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Extensive iliocaval thrombosis in a young patient with collateral venous drainage: a case report

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Introduction: While inferior vena cava (IVC) thrombosis is a rare condition, affecting fewer than 5% of patients with lower extremity deep vein thrombosis (DVT)[1], thrombosis of the azygos and hemiazygos veins has only been described in isolated case reports[2]. We present a case of a young patient with extensive iliocaval thrombosis and partial thrombosis of the hemiazygos collateral pathway, treated with a multimodal approach.

Case report: 31-year-old woman with proximal DVT was admitted to the Intensive Care Unit for assessment of the need for invasive thrombolytic therapy. Her history included childhood repair of esophageal atresia. She reported one month of back pain and left leg cramping, followed by swelling and severe pain in the left leg shortly before presentation to the emergency department. Doppler ultrasound and multislice computed tomography (MSCT) angiography revealed extensive DVT of the left leg, with thrombosis of the left common, internal, and external iliac veins and the right common and external iliac veins, and thrombus extending into the IVC. In addition, MSCT angiography demonstrated dilatation and partial thrombosis of the hemiazygos vein, representing a collateral pathway bypassing the obstructed IVC. Initial treatment consisted of low-molecular-weight heparin (LMWH). After one week without clinical improvement, second-line therapy with systemic thrombolysis was initiated, using intravenous alteplase at a total dose of 24 mg over 24 hours. Digital subtraction angiography performed a few days later showed no radiological improvement. Endovascular treatment was therefore undertaken, consisting of catheter-directed thrombolysis with 20 mg of alteplase, followed by percutaneous mechanical thrombectomy using the AngioJet Power Pulse system and balloon angioplasty, with improved patency on control angiography. One day after the endovascular procedure, LMWH was switched to a direct oral anticoagulant (rivaroxaban). Because of progressive swelling of both legs, Doppler ultrasound of the legs was repeated and revealed new-onset DVT of the right leg, in addition to the known left leg thrombosis. Rivaroxaban was discontinued, and intravenous unfractionated heparin was started. Clinical improvement followed, and the patient was discharged on warfarin. Thrombophilia screening results were pending at the time of writing.

Conclusion: This case highlights that even a collateral pathway, such as the hemiazygos vein, may become thrombosed in extensive iliocaval thrombosis. In such patients, an individualized treatment plan that allows timely escalation to combined thrombolytic and endovascular therapy may be necessary when anticoagulation alone is insufficient.

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LITERATURE

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