



Rio de Janeiro 2011
Pre-Congress Course



Université Claude Bernard



Lyon 1

Management of Patellofemoral Disorders in Athletes

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Which athletes are at risk?

- Patellofemoral instability is a relatively common problem in athletic populations
- Patients involved in cutting and pivoting sports and contact sports are at the highest risk
 - In a series of 79 cases of patellofemoral instability in athletes:
 - American Football – 32 cases (41%)
 - **Basketball – 14 cases (18%)**
 - Football – 6 cases (8%)
 - Baseball – 5 cases (6%)

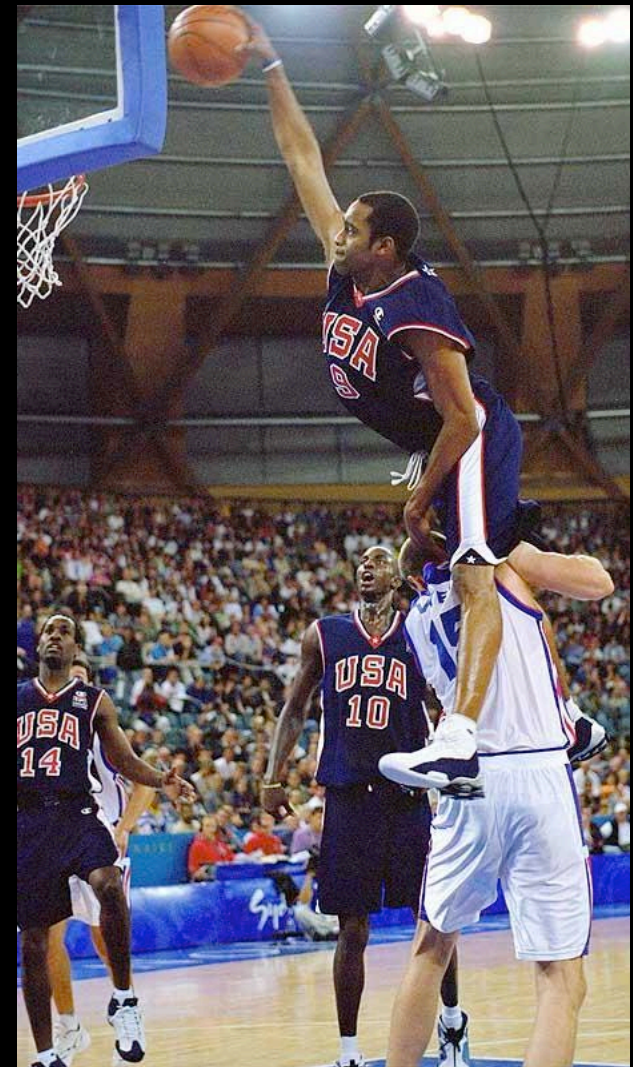
Younger Athletes

- Patellofemoral instability is more common in younger athletes
- Younger athletes are more likely to exhibit associated anatomic abnormalities
 - Trochlear dysplasia
 - Patella alta
 - Lateralized tibial tubercle



Elite Athletes

- Elite athletes are significantly less likely to have associated anatomical abnormalities
 - Dislocations are often associated with significant trauma
 - Injury to the MPFL is required for complete patellar dislocation



Evaluation of Elite Athletes

- Obtain a detailed history
 - Circumstances of the injury
 - Traumatic?
 - Is there a history of prior dislocation?
 - What are the symptoms currently
 - Instability?
 - Has the patient had any rehabilitation?



Imaging

- Plan films
 - Rule out fracture
 - Identify anatomical abnormalities
 - Patella Alta
 - Trochlear dysplasia
- MRI
 - Evaluate articular cartilage
 - Identify loose bodies
 - Confirm MPFL injury



Decision Making - #1

- Operative versus nonoperative management
 - Recurrent dislocation can be anticipated in approximately 25% of athletes treated nonoperatively
 - But... a significant proportion of those who do not redislocate may experience subjective feelings of instability that limit athletic performance
 - Other factors may influence this decision
 - Timing of season
 - Contract / playing time issues

Garth et al, AJSM, 1996

Cofield et al, J Trauma, 1973

Fondren et al, JBJS-Am, 1985



Decision Making - #1

- Nonoperative treatment may be a good option for some athletes
 - Those in whom the dislocation was associated with a direct blow to the knee
 - This with minimal patellar apprehension on physical exam (negative Smillie test)
 - In-season athletes
 - Athletes involved in sports in which bracing is possible

Decision Making - #1

- Immediate operative management
 - Those with associated anatomic abnormalities
 - Those in whom the dislocation occurred with minimal trauma
 - Recurrent dislocations
 - This with high patellar apprehension on physical exam (positive Smillie test)
 - Athletes involved in sports in which bracing is not permitted?
 - Athletes at the end of their season?

Decision Making - #2

- Which surgery?
 - Rupture of the MPFL is required for dislocation
 - We recommend MPFL reconstruction in all cases of patellar instability in athletes
 - But what about addressing other anatomic abnormalities?

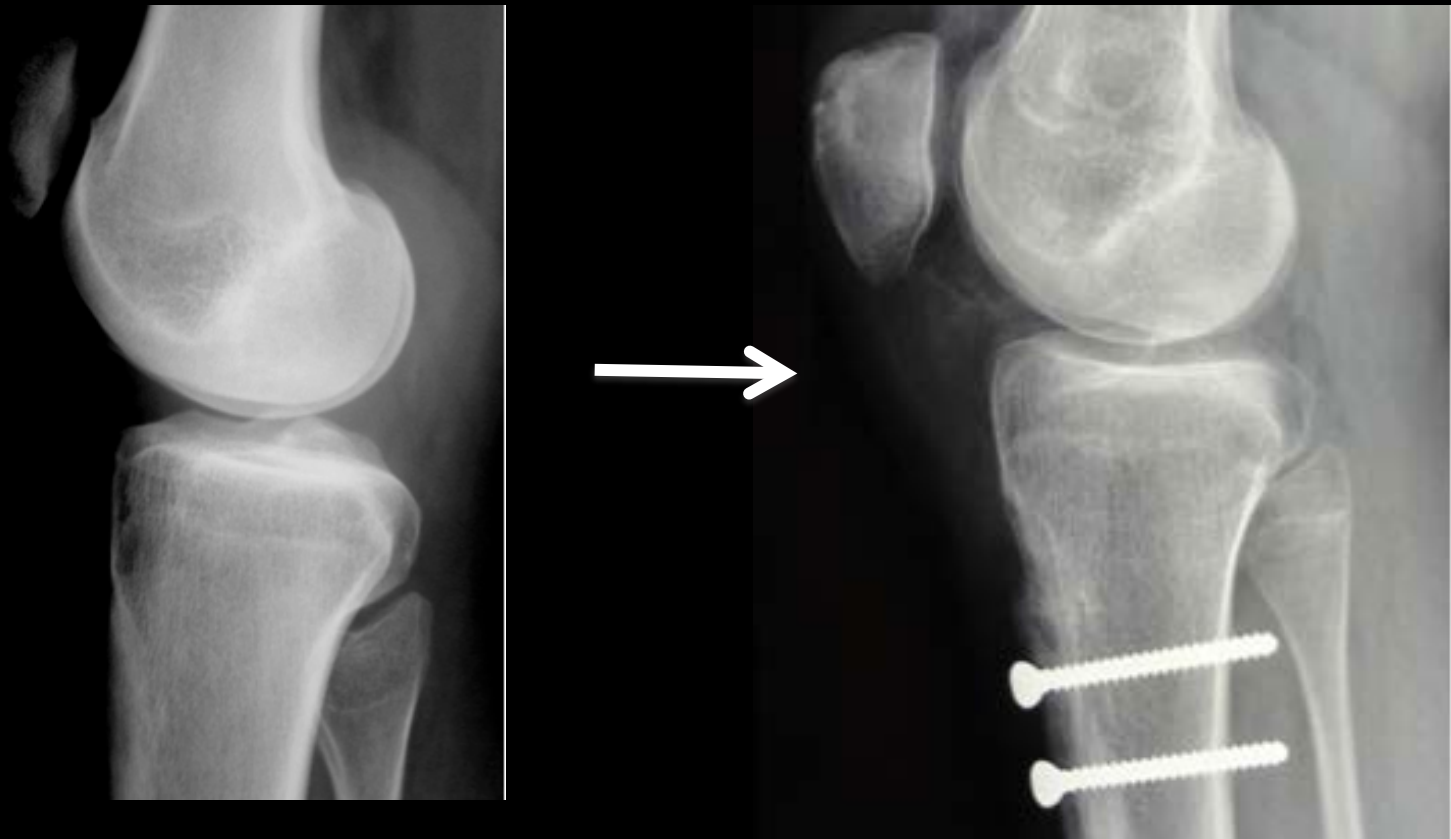
Patella Alta

- Patella alta may be more frequent in basketball players
 - Increased patient height may contribute to a longer tendon
 - Use a ratio (Caton-Deschamps or similar) to assess height rather than a numerical cutoff (such as 62mm) for patella alta
 - High patellar tendon loads in jumping athletes may also contribute to mildly increased patellar tendon length



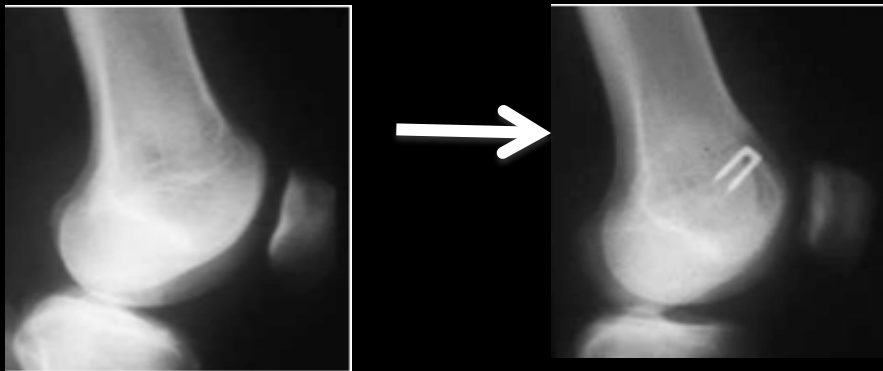
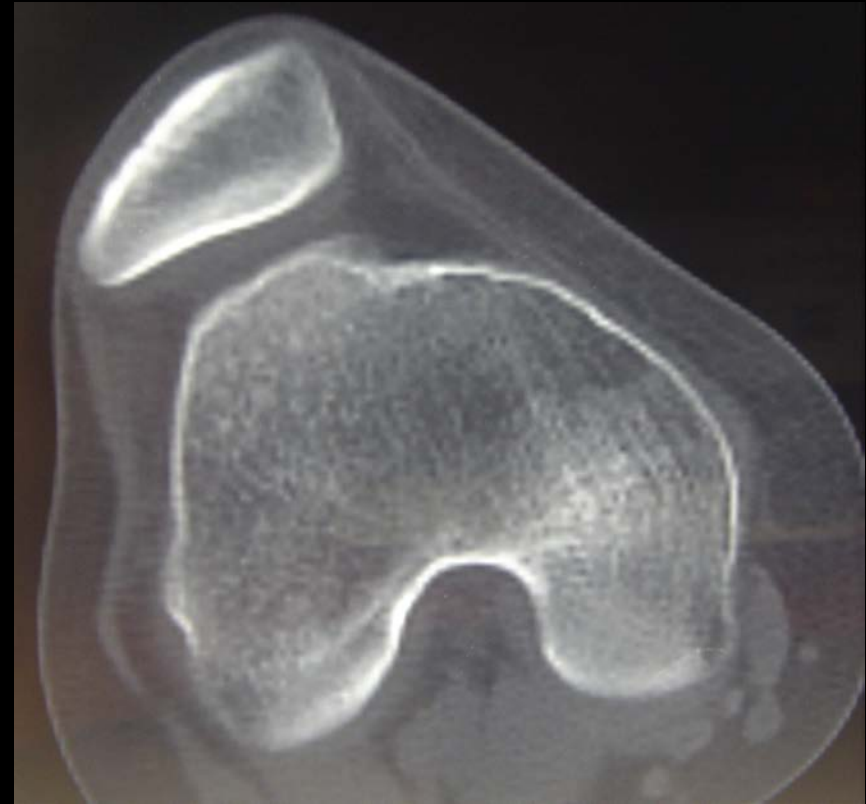
Patella Alta

- The addition of a distalizing tibial tubercle osteotomy in patients with associated patella alta is useful



Other abnormalities

- Lateralized tibial tubercle
 - Medialization
- Trochlear dysplasia
 - Trochleoplasty



Additional procedures

- In most elite level athletes, associated anatomical abnormalities do not require treatment
- Those patients with abnormalities severe enough to require treatment never reach elite athlete status





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Thank you

