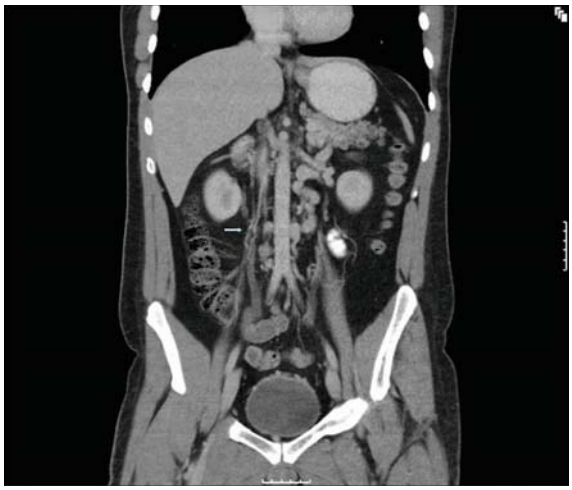
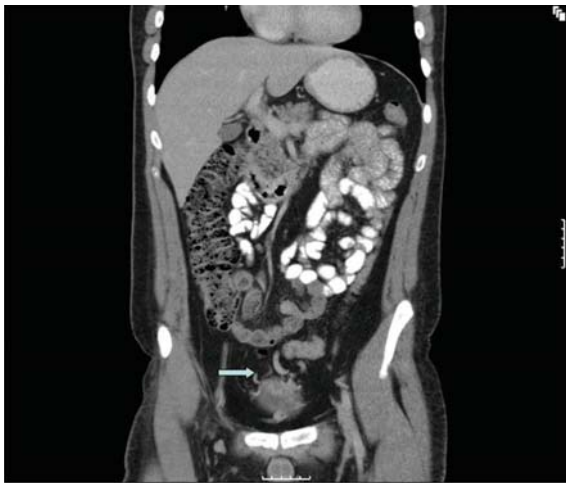
Absent Inferior Vena Cava With Resulting Bladder Varices

A Rare Cause of Frank Hematuria





A 28-year-old man with one episode of frank hematuria, settling on conservative therapy, underwent an abdominal computed tomography showing atresia of the infra-hepatic segment of the inferior vena cava (IVC) with dilated tortuous vessels in the pelvis and around the bladder. A flexible cystoscopy confirmed the bladder varices.

Inferior vena cava malformations are thought to occur embryologically or secondary to a thrombotic event, and are present in 0.3% to 0.5% of healthy individuals,[1] but are often associated with severe congenital heart diseases, asplenia, or polysplenia syndromes.[2] There remains some controversy over whether an absent or partially absent IVC is a true embryonic anomaly or occurs as a result of peri-natal IVC thrombosis.[3]

The IVC has a complex embryogenesis, but is fundamentally formed from the anastomoses of three parallel longitudinal paired embryonic veins; posterior cardinal, subcardinal, and supracardinal veins.

Pelvic varicosities occur where there is hemodynamic disruption in the IVC, iliac, or left renal veins. In men, reflux of blood from the iliac vein into the parietal tributaries results in development of atypical pelvic varicosities.[2]

Bladder varices are a rare, but important cause of hematuria and should be considered in the differential diagnoses of an otherwise asymptomatic patient presenting in this way.

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