PATELLOFEMORAL JOINT DYSFUNCTION: LOOKING BEYOND THE PATELLA

Recent research published in the November 2003 issue of Journal of Orthopaedic and Sports Physical therapy, has shed new light on an old problem: patellofemoral joint dysfunction. This special issue focuses on the influence of abnormal lower extremity mechanics on patellofemoral joint dysfunction. As excessive lateral tracking of the patella has been hypothesized to be contributory to the development of patellofemoral pain, conservative approaches to treating this disorder traditionally have focused on the patella (i.e. correcting or altering patellar tracking through treatments such as patellar taping/bracing, vastus medialis oblique strengthening, stretching, etc.).

CONTROLLING THE FEMUR MAY HELP

However, recent research has suggested that the patellofemoral joint may be influenced by the segmental interactions of the lower extremity. In particular, abnormal motions of the tibia and femur in the frontal and transverse planes during function activities have been reported to have an effect on patellofemoral joint dysfunction. Evidence in support of this premise has been provided by Powers et al.2 who used kinematic MRI techniques to evaluate patellofemoral joint motion during weightbearing and non-weightbearing movements in patients with lateral patellar subluxation. The results of this study found that the patellofemoral joint kinematics during non-weightbearing could be characterized as the patella rotating on the femur, while the patellofemoral joint kinematics during the weightbearing conditions could be characterized as the femur rotating underneath the patella.

These findings suggest that interventions aimed at controlling femoral motion proximally (i.e. strengthening the hip external rotators) or distally (i.e. foot orthotics) may play a role in treating this condition in certain patients. In addition, such research suggests that clinicians should be cognizant of the possibility that the evaluation and treatment of patellofemoral joint dysfunction may not be at the area of pain (i.e. patella), but focused on the segments and joints proximal and distal to the patellofemoral joint (i.e. hip and foot/ankle).

References


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