

## Massive pulmonary embolism arising from a bifid ovarian vein in a patient with protein S deficiency

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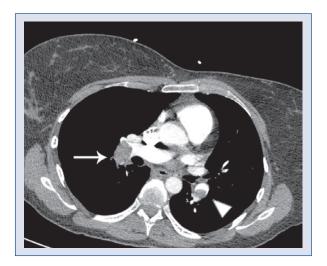
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A 36 year-old woman was admitted to the intensive care unit for sudden onset of dyspnea and near-syncope. She had resting tachypnea, tachycardia, blood pressure of 110/70 mm Hg and oxygen saturation of 90% on room air. There was no evidence of clinical thrombophlebitis of lower limbs. The ECG showed sinus tachycardia, incomplete right bundle branch block and non-specific T wave abnormalities. Cardiac ultrasound highlighted enlargement of the right ventricle (EDRVD > 30 mm) and elevated troponin Ic at 0.44  $\mu$ g/L, n < 0.04.

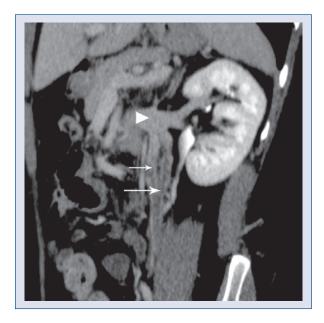
The protocol for computed tomography consisted of an evaluation of the pulmonary arteries, abdomen, pelvis and lower limbs down to and including the popliteal vein. It showed large intraluminal thrombi in both right and left pulmonary arteries and their division branches (Fig. 1), and identified partially fixed thrombi in the bifid left ovarian vein (Fig. 2). The patient received intravenous anticoagulation therapy based on therapeutic doses of standard heparin. She tolerated the medication, and showed a significant improvement in her cardiopulmonary status. Her embolic episode was related to an estroprogestative related protein S deficiency. She was discharged on warfarin and is currently doing well without functional compromise.

## Acknowledgements

The authors do not report any conflict of interest regarding this work.



**Figure 1.** Computed tomography of chest demonstrating large emboli in main right pulmonary artery (arrow) and left inferior lobar pulmonary artery (arrow head).



**Figure 2.** Computed tomography of abdomen showing extensive thrombi in left bifid ovarian vein (arrows). Left renal vein is permeable (arrow head).

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