loss of appetite. Per abdominal examination was normal.

The patient's complete blood count (CBC) panel showed anemia and Liver function test (LFT) were normal (Table 1).

Table – 1 Blood Counts, Lft

Parameter	Result
Hemoglobin	9.9 (normal 13-18 g/dl)
PCV	30.4 (normal 40.0- 54.0 %)
Platelet	361 x 10^3 /cumm (normal 150- 400)
WBC	7.98 x 10^3 /cumm (normal 4-11)
Hemoglobin	9.9 (normal 13-18 g/dl)
PCV	30.4 (normal 40.0- 54.0 %)
Total bilirubin	0.3 (normal <1 mg/dL),
direct bilirubin	0.1 (normal <0.2 mg/dL)
alkaline phosphatase	75 U/L (normal 40–129)
ALT	75.7 U/L (≤40)
AST	31.0 U/L (normal ≤35)
Serum GGT	31.8 U/L (normal 9–40)

Routine Ultrasound abdomen (Fig. 1) showed over distended gall bladder with sludge, dilated extra and intra hepatic biliary radicles in both lobes of liver. Common bile duct measured 11 mm in maximum diameter. A well-defined echogenic, non- mobile lesion without distal acoustic shadowing or vascularity was noted in terminal common bile duct. Ampullary region was not visualized due to bowel gas.

Based on these findings possibility of adherent sludge ball and soft tissue lesion were given as differentials.

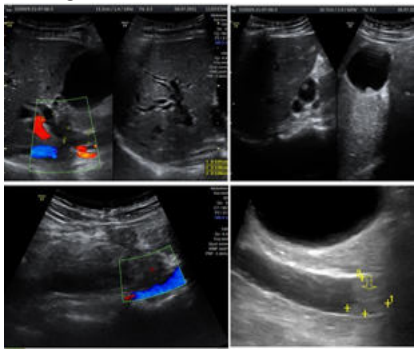

Figure 1: Ultrasound Images

MRI and Magnetic resonance cholangiopancreatography images (Fig. 2) showed an oval shaped T2 hypointense focus (25.0 x 11.0mm) in terminal common bile duct projecting into ampullary region and adjacent duodenal lumen. No evidence of extension of lesion into adjacent ductal wall / periampullary or peripancreatic regions. Dilatation of extra and intrahepatic biliary radicals in both lobes of the liver.

Computed tomography showed iso to mildly hyperdense lesion in distal common bile duct /ampulla. Based on these findings common bile duct calculus and soft tissue lesion were given as differentials and contrast study was advised. However, the referring physician went ahead with ERCP.

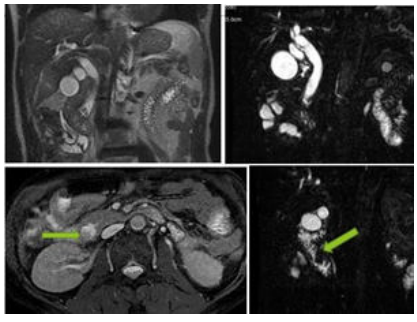

Figure 2: Mri Images (axial/coronal T2 Wt And Reformatted Mrcp)

ERCP (Fig. 3) showed a bulky and mobile proliferative ampullary lesion arising from the distal common bile duct and projecting into duodenum. Biopsy was taken and sphincterotomy with common bile duct sludge clearance was done.

HPE showed that the polypoid fragments were composed of villous structures. No evidence of dysplasia or invasion of stroma by the lining cells- Benign. It was diagnosed to be Villous Adenomatous Polyp.

Figure 3: Ercp Images

DISCUSSION

Adenomas of the extrahepatic biliary tree usually present clinically with features of obstructive jaundice [2], recurrent cholangitis, or chronic right upper quadrant pain. However, this patient was diagnosed incidentally on radiological examination.

Differentiating a benign villous adenoma from a sludge ball or a malignant tumor is complex. They all have similar clinical presentations. MRCP is more useful than USG in demonstrating the character and exact location of the lesion [3] as in this case. MR imaging with contrast has good sensitivity for depiction of vascular and bile duct invasion [4].

Although rate of benign conversion to malignancy is rare in an adenoma, however sometimes progression to biliary malignancy with metastases or local invasion is possible [5]. The risk of invasive carcinoma increases with tumor size and number of lesions [4].

In adenomas, there is a relationship between the degree of histological dysplasia and the tissue content of CA 19.9. Relationships also exists between macroscopic findings and tissue tumor markers in adenomas [6]. Serum CA 19.9 was sent which came out to be borderline - 43 (Normal <37) U/ml and was not significant in this case.

CONCLUSIONS

Adenoma of the extra hepatic bile duct is a rare entity and it should be borne in mind as a differential for all patients with intra and extra hepatic biliary duct dilatation, especially when the patient is asymptomatic. By multimodal imaging (USG/CT)and with the aid of MRCP, a working diagnosis may be reached. Subsequently, biopsy or brush cytology maybe required before the surgery. MRCP is more sensitive than USG in demonstrating the nature of lesion especially in ampullary location.

In such cases, the protocol should include thin and thick-section MR cholangiopancreatography, as well as diffusion-weighted and multiphase contrast-enhanced imaging to differentiate between calculus, sludge ball, adenoma and malignancy.

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