Absence of Inferior Vena Cava at Birth, Resulting in Bilateral Iliofemoral Acute Deep Venous Thrombosis

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SHORT COMMUNICATION

The Deep venous thrombosis (DVT) in the iliofemoral region may be more common than previously thought. 1 Acute iliofemoral DVT is associated with the highest risk of post-thrombotic morbidity. To prevent post-thrombotic syndrome, strategies for early removal of thrombi have been recommended and widely accepted in the United States, regardless of the patient's age. 2,3 However, pre-existing venous disease, such as absent inferior vena cava (IVC) syndrome, can make this treatment more difficult.

A congenital anomaly of the IVC and its tributaries is a rare vascular malformation. Abernethy was the first to describe a congenital mesocaval shunt and azygos continuation of the IVC in a 10-month-old infant with dextrocardia in 1793. 4 Between weeks 6 and 8, the IVC and adjacent urogenital drainage system undergo complex embryogenesis.

Embryonic existence three paired embryonic veins, the posterior cardinal, sub cardinal, and supracardinal veins, undergo anastomosis and regression. Huntington and Mc Lure proposed 14 theoretical variations in the anatomy of the IVC in a study of its development; 11 of the 14 variations have been observed in the domestic cat or in humans. 5 While the duplicated IVC and retro aortic left renal vein have been widely recognized as a relatively common anomaly, reports of total IVC absence are rare [1].

We present a case of acute bilateral iliofemoral DVT in a young man with an underlying absent IVC, followed by endovenous treatment. The patient gave his or her permission for this case report to be published.

A 40-year-old man presented to the emergency department with severe pain and swelling in his right lower extremity. The patient was a truck driver who had recently driven a much longer route than usual, from Texas to Illinois, just ten days before the presentation. During the journey, he developed new-onset right lower extremity pain and swelling that extended from the groyne to the posterior calf. He denied any prior history of DVT or symptoms resembling them. He was an ex-smoker who denied using illegal drugs or having a family history of coagulopathy. A venous duplex ultrasound examination confirmed the extensiveness of the venous thrombosis [2-4].

Acute venous thrombosis from the right common femoral vein to the peroneal and posterior tibial veins.

He was admitted, and heparin was immediately administered systemically. He was referred for catheter-directed thrombolysis due to the severity of his symptoms. On hospital day 2, another team attempted thrombolysis for the first time. The wire and catheter were advanced to the right common iliac vein via the right posterior tibial vein but were unable to cross the IVC or the venous collaterals. 70 mg of tissue plasminogen activator (tPA) was power-pulsed into the right iliofemoral and popliteal veins using an AngioJet Solent Omni catheter (Boston Scientific, Marlborough, Mass.), followed by pharmacomechanical thrombectomy after 60 minutes of dwell time. Despite the fact that the iliofemoral and popliteal A 30-cm infusion catheter was placed across the iliofemoral segment, and 0.5 mg/h t PA infusion was started. The following day, venography revealed a recurrent and increased clot burden in the right common and external iliac veins, as well as a persistent lack of central venous outflow. Catheters were taken out, and a second opinion was sought. A computed tomography (CT) scan of the abdomen and pelvis was then performed, revealing evidence of persistent bilateral iliofemoral DVT as well as the absence of the IVC [5].

He had two pharmacomechanical thrombolysis and thrombectomy treatments combined with vascular surgery. We hypothesised that the failure of the first intervention was due to a lack of treatment focus on the outflow venous collaterals.

After accessing the right popliteal vein from the back with the patient in the prone position, a stiff Glide wire and an angled Glide catheter (Terumo Interventional Systems, Somerset, NJ) were advanced to the L4 level. The AngioJet Solent Omni thrombectomy catheter was used, and pharmacomechanical thrombolysis with a power-pulse spray containing 20 mg of tPA was performed. The IVC collaterals, including the azygos vein, received the vast majority of the tPA volume. After 30 minutes of dwell time, pharmacomechanical thrombectomy was performed for 2 minutes with the same device. Completion venography demonstrated successful revascularization of the entire femoropopliteal and iliofemoral vein segments with a residual stenosis of 10%. This also depicted an excellent network of retroperitoneal collaterals.

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REFERENCES

1. Nicolétis C, Guerin-Surville H. Prominent ears: transposition of the posterior auricular muscle on the scapha: A new technique. Aesthetic Plast Surg. 1978; 2: 295-302.
2. Yazici I, Findikçioğlu F, Ozmen S, et al. Posterior auricular muscle flap as an adjunct to otoplasty. Aesthetic Plast Surg. 2009; 33(4):527-532.
3. Azad S, Edwin A, Kumar PV. Posterior auricular muscle – a useful adjunct in otoplasty. Br J Plast Surg. 2003;56(7): 722-723.
4. Scuderi N, Tenna S, Bitonti A et al. Repositioning of posterior auricular muscle combined with conventional otoplasty: a personal technique. J Plast Reconstr Aesthet Surg. 2007; 60(2): 201-204.
5. Ersen B, Sarialtin Y, Cihantimur B, et al. A new otoplasty procedure: combination of perichondrio-apido-dermal flap, posterior auricular muscle transpositioning and cartilage suturing to decrease the post-operative complication rates. Eur J Plast Surg. 2018; 41: 557-562.

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