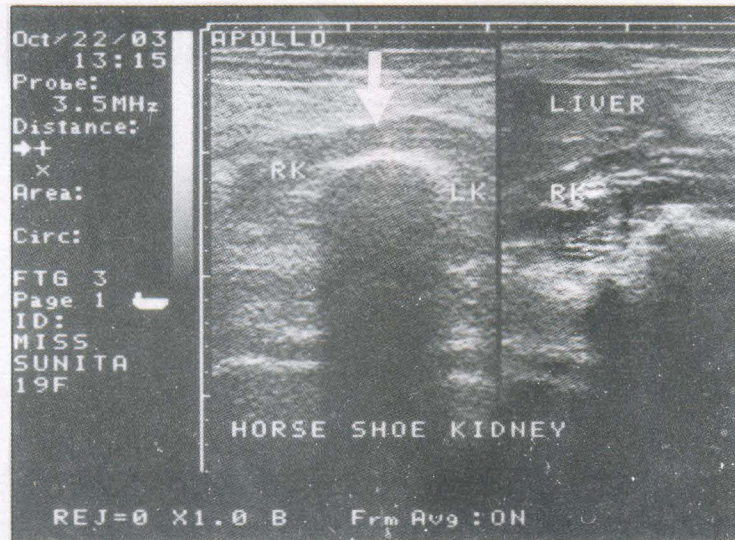


Horseshoe Kidney

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Sonogram (composite) showing normal sized malrotated kidneys, connected with each other at lower poles by a midline bridging isthmus (arrow). This sonogram is of 19 year old female who presented with vague abdominal pain.

Horseshoe kidney is probably the most common of all renal fusion anomalies. The anomaly consists of two distinct renal masses lying vertically on either side of midline connected at their respective lower poles by a parenchymatous or fibrous isthmus that crosses the midplane of the body. It occurs in 0.25 per cent of the general population, more commonly in males. The abnormality has been described clinically in all age groups ranging from fetal life to 80 years. Several variations are noted in basic shape of horseshoe kidney. In 95 per cent of patients, the kidneys join at lower poles; in a small number, however, the isthmus connects both upper poles instead. Many other congenital anomalies may be associated with this condition e. g. neural tube defects, ano-rectal malformations and various urogenital anomalies, trisomy 18, Turner's syndrome. Nearly one third of all patients remain asymptomatic. When symptoms are present, however, they are related to hydronephrosis, infection or calculus formation. The clinical features from a diseased kidney are often vague and non-specific, the anomaly, therefore, may not be suspected until a renal ultrasound or an excretory urogram is obtained. Other investigations, such as retrograde pyelography or computed tomography, may be necessary to confirm the diagnosis in some patients.

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