

Two Case Reports, One Day: No Pain - Fulminant Pulmonary Embolism And Thrombosis In Men

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Case 1: A patient consulted his GP because of swelling that had been present for seven days without pain. He was then admitted to our emergency department with a positive D-dimer rapid test. Sonography revealed a thrombosis of the femoral vein. The subsequent CT showed a bilateral pulmonary artery embolism (PE) with no dyspnea and an oxygen saturation of 86% in the capillary ABG. Anticoagulation with rivaroxaban was initiated - the patient continued to complain of no pain.

The 77-year-old patient (patient 1) reports a pulling sensation that has been present since the swelling occurred. The difference in circumference compared to the right leg was two centimeters, so no points were awarded for this when calculating the Wells score. The patient denied both pain and shortness of breath. With a Wells score of zero, no previous illnesses as well as an empty medication and phlebological history, a sonography of the leg vessels was performed with positive D-dimers of >

8000 ng/ml. This revealed a 3-4 level DVT of the left leg. To rule out PE, a CT scan of the lungs was ordered, which showed a bilateral pulmonary embolism. The patient - still without pain or shortness of breath - showed an oxygen saturation of 86% in the capillary blood gas analysis that was subsequently performed. Following the guidelines, we started anticoagulation with rivaroxaban and monitored the vital signs.

Case 2: A second patient presented with a significant increase in the circumference of one leg and increased Wells score, but without any pain, state after DVT three years ago without any recognizable trigger.

A second patient in his mid-60s (patient 2) - similar symptoms, also no pain. He also suffers from painless DVT with an elevated Wells score as well as PE with a capillary oxygen saturation of 97%. Three years ago he already suffered a DVT on the opposite side and a portal vein thrombosis one year ago. Nevertheless, no coagulation diagnostics were performed.

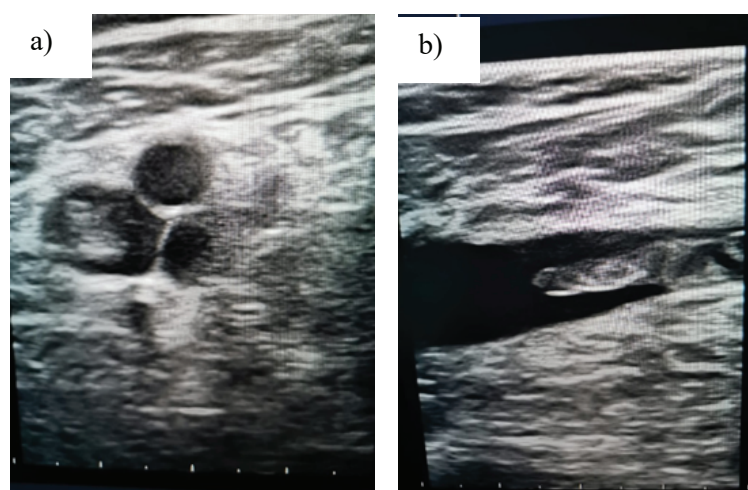


Figure 1. Thrombosis of the femoral vein (patient 1)
a) Cross-section of the femoral vein (left) with thrombus
b) Longitudinal section of the femoral vein with thrombus

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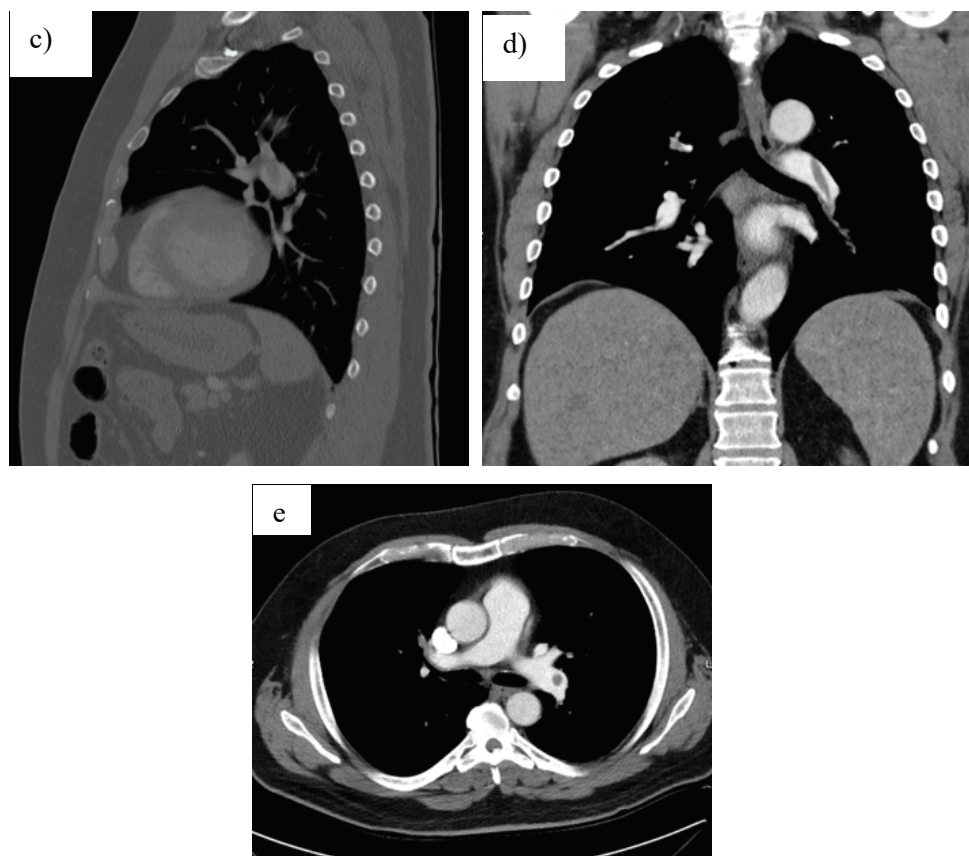


Figure 2. Pulmonary artery embolism (patient 2)

- c) In sagittal section
- d) In frontal section
- e) In coronary section

Discussion

The prevalence of thrombosis varies depending on age and gender. In general, around 3 % to 5 % of the German population suffer a DVT in the course of their lives. With regard to gender-specific differences, studies show that men have a higher risk of venous thromboembolism than women (2). At the same time, the Bonn Vein Study showed that every 6th man and every 5th woman suffers from chronic venous insufficiency, which is considered a risk factor for the development of thrombosis. Studies show that men and women perceive and process pain differently. It is said that women report more intense pain more often and that they have a lower pain threshold than men. This is influenced by hormonal differences (e.g. estrogen) and gender-specific differences in brain activity. (3) In addition, societal norms are discussed, leading men to confess to less pain. They tend to ignore discomfort for longer, be less open about it, or feel it less acutely, which may lead to them being diagnosed with thrombosis later.

Conclusion

These case reports show that DVT and the possibly associated PE, especially in men, often do not present with any pathbreaking symptoms or only mild symptoms. The main focus here is on the symptoms of pain. Any suspicion should be investigated. The D-dimer test can be seen as an important tool here, as it has a high specificity: if this test is negative, it is very likely that there is no DVT.

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