

Second pancreas sign

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Horizontal hypoechoic tissue seen in the midline anterior to spine representing the isthmus of horseshoe kidney resembles pancreas and is known as the second pancreas sign (Fig. 1) [1]. Horse shoe kidney is the most common renal anomaly occurring in about 1 in 400 live births [2]. Inferior poles are fused in more than 90% of horse shoe kidneys with the isthmus formed by functioning renal parenchyma in 85% of patients [1, 2]. The renal isthmus which extends across the midline is isoechoic to renal cortex and lies anterior to aorta, inferior vena cava, and spine. This is similar to the pancreas which is related to the SMA and SMV posteriorly [3]. Location helps in differentiating the pancreas (L1–L2 level) from renal

isthmus (L3–L4 level). Other sonographic findings of horseshoe kidney include low-lying position, malrotation with anteriorly pointing pelvis, a curved configuration of the kidney in the long axis, and a poorly defined inferior renal border [4]. Differentials for renal isthmus include enlarged paraaortic nodes, retroperitoneal fibrosis or tumor, collapsed bowel loop, and thrombosed renal vein [1]. CT and MRI can help in better imaging of retroperitoneal structures than ultrasound in obese patients and those with excessive bowel gas. However, identification of second pancreas sign on ultrasound should prompt the possibility of horseshoe kidney.

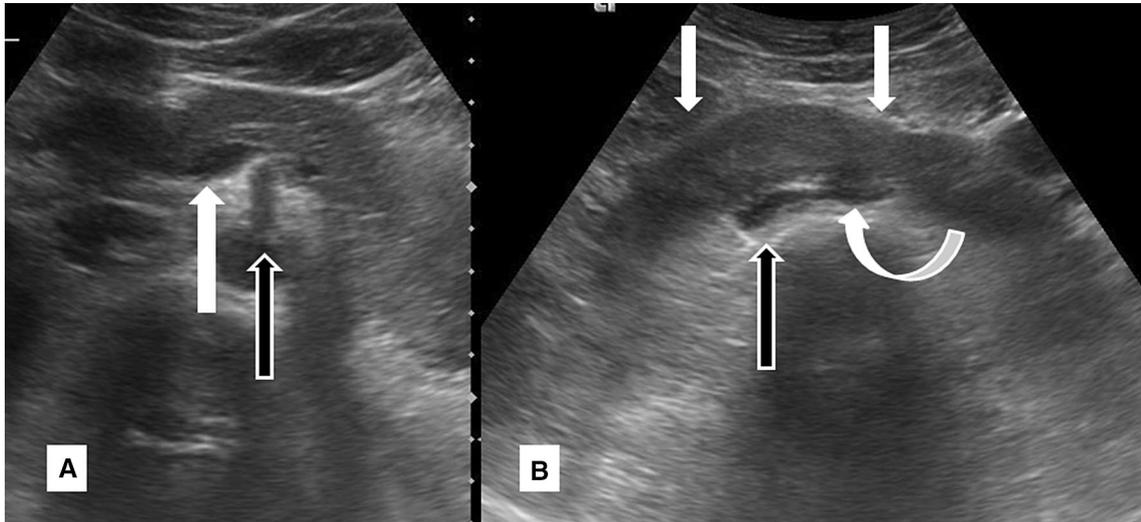


Fig. 1. Transverse ultrasound image **(A)** showing normal pancreas in the epigastric region with white arrow denoting the superior mesenteric vein and black arrow denoting the superior mesenteric artery. Transverse ultrasound image

(B) shows isthmus of the horseshoe kidney which resembles pancreas (white arrows) in the umbilical region (second pancreas sign). Black arrow denotes the IVC and curved arrow denotes the aorta.

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Compliance with ethical standards

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