

# UT News

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\*\*\*\*Treatments for life threatening blood clotting  
(pulmonary embolism) are evaluated by UTHSCD surgeon

DALLAS -- The postoperative formation of massive blood clots in the leg is a potentially dangerous condition that causes serious concern for surgeons.

This type of extensive clotting, which usually starts in the calf and can extend into the upper thigh, is known as deep venous thrombosis. It causes symptoms of aching discomfort and swelling in about 50 percent of patients who develop the clots. The presence of these symptoms may be beneficial, since they can alert the doctor and patient to the existence of a problem.

But just as often, the expanding blood clot grows unnoticed. These silent clots can turn lethal when a segment breaks off, travels through the bloodstream and lodges in the lungs. This condition, called pulmonary embolism, dams up blood flowing into the lungs and can result in death.

Dr. Patrick Clagett, general vascular surgeon and professor in the Department of Surgery at The University of Texas Health Science Center at Dallas, says most venous thrombosis with pulmonary embolism goes undetected until the patient's condition has become critical or fatal. In fact, only one in five pulmonary emboli found during autopsy has been diagnosed before the patient's death.

It is estimated that the conditions of venous thrombosis and pulmonary embolism are associated with 300,000 to 600,000 hospitalizations a year. As many as 200,000 persons die each year as a result of pulmonary embolism.

"Most deaths from pulmonary embolism occur while the patient is in the hospital or immediately thereafter," says Clagett. "But once the patient is up and fully mobile, the risk of embolism becomes small."

Most pulmonary emboli are preventable with drug therapy, Clagett says. Yet drugs -- particularly those used to dissolve blood clots -- carry their own set of hazards; therefore, surgeons must restrict drug therapy to patients at risk.

Clagett participated as a speaker in a National Institutes of Health consensus conference on venous thrombosis and pulmonary embolism last year. The purpose of the conference was to resolve questions relating to preventive measures in high-risk patient groups.

At highest risk for lethal pulmonary emboli are patients undergoing orthopedic surgery for hip replacement. Between 1 and 3 percent of hip replacement patients die as a result.

Also at high risk are those with conditions that predispose them to venous thrombosis -- such as cancer, heart failure, being over the age of 70, taking birth control pills or other forms of estrogen, immobilization for more than three days, obesity and having a history of deep venous thrombosis.

Among general surgery patients who undergo abdominal surgery, 20 percent of patients over age 40 have clots in leg veins. "Most do fine and have no problems," says Clagett. "But in 7 percent, the clot extends above the knee where it might become a serious problem."

(More)

Clagett says that surgeons should take preventive measures with all patients in high-risk categories and not rely on the presence of symptoms. "The first symptom might be a fatal pulmonary embolus." He adds that drugs -- such as heparin, warfarin and others -- are most effective among the various treatment options. These and other drugs that thin the blood or constrict veins should be used selectively, according to the high-risk category in which the patient falls.

Devices that intermittently squeeze the lower extremities and promote blood flow in the veins, such as inflatable boots, have been found effective in preventing blood clots. The use of elastic stockings is considered beneficial but has not been studied well enough to make a general recommendation for their use.

Methods of early detection and treatment other than drugs were generally ruled out by the group. Radiologic imaging for detection was deemed effective but too expensive to be used on a routine basis.

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Distribution: AA,AB,AC,AF,AF1,AG,AG1,AH,AI,AK,AK1,AM,SC,SL

NOTE: The University of Texas Health Science Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and the School of Allied Health Sciences.