Patellofemoral disorders
Classification and... Terminology
Professor Philippe Neyret
E Servien
S Lustig
G Demey
Lyon France

Don Fithian
Several previous dislocations

Several previous dislocations
A Trillat  H Dejour  G Walch

1959  1987

P. dislocations

No Symptom

One or more

Morphological
Abnormalities

Control Group

Episodic
Patellar
Dislocation

Control Group

D Fithian, Ph Neyret, E Servien
Patella instability: The Lyon experience
Techniques Knee Surgery, 2007, 6, 112-123

Dejour H, Walch G, Neyret P, Aelleine P
Trochlea dysplasia, Rev Chir Orthop 1990, 76: 45-54
Morphological abnormalities in Episodic Patellar Dislocations

- **TROCHLEAR DYSPLASIA**
  1. Patella alta
  2. TTTG > 20 mm
  3. Tilt > 20°

- Recurvatum
- Valgus
- Fem antetorsion
- Female

- **Trochlear dysplasia**

- **Crossing sign**
- **Trochlear bump**

- **Normal Trochlea**

- **Trochlear dysplasia**

- The crossing sign is present in 96% of cases in Episodic Patellar Dislocation group... and only 3% of the control group...

- **X-Rays**

- The bump or boss or prominence is defined by the distance between the tangent to the anterior cortex femur and the parallel passing through the most anterior point of the trochlea groove.
Trochlear dysplasia

The mean value of the prominence is 3.2 mm in the Episodic Patellar Dislocation group and – 0.8mm in the control group.

Trochlear dysplasia

Tecklenburg K, Dejour D, Hoser C, Fink C
Bony and cartilaginous anatomy of the patellofemoral joint
KSSTA, 2006, 14, 235-240

4 grades

A

B

C

D

Crossing sign

Double contour

Sus trochlear spur

Patellar height

TT-TG

Patellar tilt

Threshold

Caton & Deschamps Index

AT/AP

Patella alta > 1.2

Patellar Index

Threshold > 1:2
**TT.GT> 20 mm**

<table>
<thead>
<tr>
<th></th>
<th>EPD</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19.8mm</td>
<td>12.7mm</td>
</tr>
<tr>
<td>(%)</td>
<td>56%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**EPD**

**Patella tilt > 20°**

<table>
<thead>
<tr>
<th></th>
<th>EPD</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.5°</td>
<td>10°</td>
</tr>
<tr>
<td>(%)</td>
<td>90%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Secondary Factors**

- F. Antetorsion
- G. Recurvatum
- G. Valgum
- Female

**No Threshold**
Clinical Sciences
Neyret P, Robinson AHN, ..., Chambat P
Patellar tendon length – the factor in patellar instability?
The Knee 2002

Servien E, Ait Sislem T, Neyret P
Study of the patellar apex in objective patellar dislocation.
Rev Chir Orthop 2003, 89, 605-612

Escala J, Mellado J, Olona M, Giné J, Sauri A, Neyret P
Objective patellar instability: MR-based quantitative assessment of potentially associated anatomical features
KSSTA 2006, 4, 264-272

Servien E, Verdonk P, Neyret P
Tibial tuberosity transfer for episodic patellar dislocation

Thank You,
Francois, Philippe...
and good luck in Doha!

University of Lyon