

# Ultrasound waves aid in rapid treatment of DVT

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The use of ultrasound waves for deep vein thrombosis (DVT) may help dissolve blood clots in less time than using clot-busting drugs alone, according to researchers at Emory University. The study will be presented Sunday, Nov. 23, 2008 at the annual VEITHsymposium in New York City.

"These clots are a main cause of both heart attacks and stroke and the more quickly you can eliminate them the better," says Karthikeshwar Kasirajan, MD, assistant professor of surgery in the Emory University School of Medicine.

A DVT is a blood clot that forms in a vein deep in the body, most often in the lower leg or thigh. A loose clot, called an embolus, can break off and travel through the bloodstream to the lungs and block blood flow. The life-threatening condition is called pulmonary embolism. The surgeon general's campaign estimates that every year, between 350,000 and 600,000 Americans get one of these clots - and at least 100,000 of them die.

"We now know that using ultrasound, along with the traditional method of using drugs to break up or dissolve blood clots, will help restore flow, prevent valve damage and also prevent the possibility of pulmonary embolism," says Kasirajan.

Researchers treated 37 patients with the clot-dissolving drug called tPA (tissue plasminogen activator), while using ultrasound to loosen the

proteins in their blood clots and send the drug into the clots faster.

Of the 37, 16 had DVT and 21 had acute in-situ arterial thrombosis. All the patients with arterial thrombosis had their clots completely dissolved, and all but six of the DVT patients had theirs completely dissolved.

Four DVT patients had their clots partially dissolved and two saw no change. Only one of the 37 had a complication (neck hematoma). Most of the 37 (83 percent) were subsequently treated with angioplasty and stent placement.

Risk factors for DVT include: being immobile for long periods of time, recent surgery, a fall or broken bone, pregnancy, a car crash, birth control pills or menopause hormones. The risk rises with age, especially over 65, and among people who smoke or are obese.

Source: Emory University

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