Muscular Vein Thrombosis Previous to Immobilization in Acute Tendo Achilles Rupture.

Case Report and review of literature.

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Background and rationale

- Treatment of Achilles tendon rupture include a period of immobilization which is a risk factor for distal vein thrombosis.

- There is a gap in literature linking the diagnosis of thromboembolic events to the Achilles rupture previous to the immobilization.

- The role of muscular vein thrombosis is gaining relevance within the current published data, despite there is no report of it association with tendo Achilles rupture before or after the initiation of treatment.
Background and rationale
Case Report

✓ Five consecutive patients with a diagnosis of traumatic Achilles rupture were evaluated.

✓ All patients sustained non traumatic injuries.

✓ Ultrasound to locate the rupture site and color Doppler ultrasound was performed by an expert in vascular echography, before the initiation of treatment.

✓ In all cases a thrombosis of the calf muscle veins was found. Surgical treatment was not advice in any of the patients and definitive treatment was conservative.
Discussion

✓ Calf muscle veins are deep veins that are nonpaired and not associated with named tibial arteries.

✓ Complex venous system that include the soleal and gastrocnemius veins that run as sinusoids within the muscles.

✓ In patients with symptoms of distal vein thrombosis, muscular veins have been shown to be the most common location for thrombosis with 23% to 41% of all patients.
Discussion

✓ Previous studies outlined immobilization needed for tendo Achilles rupture, as a risk factor for distal vein thrombosis.

✓ Our group of patients was diagnosed before immobilization was established.

✓ Muscle trauma associated with the tendinous rupture may have some influence in the thrombi generation triggering some kind of endothelial dysfunction, or affecting the calf muscle pump and creating venous stasis
Theoretical risk of further propagation to the profound venous system and subsequently to the pulmonary system.

This fact not only conditions the treatment of MVT itself, but also the treatment of the Achilles rupture.
References