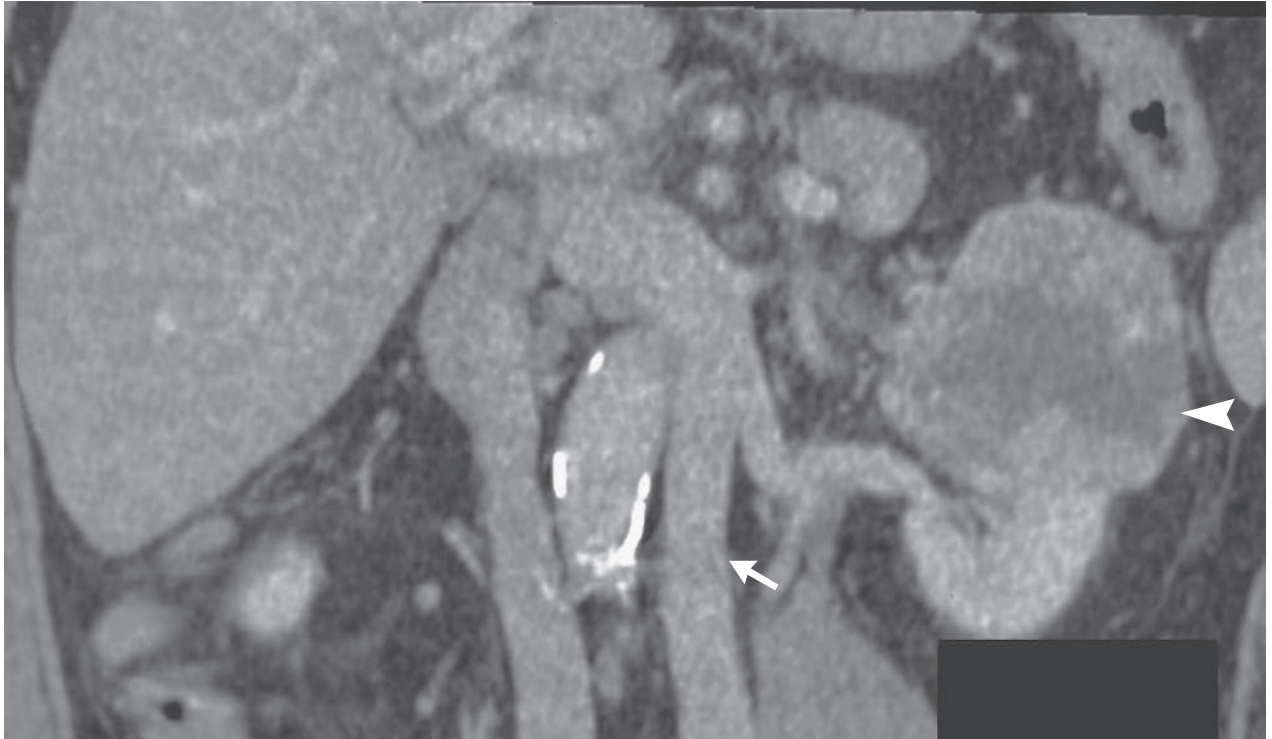


IMAGES IN CLINICAL MEDICINE

Duplication of the Inferior Vena Cava



A 68-YEAR-OLD MAN WITH HYPERTENSION PRESENTED WITH VAGUE AB-
dominal pain. Ultrasonography of the abdomen showed a renal mass in the
left kidney. A computed tomographic scan of the abdomen showed a mass
consistent with a renal-cell carcinoma in the upper pole of the left kidney (arrow-
head) and a duplication of the inferior vena cava (arrow). The aorta, which has
calcifications, can be seen between the duplicate inferior vena cavae. The inferior
vena cava is formed between weeks 6 and 10 of gestation. Duplication occurs in
0.2 to 3.0% of the general population. The infrarenal portion of the inferior vena
cava is formed from the right supracardinal vein while the left supracardinal vein
regresses. A duplicate inferior vena cava results from persistence of both the right
and left supracardinal veins. Although such anomalies are generally asymptomatic,
they have important clinical ramifications in certain settings (e.g., when pulmonary
embolism occurs after filter placement in the right inferior vena cava because of the
presence of a left inferior vena cava). They can also be a source of diagnostic uncer-
tainty and make surgery more hazardous. Knowledge of caval anomalies can prevent
misinterpretation of mediastinal masses, iliac occlusion with venous collaterals, and
paravertebral lymph-node enlargement. In this patient, a complete resection of the
renal-cell carcinoma, which was confined to the kidney, was successful.

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