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Case Report

Endoscopic ultrasound-guided fine-needle aspiration of an aortocaval lymph node by the transcaval approach

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Abstract

A 59-year-old male was diagnosed as carcinoma gallbladder around 1 year back and underwent radical cholecystectomy. He also received four cycles of chemotherapy. Now, he complained upper abdominal heaviness; positron emission tomography-computed tomography (PET-CT) was done which showed PET-avid 8.5 mm sized lymph node at aortocaval region. There was no safe route, so endoscopic ultrasound (EUS)-guided fine-needle aspiration (FNA) was advised. However, FNA was not possible without crossing inferior vena cava and further management depended on FNA report. The EUS-FNA was done, and cytopathological smears were consistent with metastatic adenocarcinoma. There was no complication.

Key words

Carcinoma gallbladder, chemotherapy, inferior vena cava, transvenous fine-needle aspiration

Introduction

A 59-year-old male was diagnosed as carcinoma gallbladder in October 2014. He underwent radical cholecystectomy; histopathology was suggestive of moderately differentiated adenocarcinoma. The patient received four cycles of chemotherapy. He complained upper abdominal heaviness in December 2015. A positron emission tomography-computed tomography (PET-CT) was done which showed PET-avid 8.5 mm sized lymph node at aortocaval region. Interventional radiology opinion was taken for fine-needle aspiration (FNA), and no safe route was found. The patient was referred for endoscopic ultrasound (EUS)-guided FNA, and it was found that FNA was not possible without crossing inferior vena cava (IVC) [Figure 1]. The same and risk of bleed was discussed with the patient and oncology team, and it was decided to take FNA as further management depended on FNA report. The EUS-FNA was done with

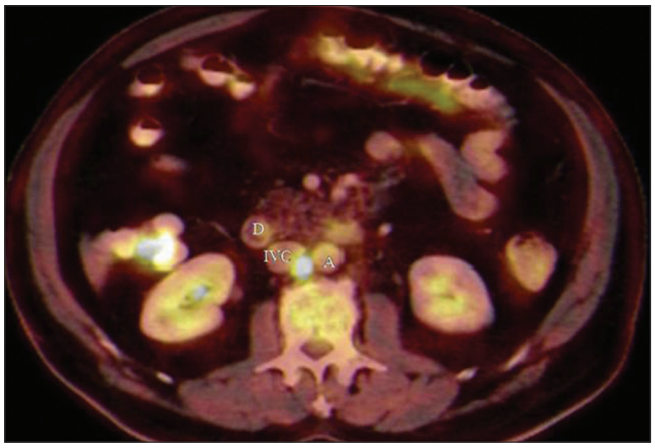

Figure 1: Positron emission tomography-computed tomography image showing intensely fluorodeoxyglucose-avid lymph node in between (posterior to) inferior vena cava (labeled IVC) and aorta (labeled as A), duodenum is labeled as D

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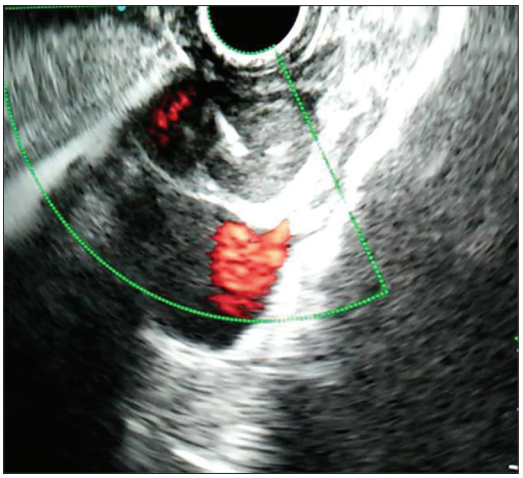

Figure 2: Endoscopic ultrasound image showing needle in lymph node, transversing inferior vena cava

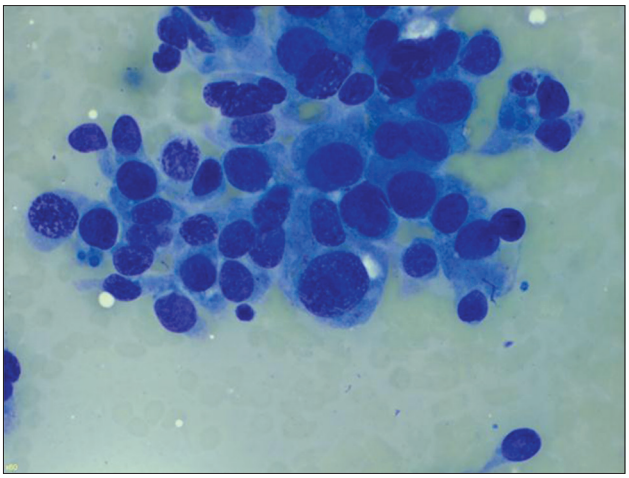

Figure 3: Cytopathological smear (Giemsa stain, ×60 times magnification) showing malignant cells with high NC ratio

25-gauge needle (Wilson-Cook Medical) without fanning using GF-UCT 140 linear echoendoscope (EUS scope, Olympus, Tokyo, Japan); a single pass was made [Figure 2]. The lymph node was heteroechoic with predominant hypoechoic, round, well-defined border, and size of 8 mm. There was no perilesional hematoma/bleed, and the patient remained asymptomatic. The cytopathological smears were consistent with metastatic adenocarcinoma [Figure 3].

While transaortic EUS-guided FNA has been reported,[1] transvenous FNA has not been reported. Veins have thin walls (unlike arteries), and there is risk of bleed. However, CT-guided transvenous biopsies have been reported. Sofocleous *et al*.[2] published their experience of 58 biopsies in pancreatic or peripancreatic masses crossing IVC ($n = 54$)/renal vein ($n = 4$) or both ($n = 3$). The authors found CT evidence of perilesional blood in eight patients including three patients where renal artery was punctured. All patients remained asymptomatic.[2] Gupta *et al*.[3] reviewed CT-guided fine-needle aspiration biopsy using posterior transcaval route in 29 patients and reported minor complications in four patients (small retroperitoneal hematomas in three and abdominal pain occurred in one). We suggest that when FNA is necessary and it is not possible to get tissue diagnosis by other means, trans-IVC FNA can be attempted.

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Conflicts of interest
There are no conflicts of interest.

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