

Case report

Patellofemoral syndrome

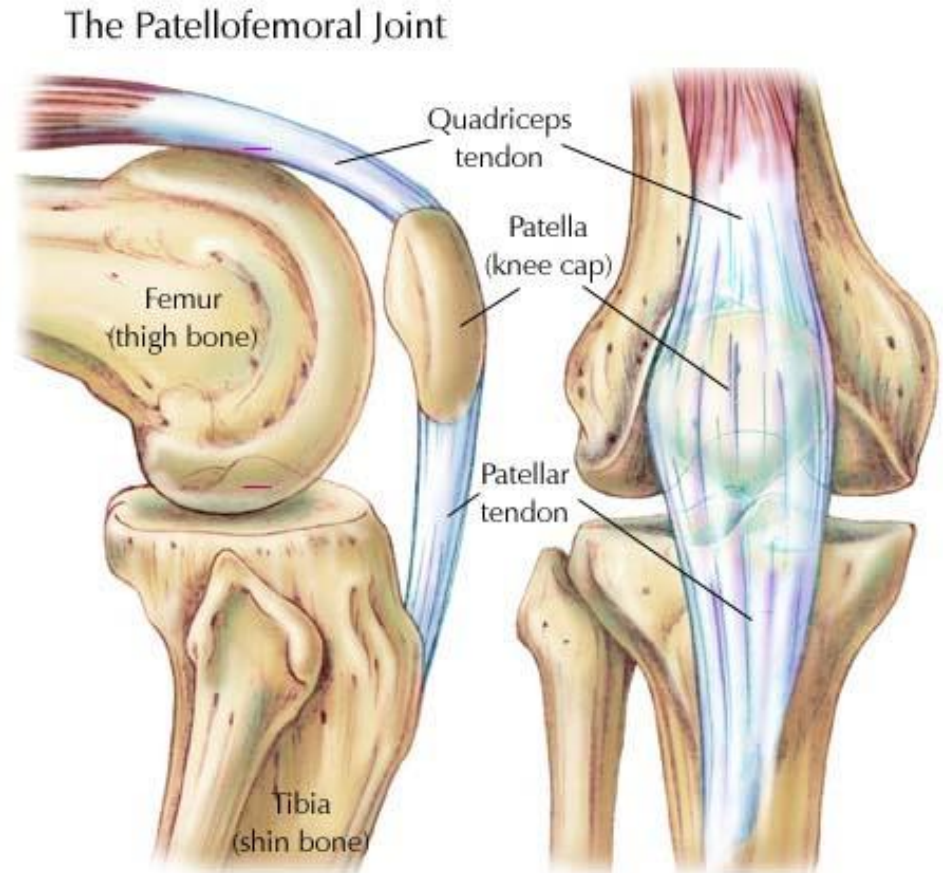
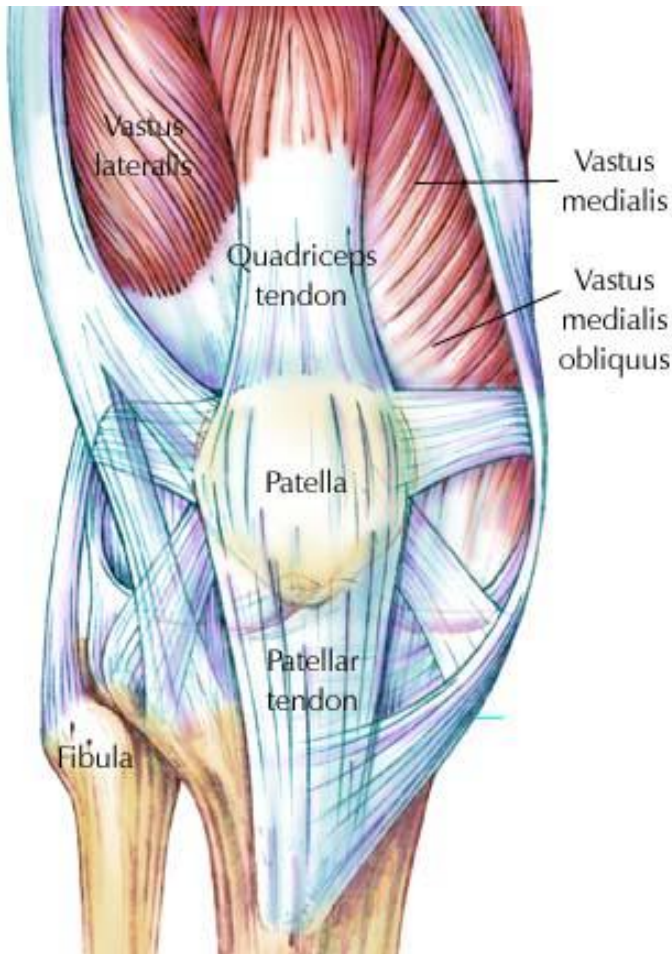
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History

- Male, 30 ys
- Pain around kneecap for 3 months
- Pain aggravated by squatting, stair climbing, sports (badminton)
- Normal walking
- No previous trauma

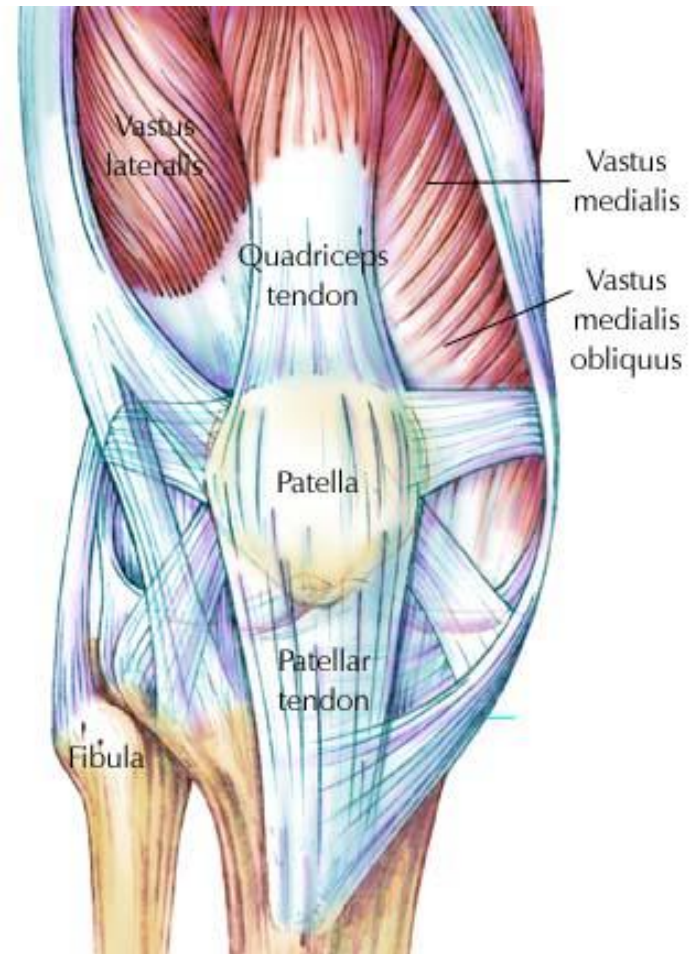
Anatomy of the knee



Anterior knee pain

Patellofemoral syndrome

- Patellar instability
- Overuse syndrome
- Patellar compression syndrome
- Soft tissue lesions
- Biomechanical linkage problem
- Direct trauma



Examination

- No swelling, no pain point
- Negative tests for ligaments, menisci
- Normal ROM of hip, knee, ankle
- Normal mobilisation of patellar
- Crepitance under pressure on patellar at flexion of 60⁰-70⁰
- Weakness of quadriceps (atrophy of VM)

MRI



Treatment

- Rest
- Medication: NSAIDs, Steroids...
- Physiotherapy
- Surgery

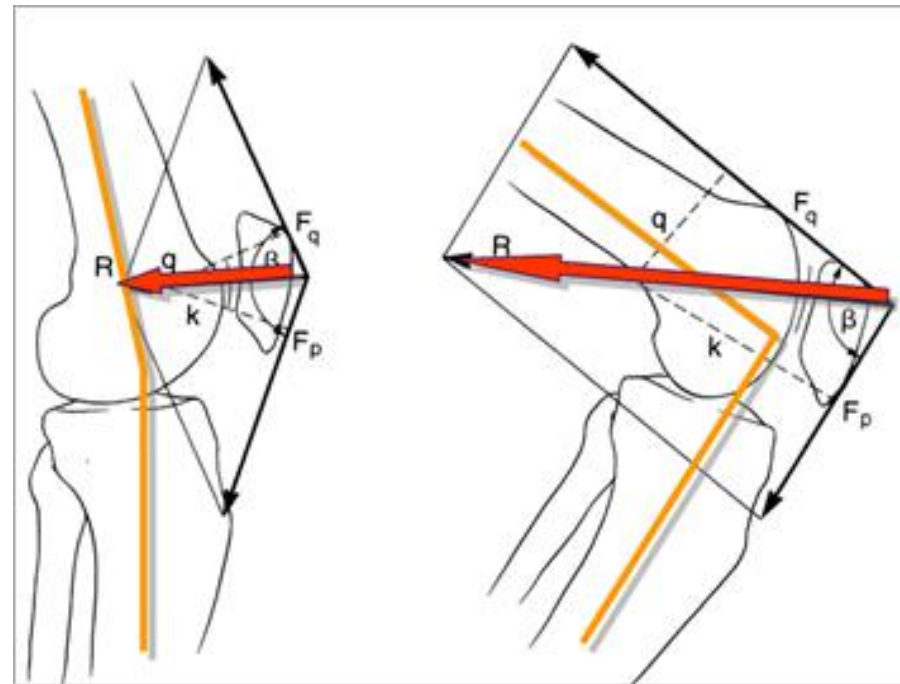
Physiotherapy

- Reduce pain and inflammation
- Correct abnormal patellar position
- Correct abnormal biomechanics
- Strengthen vastus medialis oblique (VMO) and hip adductors
- Modify activities

Patellofemoral joint reaction force

PFJRF:

- Level walking: 0.5 xBW
- Going upstairs: 3-4 xBW
- Squatting: 7-8 x BW

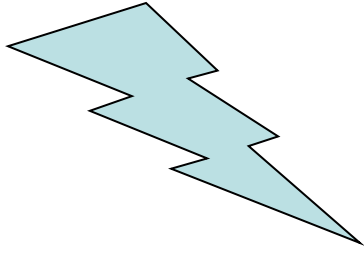




Should do

- Isometric exercise (0° , 90° ?)
- Closed chain terminal extension with limited range (1/4 squat, leg press)
- Activities:
 1. Swimming (flutter kick, knees straight)
 2. Cycling (with a high seat)
 3. Slow jogging on grass





Should not do

- Exercises at angles 20° - 75°
- Activities:
 1. bunny hop
 2. running (sprints, downhill)
 3. climbing stairs (up and down)
 4. squatting

Existing problem

How to strengthen the vastus medialis?

Thank you for your attention!