MORPHOMETRIC EVALUATION OF ACHILLES TENDON BY ULTRASOUND

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Calcaneal tendon lesions are among the most frequent tendinous lesions of the human body, corresponding to about 20% of lesions in runners. Lesions may be acute or chronic and may be related to a basic disease like diabetes, collagenosis, rheumatoid arthritis and gout. A hypovascular zone at 2-6 cm proximal to the tendinous insertion in the calcaneus is the most frequent site of lesion. Lesions affecting the calcaneal tendon are: peritendinitis, paratendinitis, tendinosis, partial and complete ruptures.

Ultrasound (US) is a highly effective method for calcaneal tendon evaluation. In cases of tendinosis and chronic partial ruptures, the physical examination may be inconclusive and US plays a significant diagnostic role, disclosing textural alterations and thickening. This tendon thickening is diagnosed by the loss of the concave-convex morphology and through the tendon measurement in the axial plane. Tendon measurement in the longitudinal plane may overestimate its thickness because of the obliquity of its course. Studies in the literature report an anteroposterior diameter ranging between 3.5 cm and 6.9 cm, with larger diameters in men, taller and elder persons. Therefore, the knowledge of reference values for the calcaneal tendon diameters may be of help in the evaluation of its thickening and, as a result, in the diagnosis of tendinosis and chronic partial ruptures.

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