

Quantitative analysis of the medial ulnar collateral ligament ulnar footprint and its relationship to the ulnar sublime tubercle

Farrow LD, et al.

Am J Sports Med (2011) 39, 1936

The authors studied the morphological characteristics of the footprint of the medial ulnar collateral ligament (MUCL) in 10 fresh frozen cadavers, 100 osseous specimens and an additional 10 osseous specimens with 3D CT. The length of the anterior band's ulnar attachment, the entire ligament length and the length of an osseous ridge, hitherto undescribed which they term the medial ulnar collateral ridge was identified on all specimens extending distally from the sublime tubercle to just medial to the ulnar attachment of the brachialis tendon. Its mean length was 24.5 mm. The mean length of the ulnar collateral ligament was 53.9 mm and the mean ulnar soft tissue footprint was 29.2 mm. The authors conclude that the MUCL has a long attachment and attaches to a previously un-described ridge of bone and elaborate on how current reconstruction techniques fail to restore the repaired ligament to its native anatomic state.

Substance P accelerates angiogenesis in tendon tissue and enhances paratendinitis in response to Achilles tendon overuse in a tendinopathy model

Anderson G, et al.

Br J Sports Med 2011;45;1017–1022

Background: Tenocytes produce substance P (SP) and its receptor (neurokinin 1 receptor NK-1R) is present throughout tendon tissue especially in the presence of tendinopathy. Hypercellularity and vascular proliferation is also present.

Using rabbit Achilles tendon as a model, rabbits were subjected to one week of overuse of the Achilles tendon in conjunction with SP injections in the paratenon. Exercised control animals received sodium chloride or no injections. Tenocyte number and vascular density as well as paratendinous inflammation were evaluated. Immuno-histochemistry to detect NK-1R was conducted. There was a significant increase in tenocyte number compared with un-exercised and un-injected tendons. The authors conclude that SP accelerated tendinosis in this rabbit model seemed to account for angiogenic response. The implication is that SP effects can be clinically blocked.

The prevalence of cam-type femoroacetabular deformity in asymptomatic adults

Jung KA, et al.

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This was a retrospective study of CT AP scout views of 419 randomly selected patients between April 2004 and August 2009 to determine the prevalence of cam type femoroacetabular impingement (FAI) in an asymptomatic population. From 215 male hips a total of 108 had a mean angle of 59.12°; of these 30 hips (13.95%) were considered abnormal. In women 5.56% of hips were considered abnormal. The authors conclude that cam type FAI does not appear to be uncommon in an asymptomatic population and that an increase in the α -angle is twice as frequent in males as in females. The authors state that a long term epidemiological study is needed to determine the natural history of these findings.

The patho-anatomy of patellofemoral subluxation

Monk AP, et al.

JBJS (Br) 2011, 1341–1347

In an MRI study of 60 patients with patella subluxation assessed on dynamic MRI, the relationship between subluxation and multiple bony, cartilaginous, and soft tissue factors that might predispose to subluxation were assessed using discriminant function analysis. Patella engagement (% of patella cartilage overlapping with trochlea cartilage) had the strongest relationship with subluxation. Patellae with >30% engagement tended not to sublux those with less than 30% engagement tended to sublux. Other factors associated with subluxation included tibial tubercle—trochlea notch distance, vastus medialis obliquus distance from patella, patella alta and bone/cartilaginous angles in the superior part of the trochlea. No relationship was found between subluxation and bone/cartilage sulcus angles in the middle and lower part of the trochlea, cartilage thickness and Wiberg classification of patella.

Abstracted by M. Sundaram, M.D.
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