

Superior Vena Cava Syndrome in a Child and Venous Collateral Pathways: MDCT Imaging

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Superior vena cava (SVC) occlusion is known to have multiple etiologies in adults but is a rare finding in children.¹ The SVC syndrome results from obstruction of the SVC or its major tributaries by intraluminal occlusion or by extrinsic compression and/or invasion from malignant and benign diseases. Obstruction of the SVC causes elevated pressure in the veins feeding into SVC and increased or reversed blood flow through collateral vessels.² The signs of SVC syndrome included edema of the face, neck, or upper extremities; facial flush; cyanosis of the upper body; grossly visible dilated veins in the neck; or superficial collateral vessels. Severity of the syndrome depends on the collateral vascular system development. The collateral veins may show variable location and connection, and although the SVC is obstructed in the upper thorax, abdominal, and pelvic vessels usually participate to the collateral venous pathway as well.³ Therefore, identifying and describing these circulations can be difficult. We present multidetector row CT (16-detector scanner) features of a case of SVC syndrome caused by compression of lymphadenopathies at Hodgkin lymphoma.

A 8-year-old girl was admitted to our institute complaining swelling of neck and face and fever also. Patient also complained of weight loss (3 kilograms) and night sweats for a month. She had previously been healthy. Physical examination revealed neck swelling and multiple enlarged, painless, and mobile lymph nodes. Laboratory showed mild anemia. Her chest radiograph showed mediastinal enlargement and computed tomography of the chest showed massive mediastinal lymphadenopathy, axillary adenopathy, and bilateral pleural effusions (Figure 1). Computed tomography showed no contrast within the SVC and contrast within enlarged collateral venous channels of the left chest and no channels on the right because of the right subclavian venous occlusion. 3D volume-rendered images (Figure 2) showed enlarged collateral venous channels over the left

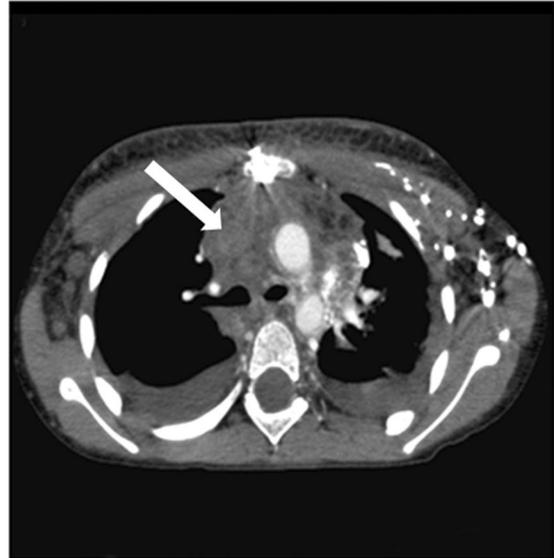


FIGURE 1. Contrast enhanced computed tomography (axial maximal intensity projection) image showing conglomerate mediastinal adenopathy and axillary adenopathy. There is no contrast in the SVC (arrow).

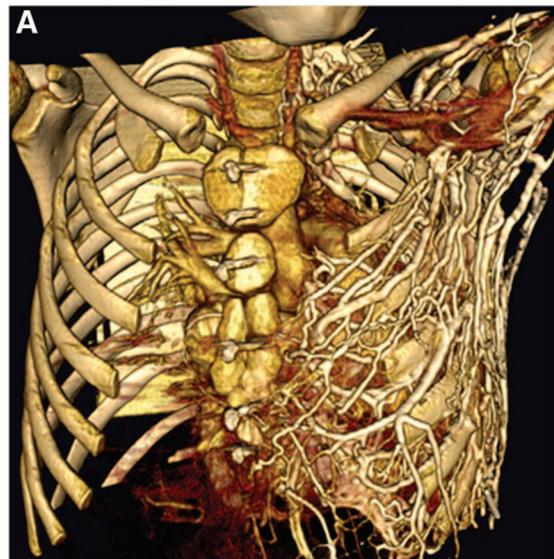


FIGURE 2. A, B, 3D volume-rendered computed tomography image with enlarged venous collateral channels on the left chest that resemble mangrove tree and no channels on the right because of the right subclavian venous occlusion.

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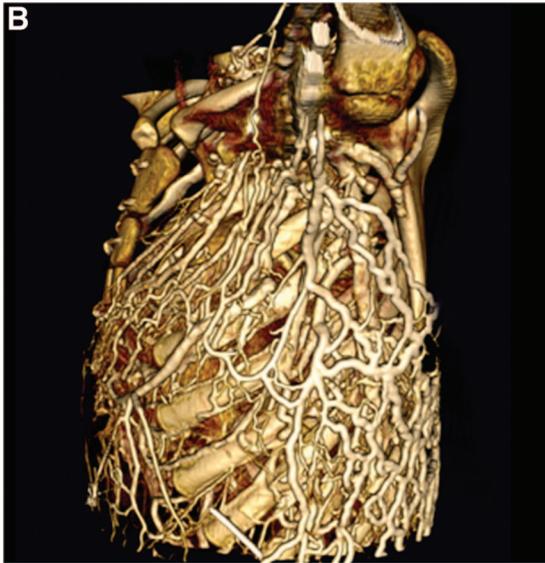


FIGURE 2. (Continued).

chest with an appearance reminiscent of the roots of a mangrove tree.

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