Decisive Role of Nuclear Imaging in a Rare Pancreatic Incidentaloma

Abstract

Pancreatic incidentalomas are increasingly recognized entities that occur as a fallout of widespread availability of high definition imaging technology. These lesions offer diagnostic dilemmas to both clinicians and radiologists alike. Nevertheless, it is the advancement in diagnostic radiology that comes to the rescue in the management of these not-so-uncommon lesions.

Keywords: *Cholecystitis, magnetic resonance, magnetic resonance cholangiopancreatography, pancreatic incidentalomas*

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A 33-year-old male presented with severe upper abdominal pain for the past 6 months with on/off nausea and vomiting. Magnetic resonance (MR) cholangiopancreatography showed stones in the cystic duct and neck of gallbladder with features suggestive of chronic cholecystitis. Incidentally, a small well-defined T2-weighted hyperintense lesion of size 1.6 cm × 1.5 cm was seen at the tail of pancreas, and the lesion showed restricted diffusion. An interesting finding was noted by our clinicians, that the intrapancreatic lesion was strikingly similar in intensity to spleen in all the phases of MR imaging (MRI) [Figure 1]. Following this, we performed a nuclear imaging study with technetium-labeled sulfur colloid. Static planar images and hybrid single-photon emission computed tomography images of the abdomen were acquired which showed physiological tracer uptake in the liver and spleen. A focus of sulfur colloid uptake was also noted in the tail of pancreas which corresponded to the previously described lesion noted on MRI [Figure 2]. These findings confirmed the diagnosis of intrapancreatic location of accessory spleen. The patient underwent an uneventful laparoscopic cholecystectomy during which laparoscopic mobilization of the tail of pancreas was done [Figure 3]. The lesion was appearing similar to spleen necessitating no further intervention for the pancreatic incidentaloma.

Intrapancreatic splenunculus is rarely symptomatic and does not require any treatment. Its diagnosis is difficult if unsuspected.[1,2] Embryologically, it arises

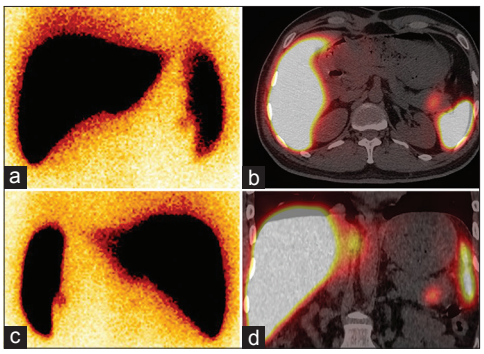

Figure 1: Static anterior (a) and posterior (c) images of the abdomen acquired 20 min after intravenous administration of 4 mCi of Tc99m Sulfur colloid showing physiological tracer uptake in the liver and spleen and a tiny focus of extra-splenic tracer uptake. On hybrid single-photon emission computed tomography imaging (Transaxial [b] and Coronal [d]), the focal uptake is localized to a lesion in the tail of pancreas which correlated with the SOL noted on MRI. This confirmed that it was heterotopic intrapancreatic splenic tissue

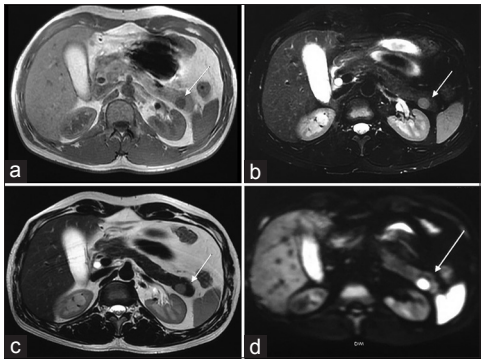

Figure 2: Magnetic resonance imaging showing (a) Axial T1-weighted, (b) T2-weighted, (c) T2-weighted FS, and (d) axial diffusion-weighted imaging, a well-defined homogeneous lesion (white arrow) in tail of pancreas isointense to spleen in all the sequences including diffusion-weighted images suggesting the possibility of intrapancreatic splenunculus

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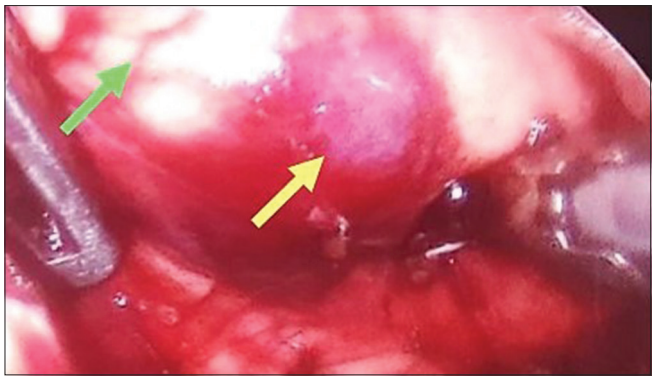

Figure 3: Accessory Spleen (yellow arrow) within the tail of pancreas (green arrow) during laparoscopic exploration

from the failure of fusion of splenic anlage located in the dorsal mesogastrium during the 5th week of fetal life.[3] Diligent attention to subtle radiological clues and an understanding of embryological/anatomical concepts will help in timely diagnosis. This ultimately serves to avoid unnecessary surgeries thereby avoiding major complications. Furthermore, we would like to state that, even though the definite investigation for identification of ectopic splenic tissue is heat denatured red blood cell (RBC) scintigraphy,[4] sulfur colloid scintigraphy appears to be a reasonable, and practical alternative as infrastructure for heat denaturation of RBC is not widely available in all nuclear medicine departments.[5,6]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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