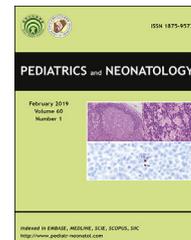


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Images

How the absence of infrarenal inferior vena cava can mimic lymphoma

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A 14-year-old girl was presented to the emergency department with low back pain after a spinal trauma. Unenhanced computed tomography (CT) of the spine revealed a compression vertebral fracture of the first lumbar vertebral body. Furthermore, upon examination of the CT images by soft tissue window, the physicians noticed several retroperitoneal para-aortic masses most likely attributable to lymphadenopathies (Fig. 1 – white arrow). These findings suggest, as the most plausible diagnosis, lymphoma with involvement of retroperitoneal lymph nodes.

Subsequently, thoracic and abdominal contrast-enhanced CT was performed to confirm and stage the disease. The contrast-enhanced CT showed widespread anomaly of the whole venous system characterized by a complete absence of infrarenal inferior vena cava (IIVC), extremely enlarged azygos and hemiazygos veins (dotted arrow), and multiple dilated veins with large varicosities (especially renal veins – black arrows). Iliac veins drain into lumbar veins, which drain into the azygos–hemiazygos venous system. Suprarenal inferior vena cava, formed by confluence of the renal veins, presented very small caliber. The contrast-enhanced CT with multiplanar reconstruction rectified that the

suspected retroperitoneal masses were attributable to voluminous varicose veins. No other malformations were detected on the CT study. Moreover, the cardiovascular clinical examination was negative.

The absence of IIVC is an extremely rare congenital anomaly, which has already been described in several case reports.¹ Controversy exists as to whether this condition is a true embryonic anomaly or the result of perinatal inferior vena cava thrombosis.

This young patient was completely asymptomatic before the trauma; however, patients with absent IIVC may present with various symptoms of lower extremity venous insufficiency or deep venous thrombosis.² Congenital heart diseases, situs inversus, asplenia, polysplenia, and other abnormalities may be associated with this vascular anomaly. Anticoagulant therapy has been suggested for symptomatic subjects, and venous bypass surgery represents another option for these patients.² Moreover, as already described, the collateral circulations and the voluminous varicose veins may simulate paraspinal masses, especially on unenhanced CT scans.³ This feature can be considered as a pitfall for the diagnosis of this condition.

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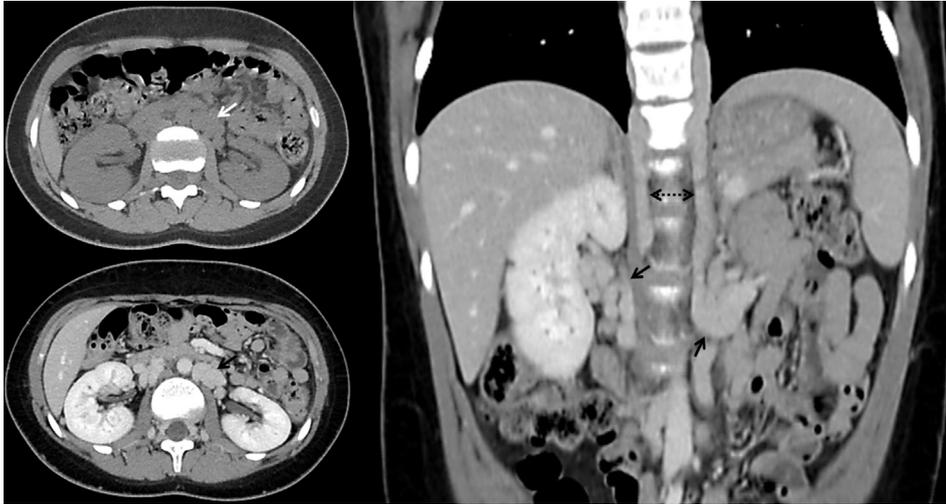


Fig. 1 Unenhanced computed tomography of the spine showing retroperitoneal masses resembling multiple pathological lymph nodes (up left, white arrow). Contrast-enhanced computed tomography showing multiple large varicosities (down left and right, black arrows), enlarged azygos and hemiazygos veins (right, dotted arrow).

Conflicts of interest

We have no conflict of interest to declare.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.pedneo.2018.05.006>.