A Deadly Venopuncture

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An 85 year old woman was admitted because of pneumonia. Five days after her admission she complained of shortness of breath and pain in both arms, without chest pain. An electrocardiogram disclosed new ST segment elevation in the lateral wall and there was significant creatinine phosphokinase elevation. Aspirin 100 mg/day and enoxaparine 60 mg twice a day, according to body weight, were prescribed.

Five days later, following routine venopuncture from the dorsal venous arch, a huge hematoma with edema, compartment syndrome and necrosis developed along the forearm and hand. Platelet count, prothrombin time, and partial thromboplastin time were within normal range. A Doppler study of the arms revealed normal arterial flow. The patient was treated with prompt excision and topical application of silver sulfadiazine. She recovered slowly over a few weeks but eventually died from sepsis. Blood cultures were negative.

This case emphasizes the hazards of anticoagulation therapy and the need for strict supervision in arterial and even veopuncture during this therapy.

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**Capsule**

**Circadian clock**

The main circadian clock in mammals is located in the brain, but the cells of many peripheral tissues also contain clocks. Yagita et al. report that the molecular components that make up these peripheral clocks, at least those in fibroblasts, are the same as those that form the brain’s master clock in the mouse. Transcriptional and translation feedback loops consisting of Per2, Bmal1, Clock, and Cry1 and their respective proteins interact to produce a circadian 24 hour rhythm in cultured fibroblasts. The oscillations and period length are dependent on the presence of Cry1, as in the brain. Thus, the causes of the distinctive features of peripheral oscillators – a tendency to damp and insensitivity to light – must be sought elsewhere.

*Science* 2001;292:278