

*Nils Kucher*

## Deep vein thrombosis and pulmonary embolism

Venous thromboembolism (VTE) encompasses deep vein thrombosis (DVT) and pulmonary embolism (PE). The incidence of VTE is high, ranging from 1–2 per 1000 per year; it has increased over the past decade. PE is not a benign condition, and 3-month mortality in PE patients is higher (15%) than in those with acute myocardial infarction. The most common cause of death within 30 days is right ventricular failure, and clinical outcome beyond 30 days often depends on underlying conditions that often are the trigger of VTE.

Despite contemporary imaging modalities, VTE diagnosis remains challenging. Assessment of the clinical pretest probability helps select patients who are candidates for further diagnostic testing. D-dimer, venous ultrasound, and multislice CT have emerged as the most important and reliable diagnostic tools.

Most VTE patients can be treated with anticoagulation alone. Controversy persists about the duration and intensity of anticoagulation in patients with idiopathic VTE. The role of systemic fibrinolysis in patients with severe PE is still unclear, and large randomised controlled trials are warranted. Patients with

massive PE and haemodynamic instability are ideal candidates for fibrinolysis but many of these critically ill patients also have an increased bleeding risk. These patients may be better suited for percutaneous catheter thrombectomy or surgical embolectomy.

Inferior vena cava filters are increasingly being used in VTE patients. Filter indications are recurrent PE despite therapeutic anticoagulation and increased risk of both clotting and bleeding complications. Newer retrievable filters are ideal for patients with transient risk factors.

VTE prevention is a major health care issue in most countries. In Switzerland, almost half of the hospitalised medical patients at risk do not receive any prophylaxis, or administered prophylaxis is inadequate. Continuing medical education and clinical decision support systems are useful to increase the prophylaxis rate and reduce the VTE rate among hospitalised patients.

Renowned international experts have contributed to two special editions of Cardiovascular Medicine that provides an up-to-date on diagnosis, risk stratification, therapy, and prevention of DVT and PE for practical physicians.

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