Complete Tear of Quadriceps Tendon

Pornthep Mamanee, MD[1]; Somsak Gerapralungsub, MD[2]

[1]BASEM, Bangkok Hospital, Bangkok Hospital Group, Bangkok, Thailand.
[2]Radiologist, Bangkok Hospital, Bang kok Hospital Group, Bangkok, Thailand.

Received: May 10, 2016 Revision received: May 13, 2016 Accepted after revision: June 22, 2016
BKK Med J 2016;12:109-110.
www.bangkokmedjournal.com

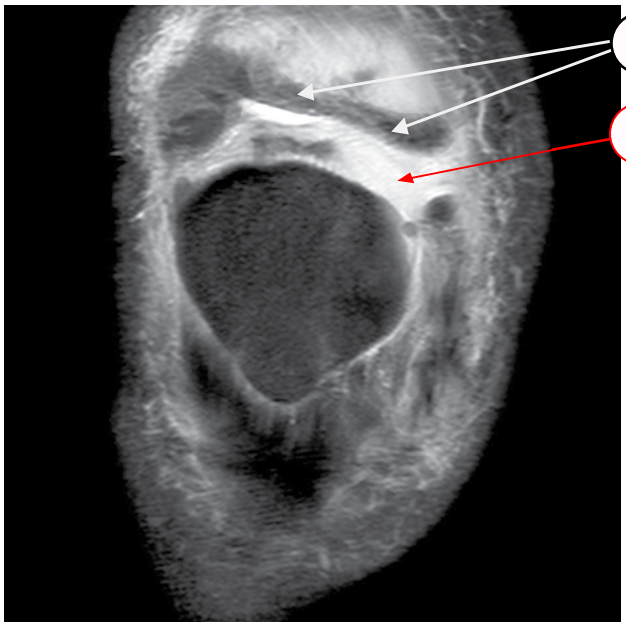


Figure A: MRI coronal PDFS shows complete tear of quadriceps tendon with demonstrated stump seen as hypointensity (white arrows).Hyperintensity (red arrows) is represented hemathrosis.

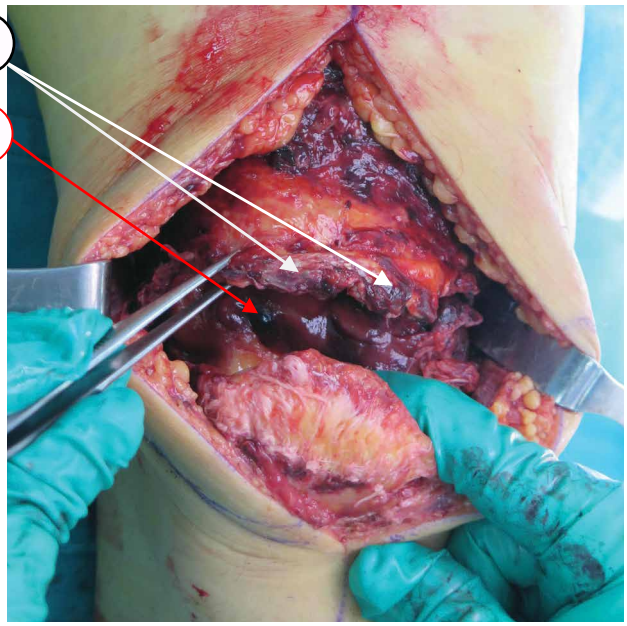


Figure B: Operative findings shows complete tear of quadriceps tendon (white arrows) representing the tendon. Hemathrosis is demonstrated (red arrow).

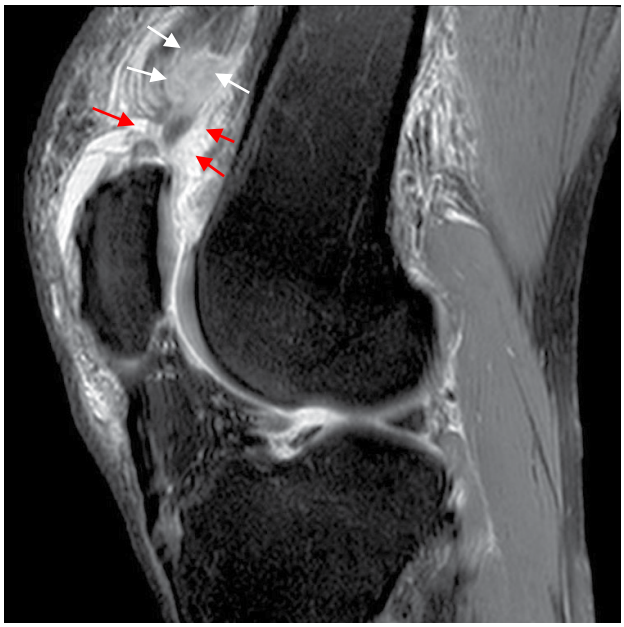


Figure C: MRI surrounding with soft tissue edema in sagittal PDFS shows intermediate intensity (white arrows) representing edematous quadriceps tendon. Hyperintensity (red arrows) beneath tendon tear is hemathrosis.

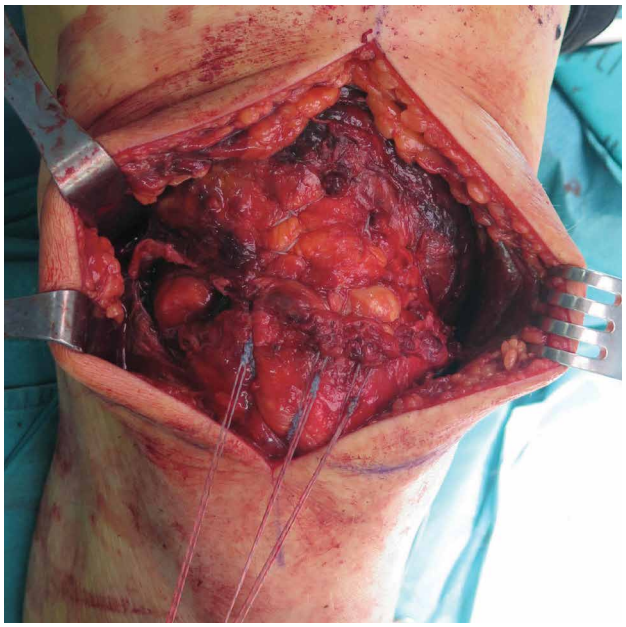


Figure D: Post complete repair quadriceps tendon by direct repair by pulled-out-suture.

A 60- year-old male fell on his right knee hitting the ground and heard an accompanied sound "**tik**" immediately. He developed severe pain and was unable to extend his knee. Diagnosis was complete tear of quadriceps tendon by physical examination and confirmed by MRI study. His underlying diseases were atrial fibrillation and asthma which was treated with lanoxin and aspirin. The patient underwent direct repair by pulled-out-suture. Eventually he recovered after the operation followed by rehabilitation.

A tear of the quadriceps tendon is common in athletes. The predisposed factors are underlying diabetes mellitus, chronic renal failure, cortisone administration, systemic lupus erythematosus (SLE), gouty arthritis, hyperthyroidism or underlying decreased vascular supply for instance ischemic from arteriosclerotic changes. Bilateral quadriceps tendon tears are likely due to underlying gout, diabetes and the use of steroids.[1] The majority of tears start at the central initiate to periphery. It occurs at the osteotendinous junction transversely. It may extend to adjacent tendons such as rectus femorus, vatus intermedius. The injury occurs in the flexion position. Hemathrosis is detected clinically. Mobile patella is indicated and the patient is unable to extend the knee. The ultrasonic scan may help in emergency for confirmation. The routine radiogram shows patella in a low position when compared with the opposite site. The gold standard diagnosis is MRI. The typical MRI finding is fluid in the gap between the tendon disruption.[2]

References

1. I Ilan D, Tejwani N, Keschner M, et al. Quadriceps tendon rupture. *J Am Acad Orthop Surg* 2003;11:192-200.
2. Manaster BJ, Andrew CL, Petersilge CA, et al. Part III clinical based: Knee and leg. *Expert ddx: musculskeletal*: Published by Amirsys® (EXPERTddx (TM)) 2009: 84.

ISSN 2287-0237 (online)/ 2287-9674 (print)