

Quadriceps Tendon Rupture with Avulsed Fracture of Patella and Resulting Patella Baja Deformity

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Abstract

Case Report

Rupture of the quadriceps tendon is a rare injury. Predispositions such as recurrent microtrauma or degenerative changes are typically present. Clinical examination is typically sufficient to diagnose acute quadriceps tendon ruptures. People older than 40 with underlying medical issues are more likely to get quadriceps tendon ruptures. Early care improves the result and makes the damage debilitating. Radiographs and ultrasonography are frequently necessary for an early diagnosis when the traditional clinical signs are absent.

Keywords: Quadriceps tendon rupture, radiograph, USG, patella Baja.

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CLINICAL HISTORY:

H/O slip while walking with sudden flexion four years back. Since then, he has complained of limp and mild pain over the right knee while walking and

needs assistance extending the right knee. Not a K/C/O T2DM/ HTN. On inspection and palpation, the patella is not visualised in the usual location, dislocated inferiorly, as shown in Figure 1.



Figure 1

IMAGING FINDINGS:

Radiograph bilateral knee AP lateral view (shown in Figure 2 & 3)

- Cortical irregularity over base of right patella with avulsed fractured fragment along the lower third shaft of femur bone.

- Patella is displaced inferiorly.
- Degenerative changes in form of reduction in medial joint space and marginal osteophytes.



Figure 2



Figure 3



Figure 4: Shows comparison between with case and control

ULTRASOUND FINDINGS:

- Linear high frequency transducer probe USG images (shown in Figure 5)
- On right side, hypoechoic bulky right quadriceps muscle with architectural distortion and avulsed fractured fragment measuring 5.8 mm.
- On left, normal echogenic quadriceps muscle fibres.



Figure 5

DISCUSSION

Quadriceps tendon rupture (QTR) is a common condition that typically affects male patients over 50 [1-4]. 1.37/100.000 quadriceps tendon injuries occur worldwide [5]. They account for a significant portion of extensor mechanism injuries, particularly in patients over 50. In a 25-year study of extensor knee injuries, Garner *et al.*, discovered that quadriceps tendon ruptures account for 28.9% of cases [6]. Since about 30% to 35% of simultaneous bilateral quadriceps tendon ruptures (SBQTR) are spontaneous, this is a fortunate finding [4, 7]. Sometimes predisposing medical factors such as systemic lupus erythematosus, hyperparathyroidism, gout, diabetes mellitus, steroid use, obesity, and advanced age might be linked to SBQTR [3, 4, 8, 9]. Other less frequent risks include fluoroquinolones, severe osteomalacia, and amyloidosis [5, 10]. SBQTR can still arise in healthy people despite being linked to known predisposing risk factors [3, 9]. Orthopaedic surgeons, family doctors, and emergency room doctors all need to be able to diagnose QTR at the first sign of the condition. Early surgical management and diagnosis are essential to achieve a satisfactory outcome equivalent to unilateral injuries.

Take home message: early surgical management, diagnosis is essential.

Final diagnosis: Quadriceps tendon rupture with avulsed fracture of patella and resulting patella Baja deformity – right

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