

Do Waveforms Matter? Yes They Do! A Case in Point

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Introduction/Patient Description

A 38-year old G1P0 presented to the Vascular Lab at 32 weeks gestation for evaluation of persistent left lower extremity edema. The patient reported a one-month history of left leg pain and swelling after a long car trip. Of note, she had three negative lower extremity ultrasounds at outside imaging facilities over the previous six weeks.

Methods

Left lower extremity venous duplex was performed with B-mode, color, power and spectral Doppler using a linear 12-3 MHz transducer. Images were documented using Intersocietal Accreditation Commission Vascular Testing (IAC VT) protocol.

Results

Left lower extremity duplex revealed continuous flow in the bilateral common femoral veins. Right common iliac and external iliac vein Doppler waveforms demonstrated spontaneous and phasic flow. Left proximal common iliac and external iliac veins revealed continuous flow. Acute, occlusive deep venous thrombus (DVT) was identified in the left distal common iliac vein. The left common iliac vein was enlarged measuring 2.2 cm compared to the contralateral common iliac vein 1.4 cm.

Conclusion/Discussion

Ultrasonographic infrainguinal demonstration of acute deep venous thrombosis is straightforward, and usually achievable with standard IAC VT protocol. However, imaging of the proximal pelvic venous circulation can be more elusive, particularly in the pregnant patient. Therefore, it is imperative to assess the spectral Doppler waveforms and to investigate pelvic venous flow. Because of the sonographer's attention to the common femoral waveforms, additional focused pelvic imaging was performed and located acute, occlusive iliac DVT as the cause of significant edema.