

Val d'Isère 2012

Multiligament injuries

Results of different treatments

4th Advanced Course on Knee Surgery

Ph. COLOMBET

Bordeaux Mérieux Sports Medicine Center

Val d'Isère 2012

Preamble

The dislocated knee is a **severe injury** resulting

- from **violent trauma**
- Definition: disruption of at least **3 of the 4 major ligaments** of the knee
- Leading to significant functional instability



G. Fanelli AJSM 2005

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Preamble

- **Vascular and nerve damage**, as well as associated **fractures**,
- May contribute to the **challenge of caring** for this injury
- The treatment of this complex problem becomes **more and more surgical**



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Preamble

- **Bony injuries** are treated more aggressively
- **Complete ruptures** are treated more aggressively than partial
- **Level of importance** for treatment:
 - PLC/LCL
 - ACL
 - PCL
 - MCL

ESSKA
25th May 2006

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Results of different treatments

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Results

Conservative treatment

(n=12)

- **Stiffness 25%**
 - 1 Mob\Anest. 2 Arthrolysis
- Flexion **mean 95°** (40-120)
- Extension **2/12 (-5°)**
- Function **8/10 satisfied**

Sympo SOFCOT 2008

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Results Val d'Isère 2012

Conservative treatment

- **Laxity (n=12)**
 - Lachman A+B 50%
 - Posterior draw 80%
 - Lateral laxity 90%
 - Medial laxity 80%

} A+B

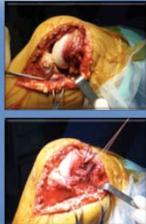
Function results rather good but few patients

Sympo SOFCOT 2008
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Surgical treatment

- **Both Cruciate + MCL n=14**
 - No improvement on anterior laxity
 - Better on posterior draw <10 mm (12/13)
 - Improvement of medial laxity <15° (10/13)
 - Mean of Flexion = 100° (80° - 130°)



Sympo SOFCOT 2008
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Results Val d'Isère 2012

Surgical treatment

- **Both Cruciate + LCL n=13**
 - No improvement on anterior laxity
 - Better on posterior draw <10 mm (11/12)
 - Intermediate on lateral laxity <15° (5/12)
 - Mean of Flexion = 95° (40° - 130°)



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Results Val d'Isère 2012

Surgical treatment

- **Both Cruciate + MCL + LCL n=8**
 - Clear improvement of:
 - Anterior laxity: 80%
 - Posterior laxity 80%
 - Lateral laxity 80%
 - Medial laxity 80%
 - But Mean of Flexion = 72° (60° - 135°)



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Results Val d'Isère 2012

Surgical treatment

- **Post op evolution**
 - Mean of immobilization : 25 days
 - Stiffness
 - Mobil Anest. 11/41 (27%)
 - Arthrolysis 10/41 (24,5%)
 - Infection = 2/41 (5%)

Sympo SOFCOT 2008
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Results Val d'Isère 2012

CONCLUSIONS

- **Surgical treatment**
 - Stiffness (@ 6/9 months)
 - Perfect on PCL et MCL
 - Poor on LCL
- **Conservative treatment**
 - Quite good results but few indications

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Results Val d'Isère 2012

Fresh-frozen graft

- SUBJECTIVE Rating

	Acute	Chronic
Lysholm	91 (72-100)	80 (51-100)
KOOS (ADLs)	91 (73-99)	84 (64-99)
KOOS (Sports)	89 (60-100)	69 (0-100)

C. Hamer ISAKOS 2009
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Results Val d'Isère 2012

Fresh-frozen graft

- SUBJECTIVE Rating
- IKDC Subjective Score
 - Normal 9,7%
 - Nearly normal 64,5%
 - Abnormal 12,9%
 - Severely abnormal 12,9%

74,2%

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Results Val d'Isère 2012

Fresh-frozen graft

RANGE of MOTION (n=31)

- Flexion Loss
 - 0° to 4° 10
 - 5° to 15° 15
 - > 15° 6
- Extension Loss *Acute=Chronic*
 - < 3° 26
 - 3° to 5° 3
 - 6° to 10° 1
 - > 10° 1

C. Hamer ISAKOS 2009
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Results Val d'Isère 2012

- Overall IKDC
 - Normal 9,7%
 - Nearly normal 48,4%
 - Abnormal 25,8%
 - Severely abnormal 16,1%

16 of 18 A+B were acute

58%

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Results Val d'Isère 2012

- CONCLUSIONS
- Reconstruction with fresh-frozen allograft provides **satisfactory functional results** with acceptable range of motion and stability
- The ability of patients to return to high demand sports and **heavy manual labor is less predictable**

C. Hamer ISAKOS 2009
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Results Val d'Isère 2012

- Other results
- Consensus for:
 - Better results in acute than in chronic
 - Results moderate improvable
 - OK for daily life
 - Reduction of sport level
 - Doubt for the old days (OA)



Tsurbakis et al, KSSTA 2006 level 3
Karataglis et al, KSSTA 2006, level 4

C. Hamer ISAKOS 2009
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CONCLUSION Val d'Isère 2012

- **Acute MCL tears + ACL/PCL tears** may in certain cases be treated with bracing.
- **Postero-lateral corner injuries + ACL/PCL tears** are **best treated with primary repair**, combined with **reconstruction** using strong **auto graft** (split biceps tendon, biceps tendon, semitendinosus) or **allograft tissue**.

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Thanks for your attention!

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