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Superior vena cava syndrome in the CT scanning

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ABSTRACT

Introduction. The study concerns a 67-year-old woman with symptoms such as swelling of the face, neck and upper limbs; bruising in the head and neck region; conjunctival hyperemia; excessive filling of the jugular veins. The CT examination was performed using the SOMATOM Definition AS (Siemens) and analyzed with SYNGO Multi-Modality CT Workstation (Siemens). The study showed a tumoral mass (67 × 91 mm) located in the right upper lobe and adjacent to the mediastinum, simultaneously invades the superior vena cava and causes it to narrow completely.

Keywords: superior vena cava syndrome, CT, tumor.

The study concerns a 67-year-old woman with symptoms such as swelling of the face, neck and upper limbs; bruising in the head and neck region; conjunctival hyperemia; excessive filling of the jugular veins. In addition, the patient complained of symptoms such as dizziness, headache, and blurred vision. The study was conducted using a contrast agent - Omnipaque 350 (contains 755 mg of iohexol equivalent to 350 mg of organic iodine per ml). The CT examination was performed using the SOMATOM Definition AS (Siemens) and analyzed with SYNGO Multi-Modality CT Workstation (Siemens). The study showed tumoral mass (67 × 91 mm) located in the right upper lobe and adjacent to the mediastinum, simultaneously invades the superior vena cava and causes it to narrow completely. The tumoral mass also adheres to the brachiocephalic trunk and compresses the bronchi to the upper lobe. (**Figure 1A**). At the apex of the right lung, a metastatic change of 40 × 27 mm was observed (**Figure 1B**). In the hilum of the right lung, the tumoral mass (size 41 × 30 mm) narrowing the main and lobar bronchi and narrowing the right pulmonary artery was also observed (**Figure 1C**). According to literature data, the syndrome of the superior vena cava in 90–95% of cases is caused by malignant tumors, and in 5–10% by benign tumors. Superior vena cava syndrome compression usually caused by tumoral masses in the middle or anterior mediastinum and it most often affects the right lung cancer (80%) [1, 2].

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Conflict of interest statement
The authors declare no conflict of interest.

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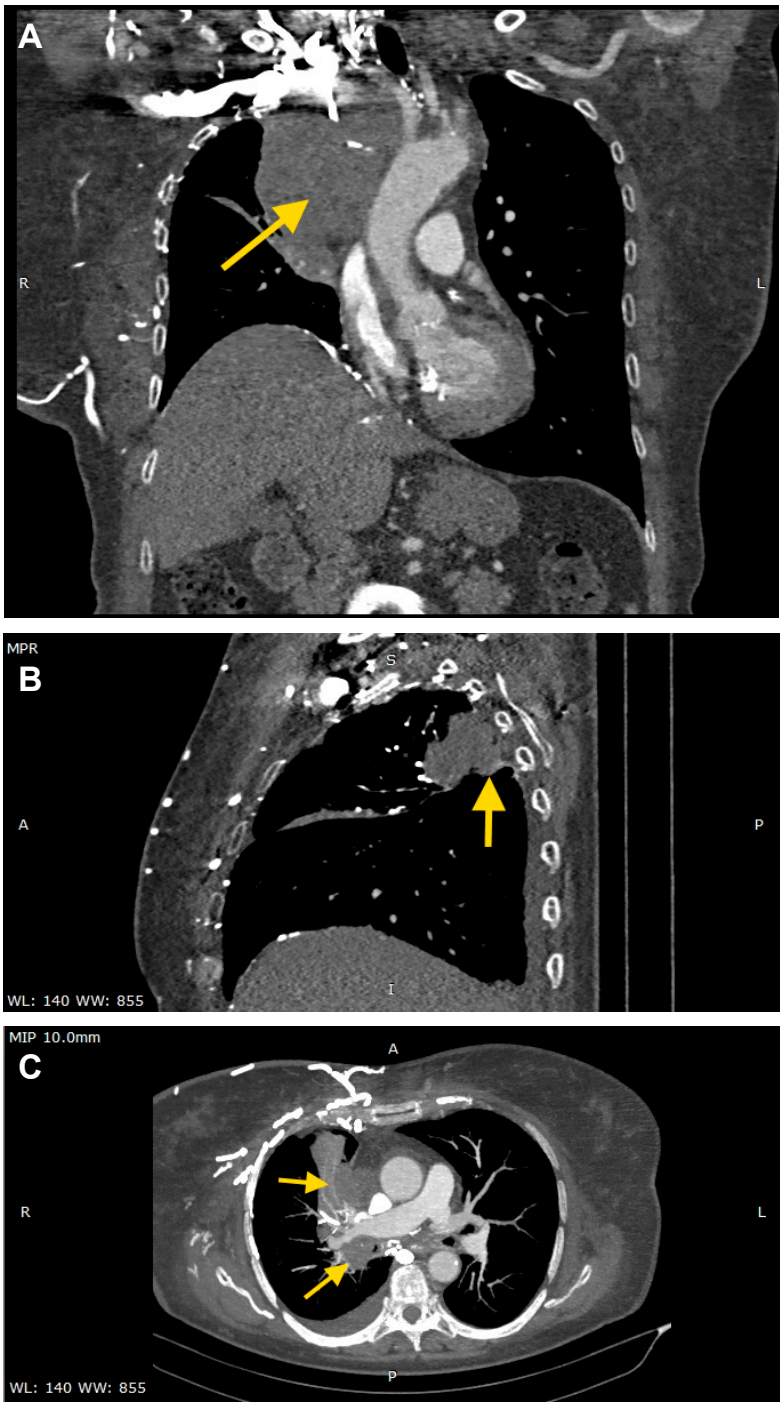

Figure 1. Lung cancer responsible for a superior vena cava syndrome. The CT scan detects the tumoral mass (arrow): A – coronal reconstruction; B – sagittal reconstruction; C – axial reconstruction in maximum intensity projection [MIP]

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