Ultrasonic testing with Doppler imaging can rule out blood clots in pregnant women

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The use of serial compression ultrasonographic testing together with Doppler imaging appears to be a reliable method of ruling out blood clots in the legs of pregnant women, according to a study published in *CMAJ* (*Canadian Medical Association Journal*). Physicians can likely safely withhold anticoagulation therapy based on the results.

This technique, recommended in women who are not pregnant to determine if there is deep vein thrombosis (DVT) in the legs, is also used in pregnant women but its safety has not been validated in this cohort. Anticoagulation drugs are used to treat blood clots during pregnancy and are safe for the fetus; inappropriately diagnosing blood clots during pregnancy can result in unnecessary risks to a woman during and after pregnancy. It is therefore important to establish whether there is a clot.

Researchers studied data for 221 women who had symptoms of DVTs over an 8-year period from August 2002 to September 2010 to determine whether compression ultrasonography with Doppler imaging is a safe diagnostic approach. They found that 7.7% of pregnant women with symptoms had deep vein thrombosis; 94% of these diagnoses were detected using serial compression ultrasonography with Doppler imaging of the iliac veins. These women were subsequently treated with anticoagulants. One patient with normal test results was found to have a pulmonary embolism 7 weeks later. The incidence of DVTs during follow up was less than 1% (0.49%).

"Our strategy of serial compression ultrasonography combined with

Doppler imaging of the iliac veins appears to reliably exclude clinically important deep vein thrombosis," writes Dr. Wee-Shian Chan, who is now at Department of Medicine, BC Women's Hospital and Health Centre, with coauthors.

"Our study highlights the importance of iliac vein visualization in symptomatic pregnant women. Because all of our cases of deep vein thrombosis were identified by initial imaging with compression ultrasonography and Doppler studies, it is unclear whether serial testing over a 7-day period is necessary," write the authors. More studies will be needed.

More information: www.cmaj.ca/lookup/doi/10.1503/cmaj.120895

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