Detection Of Accessory Splenic Tissue On Liver/Spleen Colloid Scan – Another Marvel Of SPECT-CT

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Abstract

Accessory splenic tissue is common after surgical intervention relating to spleen. However, it can occur by birth and in cases of idiopathic thrombocytopenic purpura (ITP). In ITP, accessory spleen can recur after splenectomy. Imaging modalities like CT and ultrasound serve as convenient tools for diagnosis of hepatic and splenic pathologies; however, their role is limited. Hybrid nuclear imaging can solve the mystery as it gives anatomical and targetted functional information. 99mTc labelled liver/spleen colloid scan has vast applications from detecting focal nodular hyperplasia to splenic remnants. We describe the case of a patient where colloid scan localized of suspected accessory splenic tissue after repeated surgery.

Keywords: Liver/-Spleen Colloid, Splenectomy, SPECT/CT, Pneumothorax

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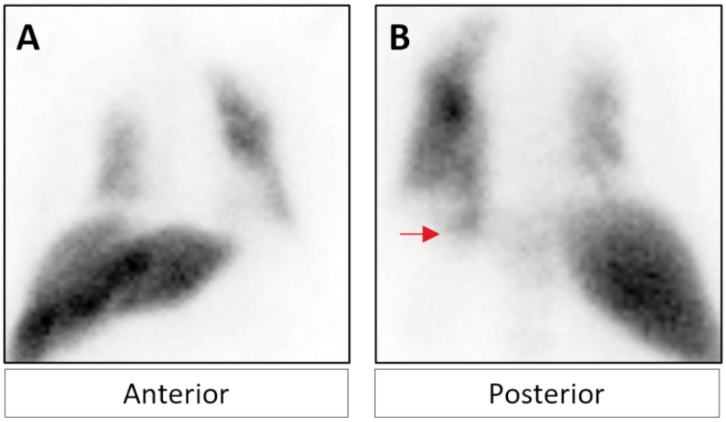

Figure-1: Normal physiological tracer activity is appreciated in liver parenchyma. A focus of slightly increased tracer uptake noted inferiorly under left hemi diaphragm (red arrows) on posterior views (B). Incidental finding of increased tracer uptake in bilateral lung parenchyma. Right lung appears smaller than the left one.

A 52-year-old woman with known idiopathic thrombocytopenic purpura (ITP) underwent splenectomy. Subsequently a redo surgery was performed for residual splenic tissue seen on CT. However, symptoms persisted even after second surgery. Liver/spleen scan was acquired prior to third surgery to localize splenic tissue in the splenectomy bed or elsewhere in the body.

ITP is an autoimmune disease with increased antibody mediated destruction of platelets. Various treatment options include steroids, gammaglobulins and rituximab. Splenectomy has a crucial role in management of ITP and is usually performed after 12 months of diagnosis.[1] Residual/accessory splenic tissue is not an unusual finding after any surgical intervention.[2]

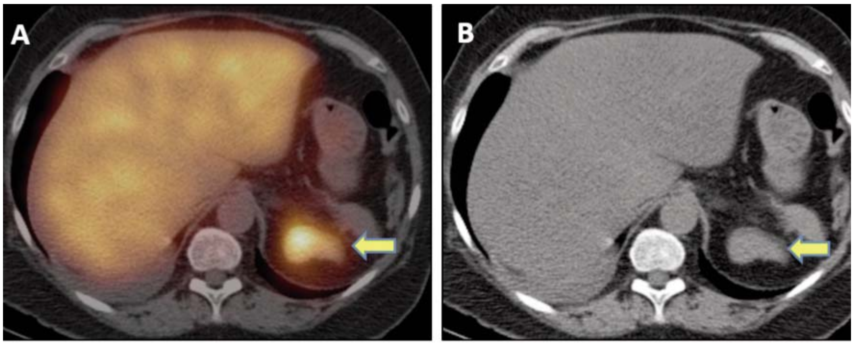

Figure-2: Axial SPECT-CT images of abdomen demonstrate uptake in a soft tissue density mass measuring 3.8 x 1.8 cm in left hemi abdomen (yellow arrows) consistent with accessory splenic tissue.

Tc-99m sulfur colloid scan is considered as the most sensitive technique for detection of accessory splenic tissue. In cases where there is suspicion of splenosis after splenectomy, opting for molecular imaging is of benefit as it can provide functional information. Addition of SPECT/CT to 99mTc labelled colloid scan offers high confidence in localization of ectopic splenic tissue.[3,4] Tracer uptake in lungs on liver spleen colloid scan has variable explanations due to alterations in colloid physiology. One possible explanation is the colloid uptake by lung

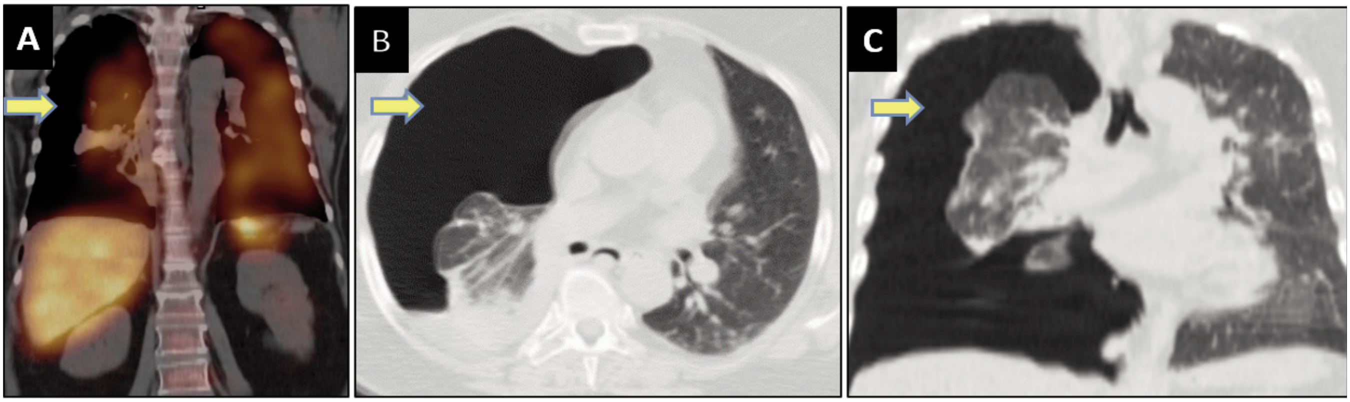

Figure-3: Coronal fused (A), axial and coronal lung windows (B, C) of SPECT-CT images demonstrate absent pulmonary vascular markings and hyper inflated right lung, consistent with right sided pneumothorax (yellow arrows).

macrophages. Studies have shown that uptake is more common in patients with history of organ transplants, severe neoplastic infiltration of the lung or liver disease.[5]

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