Background: 20 year-old, 185cm, 65kg, female, NAIA golf athlete presented with insidious onset of pain in her left lower extremity partially localized at the medial aspect of the knee and superior aspect of the patella. After initial evaluation, the AT treated athlete conservatively for suspected pes anserine tendinopathy by controlling pain and ensuring maintenance of strength of the surrounding musculature of the knee. Athlete was able to maintain participation with limited complaints. The following season, athlete was re-evaluated after complaints of persistent pain present during athletic activities with no mechanism of injury. The evaluation was unremarkable.

Differential Diagnoses

- Medial Meniscal tear
- Pes anserine bursitis/tendinopathy
- Patellofemoral pain syndrome
- Lateral patella subluxation

Clinical Evaluation

AROM was WNL, no palpable tenderness (-) Patellar tap, (-) Lachman’s, (-) Valgus and Varus stress tests, (-) Anterior Drawer, (-) Posterior drawer, (-) Anterior and posterior compartment and compression, (+) Bowstring, (+) McMurray’s, (+) Slocum, (+) Clarke’s sign, (+) Patellar grind, (+) Houghton’s plica, (+) Wilson’s sign, and (+) Noble compression.

One month later, athlete came to AT unable to weight bear with (+) palpable tenderness along the medial joint line following a competition. Perplexed, AT then referred athlete to learn orthopedic surgeon for an MRI.

MRI findings revealed: partial tear of medial patellar retinaculum, mild lateral subluxation of patella, chondromalacia patellae, and baker’s cyst ruptures. Athlete decided to obtain a second opinion and MRI with another Orthopedic before surgical confirmation. The findings disclosed that athlete “failed” a femoral groove bilaterally, which is an abnormally and lead to her diagnosed trochlear dysplasia. Treatment: The surgical procedure included a left knee arthroscopy with debridement and chondroplasty performed by university teaching physician. Unique: Based on the patient’s reported symptoms, there were no significant findings during physical examination. Trochlear dysplasia has been identified as a predisposition to patellar instability, patellar subluxation and dislocation, and patellofemoral osteoarthritis. Conclusion: The athlete is to refrain from excessive loaded knee flexion exercise for life due to diagnosis. This case provided a learning opportunity for the athletic training community to be aware of probable cause of knee instability.

Abstract

Femoral Trochlear Dysplasia in College Level Golf Athlete

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Purpose

The case demonstrated the importance of developmental structural knee deformities that affect athletic performance among the Athletic Training profession. The common structural issues that the profession is well aware of which affect knee stability are genu recurvatum, valgus, valgum, patella alta, baja, as well as foot posture. Trochlear dysplasia should be considered among the athletic population.

References

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