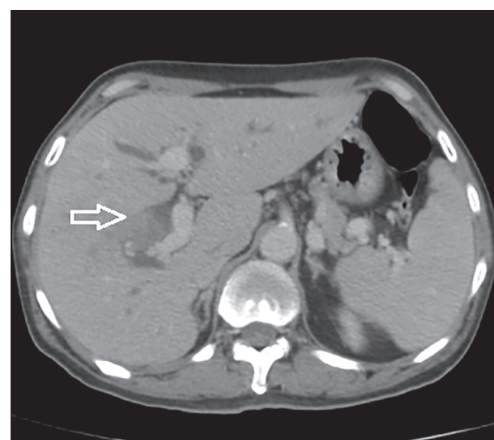


# Unusual cause of obstructive jaundice revealed by endoscopic ultrasound guided fine-needle aspiration of mediastinal lymph node

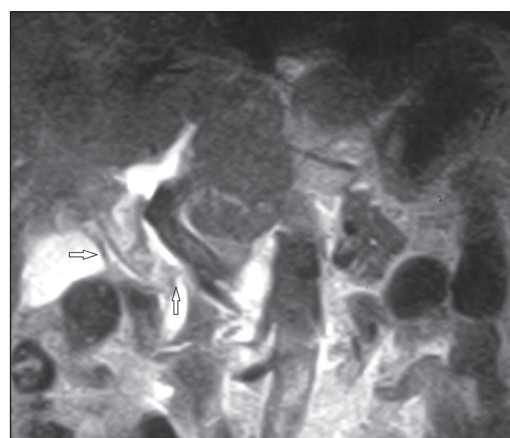
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A 65-year-old male presented to us with jaundice of 2-month duration. His liver function tests were suggestive of cholestatic jaundice with serum bilirubin of 28 mg/dL. Ultrasound of the abdomen revealed dilated intrahepatic biliary radicles with a suspicion of intra-ductal mass lesion at the hilum. Contrast-enhanced computed tomography (CT) and magnetic resonance cholangiopancreatography of the abdomen showed a soft tissue lesion in the common bile duct (CBD) extending into the right ductal system as well as distal bile duct with bilobar biliary radical dilatation [Figures 1 and 2 respectively]. Positron emission tomography CT detected a non-fluorodeoxyglucose (non-FDG) avid mass in the bile duct along with a moderately FDG avid (SUV<sub>max</sub>: 5.2, measuring 1.0 cm × 1.5 cm) portocaval lymph node [Figure 3] and moderately FDG avid (SUV<sub>max</sub>: 4.7) left upper mediastinal lymph nodes [Figure 4]. Endoscopic ultrasound (EUS) demonstrated the presence of a heterogeneously echotextured mass lesion completely filling the CBD [Figure 5] with extension into the right ductal system along with enlarged left upper mediastinal lymph nodes. EUS guided fine-needle aspiration (FNA)



**Figure 1.** Contrast-enhanced computed tomography: Soft tissue mass lesion at the confluence of the bile ducts extending into the right ductal system (arrow)



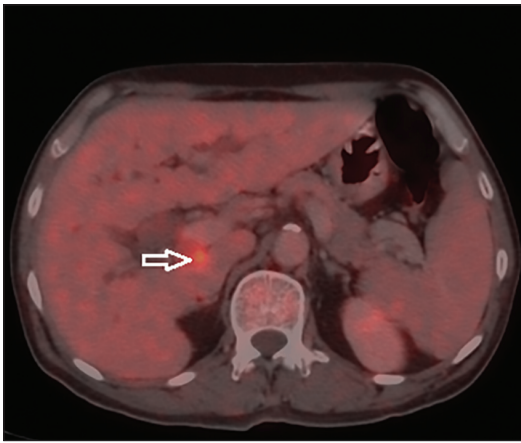
**Figure 2.** Magnetic resonance cholangiopancreatography: Intra-ductal mass in the common bile duct extending up to confluence (arrows)

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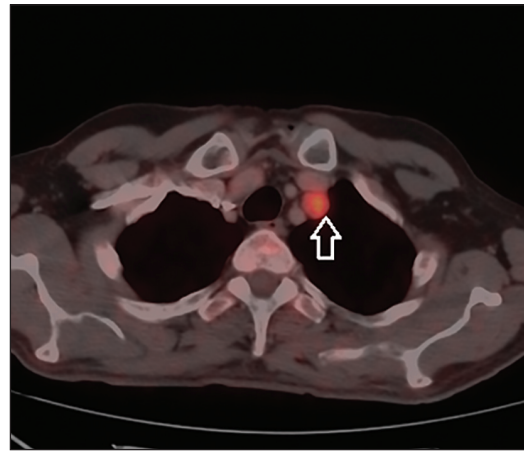
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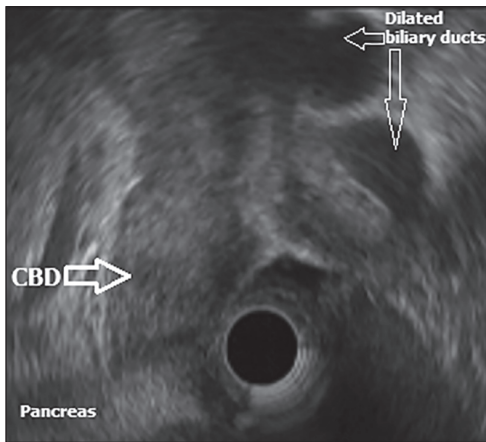
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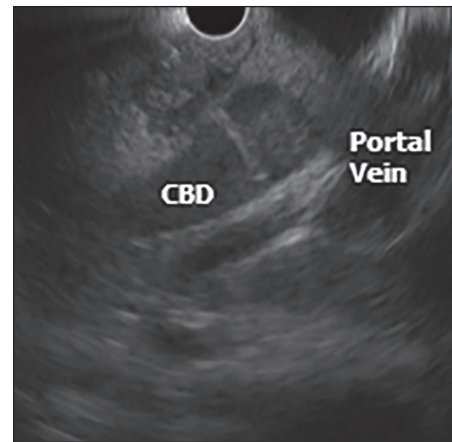
**Figure 3.** Positron emission tomography scan: Moderately flourodeoxyglucose avid ( $SUV_{max}$ : 5.2, measuring 1.0 cm × 1.5 cm, arrow) portocaval lymph node (arrow)



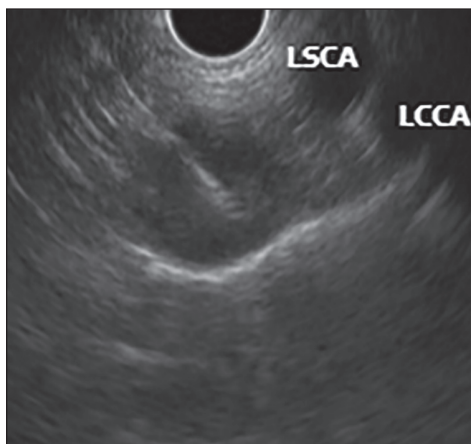
**Figure 4.** Positron emission tomography scan: Moderate flourodeoxyglucose uptake ( $SUV_{max}$ : 4.7, measuring ~1.3 cm × 1.3 cm, arrow) in highest mediastinal lymph node on the left side (arrow)



**Figure 5.** Endoscopic ultrasound: Heterogeneously echotextured mass lesion completely filling the common bile duct



**Figure 6.** Endoscopic ultrasound guided fine-needle aspiration from the bile duct lesion. CBD: Common bile duct

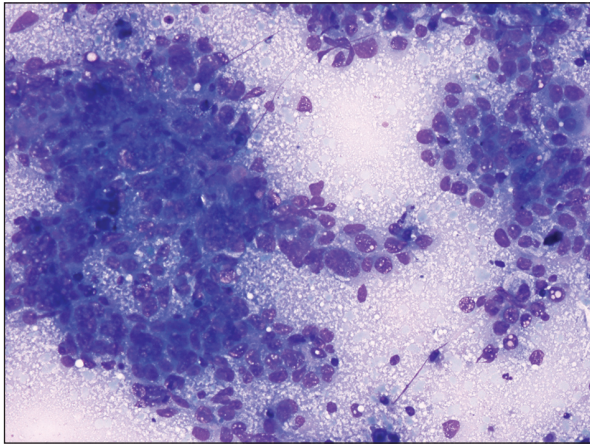


**Figure 7.** Endoscopic ultrasound fine-needle aspiration from the left upper mediastinal lymph node. LSCA: Left subclavian artery; LCCA: Left common carotid artery

was done using a 22-gauge needle (Echotip, Wilson-Cook, Winston-Salem, NC, USA) from the mass lesion in the bile duct [Figure 6] as well as the left upper

mediastinal lymph node [station 2 L; Figure 7] and three passes were taken from the bile duct lesion and two passes from the lymph node respectively. The cytological examination of the FNA specimen from the bile duct was noncontributory, whereas the FNA smears from the mediastinal lymph node showed polygonal tumor cells with hepatocytic differentiation with cytoplasmic and nuclear holes/vacuolation suggestive of metastatic hepatocellular carcinoma (HCC) [Figure 8]. The serum  $\alpha$ -foeto protein was markedly elevated (12,560 ng/mL). The patient was started on sorafenib and his serum bilirubin has decreased to 5 mg/dL after 1 month of therapy.

Obstructive jaundice as the presenting manifestation of HCC is very rare. The bile ducts can be obstructed by tumor thrombi, hemobilia, tumor compression, or tumor infiltration.<sup>[1,2]</sup> However, an icteric type of obstructive HCC with nondetectable primary lesion in the liver, as in



**Figure 8.** Fine-needle aspiration cytology smears from mediastinal lymph node showing polygonal tumor cells with hepatocytic differentiation with cytoplasmic and nuclear holes/vacuolation (MGG  $\times$  40)

the current case, has been rarely reported.<sup>[3]</sup> Furthermore, EUS-FNA is easier for lymph nodes located close to the esophagus like subcarinal, paraesophageal and lower left

paratracheal. The case is also reported because EUS-FNA was done from station 2 L for which EUS-FNA is relatively difficult due to interference by presence of air in trachea and the bronchi as well as the echoendoscope being close to upper esophageal inlet.

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