

The Paratenon – a Fallacy of Sports Medicine

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BACKGROUND: The current vogue in sports medicine is the creation of new therapeutic interventions for tendonopathy. In particular High Volume Saline Injections^{1,2}, Polidocanol Injections^{3,4}, and Hyaluronic Acid⁵ are described as being injected into a 'space' around the achilles tendon. None of these papers make reference to the lower limb fascia, but all make reference to the existence of a 'paratenon' either surrounding, or overlying the Achilles, below which is the purported therapeutic delivery zone.

METHODS: During anatomical dissection of 22 embalmed and 10 fresh cadaveric lower limbs at the University of Melbourne, in the course of a complete examination of the fascia of the lower limb, the authors revisited the anatomy of the fascia around the Achilles tendon. Furthermore, on the fresh cadavers, the authors performed a needle dilatation, using silicon latex, under ultrasound guidance of the 'paratenon space' and then dissected the specimen to confirm the anatomical location.

RESULTS: No evidence of a discrete structure, independent of the fascia of the posterior compartment of the lower leg, was identified. This 'paratenon' is in fact the posterior fascia of the lower limb. This was confirmed macroscopically, and microscopically, being made up of similar collagen bundles as the fascia overlying the gastrocnemius and peroneal compartments and of similar thickness and density. The silicone sub-fascial space was congruent with the posterior fascia compartment.

CONCLUSION: Current theories in the development of tendonopathy⁶ make no reference to overlying fascia. The new treatments proposed make use of separating the interface between what we have shown as fascia, 'paratenon', and the tendon, as a therapeutic model. Fascia must play a progenitor or antagonistic role in the development of tendon disease and is an exciting avenue for future clinical research.

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