Pain in Patients with Equal Radiographic Grades of Osteoarthritis in Both Knees: the Value of Ultrasound O-135

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Introduction: To investigate the association of ultrasound (US) features with pain and the functional scores in patients with equal radiographic grades of osteoarthritis (OA) in both knees.
Materials and Methods: 56 consecutive patients with knee OA: 85 symptomatic knees (81 knees with medial pain) and 27 asymptomatic knees, and 10 healthy patients without knee OA as a control were enrolled. US was done by two ultrasonographers blinded to patient diagnoses. US features were recorded and semiquantitatively scored (0-3) when appropriate. Since every enrolled subject received evaluations of their bilateral knees, we employed the general linear regression model and the binary logistic regression model, both with the generalized estimating equation (GEE) method to investigate the association of pain with the selected US features.
Results: In the OA group, common US findings were marginal osteophyte, suprapatellar synovitis, suprapatellar effusion (SPE), medial meniscus protrusion, medial compartment synovitis (MCS), lateral compartment synovitis, and Baker's cyst. Only SPE and MCS were significantly associated with knee pain. Visual analog pain scale (VAS) scores on motion were positively linearly associated with SPE and MCS ($P < 0.01$). Only MCS was degree-dependently associated with VAS scores at rest, the Western Ontario and McMaster Universities pain subscale, and the presence of medial knee pain ($P < 0.01$) after adjustments for age, gender, BMI, radiographic grade, and other US features. In the control group, no US features were associated with knee pain.
Discussion: US inflammation features, including SPE and MCS, were positively linearly associated with knee pain in motion in patients with equal radiographic grades of OA in both knees.. MCS was also degree-dependently associated with pain at rest and the presence of medial knee pain. These findings show that synovitis was one important predictive factor of pain. Further studies to confirm the association of US features and pain are warranted.

前十字韌帶重建以自體腿後肌肌腱移植或自體髕骨肌腱移植後呈現不同生物力學性質
Anterior Cruciate Ligament Reconstruction with Hamstring Tendon or Patellar Tendon Autograft Exhibit Different Muscle Strength O-136

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Introduction: We hypothesize long term results of ACL reconstruction with hamstring autograft or patellar tendon autograft, isokinetic performance will be the same. The purpose of the study is to quantify and interpret the isokinetic properties between two autografts.
Materials and Methods: Ten patients were included in this study. There are five subjects in patellar tendon autograft group and another five patients in hamstring tendon autograft group.
Lysholm score, anterior drawer test and Lachman test were evaluated.
Isokinetic contraction were performed at angular velocity of 60 d/s, 120 d/s, 180 d/s, followed by maximum voluntary isometric contraction at 45 degrees and 90 degrees of knee flexion.
Results: There was a statistic significant difference between normal knee and reconstructed knee at angular velocity of 180 degrees concentric knee flexion in hamstring tendon autograft group. The Z value was -1.88 (p=0.048) There was a statistic significant difference at angular velocity of 120 degrees concentric knee extension in patellar tendon autograft group. The Z value was -1.91 (p=0.042).There was a statistic significant difference in isometric contraction at 90 degrees of knee extension in patellar tendon autograft group. The Z value was -2.02 (P=0.04).
Discussion: Deficiency in knee flexion muscle strength after harvesting hamstring tendon and in knee extensor muscle strength after harvest quadriceps tendon may persist longer than it was expected.