

Limits of multiple revision

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When to stop the escalation?

Frequency

- Over a 3-year period, 460 patients with ACL reconstruction failure were prospectively enrolled and subsequently underwent revision reconstruction.
- **11 %** of the cohort had experienced multiple reconstruction failures

Wright RW, Huston LJ, Spindler KP, et al. Descriptive epidemiology of the multicenter ACL revision study (MARS) cohort. Am J Sports Med. 2010;38: 1979–86.

Little evidence

- 17 patients with multiple ACL revision.
- 15 reported persistent instability, pain, or swelling.

Wirth CJ, Peters G. The dilemma with multiply reoperated knee instabilities. *Knee Surg Sports Traumatol Arthrosc.* 1998;6:148–59.

- 10 consecutive patients who underwent repeat revision.
- IKDC A and B in 7 of 10 patients.

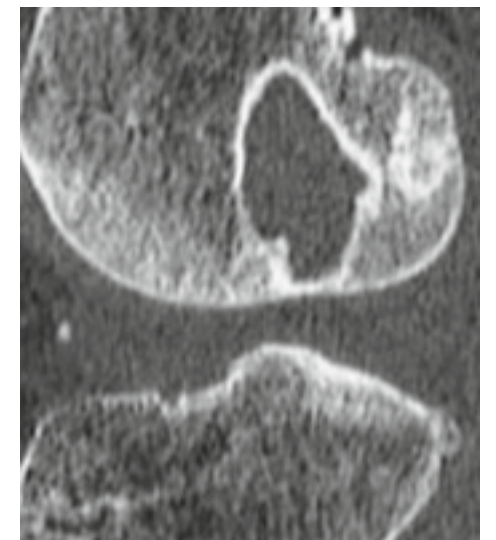
Wegrzyn J, Choteau J, Philippot R, Fessy MH, Moyen B. Repeat revision of anterior cruciate ligament reconstruction. A retrospective review of management and outcome of 10 patients with an average 3-year follow-up. *Am J Sports Med.* 2009;37:776–85

Multiple failures

- What are the problems of multiple ACL revisions?
- The same than the first ACL revision...
- ...but more!
- —> Systematic approach to determine potential subtle causes of failure to define the therapeutic plan.

Assessment

- **History:** Scrutinize the medial record!
Etiology (ies).
- **Physical examination:** Don't forget alignment, accurate motion, associated laxity...
- **Appropriate imaging:** Standard X Rays (bilateral weight-bearing, lateral in full extension, tibial slope, patella views). Limb alignment measurement. MRI and CT Scan.



Knee function

- Stiffness. Flessum
- Muscle deficit
- Pain.
- Osteoarthritis!





30 y.o. female
3 surgeries



Preoperative planning

- Which graft?
- Which fixation?

Which graft?

Depending on previous surgery

- Hamstrings
- BTB (18 months)
- Quadriceps tendon
- Opposite side
- Allografts
- Xenografts, Artificial ???

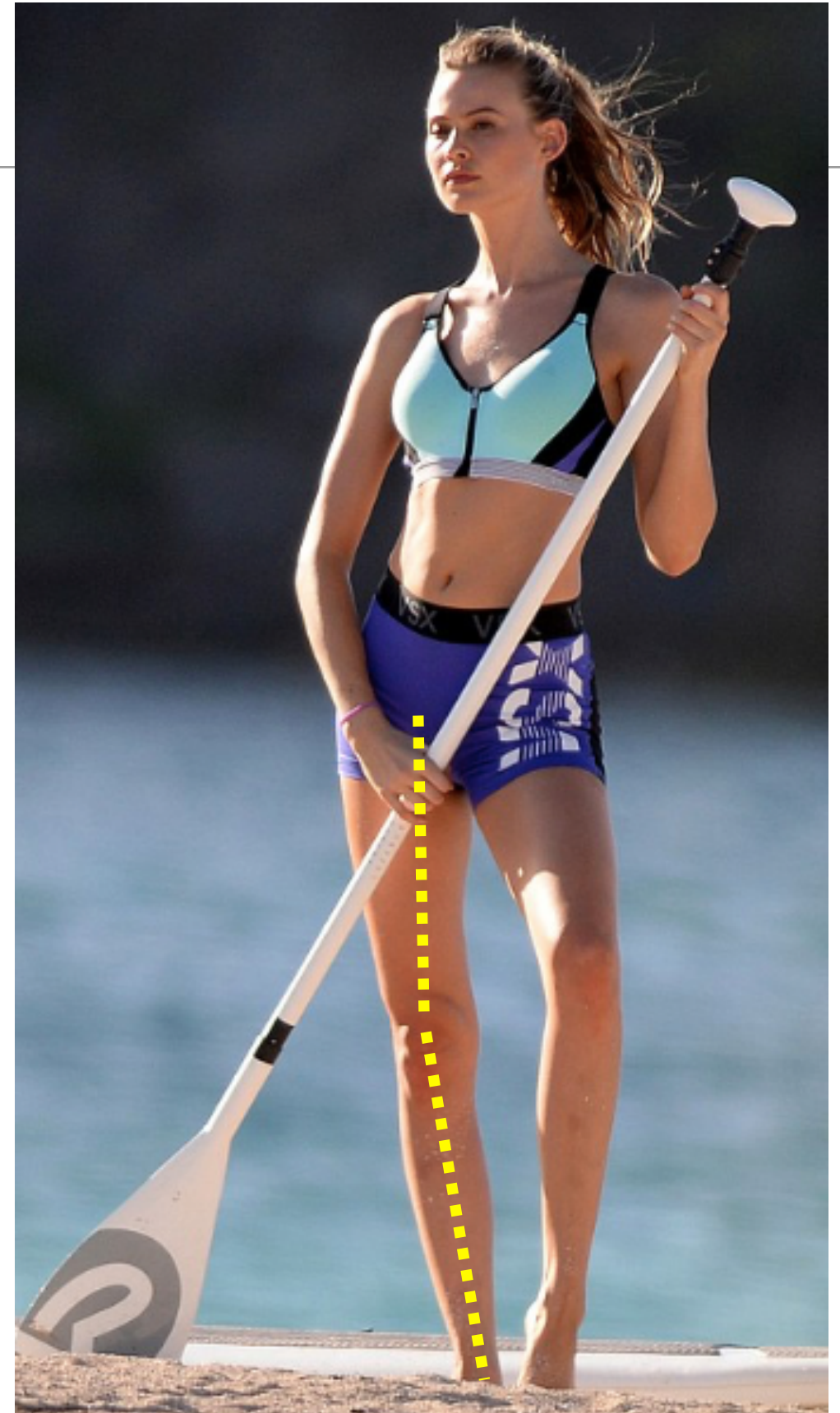
Decrease donor site issue

Preoperative planning

- Is there need for combined procedures and should these procedures be staged?
- Cartilage and meniscal lesions: same time
- Medial or lateral/PL: same time
- Osteotomy: same time.
- Massive bone loss (> 16 mm): **staged**. -> 6-9 months.



Preoperative planning Alignment

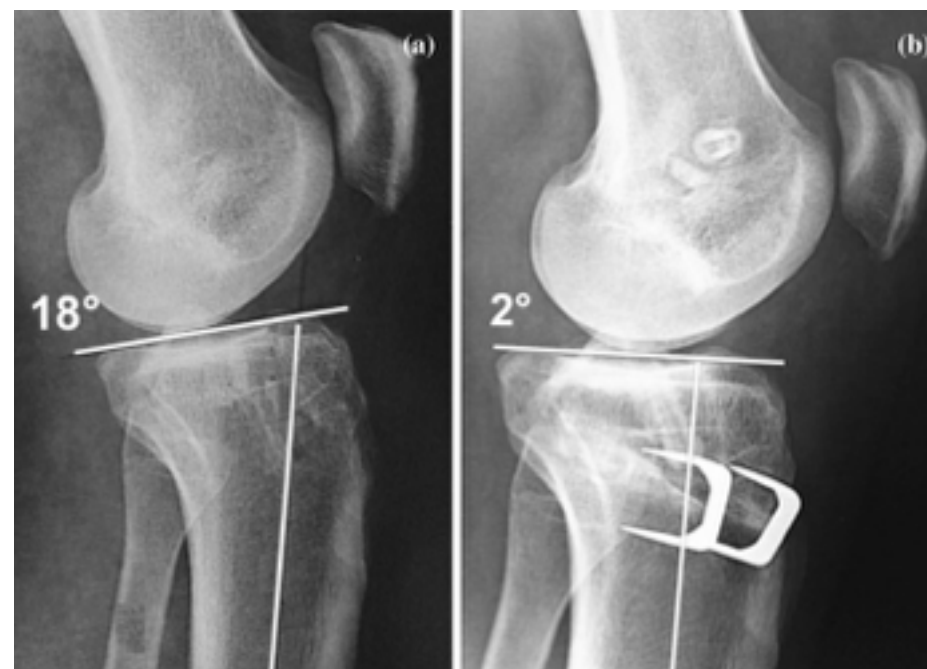


Tibial slope correction combined with second revision ACL produces good knee stability and prevents graft rupture

David Dejour¹ · Mo Saffarini² · Guillaume Demey¹ · Laurent Baverel¹

Knee Surg Sports Traumatol Arthrosc (2015) 23:2846–2852

- 9 patients with second revision combined with tibial deflexion osteotomy
- Recommend **correction of tibial slope if it exceeds 12°**, to reduce the risks of graft retear.

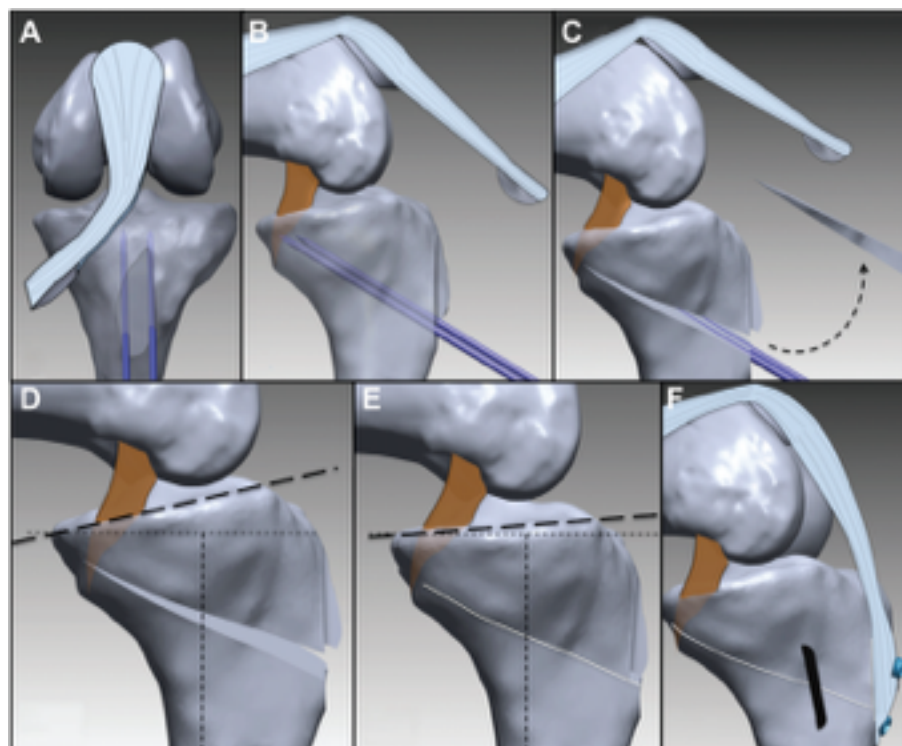


Proximal Tibial Anterior Closing Wedge Osteotomy in Repeat Revision of Anterior Cruciate Ligament Reconstruction

AJSM 2014

Bertrand Sonnery-Cottet,^{*†} MD, Stefan Mogos,[†] MD, Mathieu Thauvat,[†] MD, Pooler Archbold,[‡] MD, Jean-Marie Fayard,[†] MD, Benjamin Freychet,[†] MD, Julien Clechet,[†] MD, and Pierre Chambat,[†] MD
Investigation performed at the Centre Orthopédique Santy and Hôpital Privé Jean Mermoz, Lyon, France

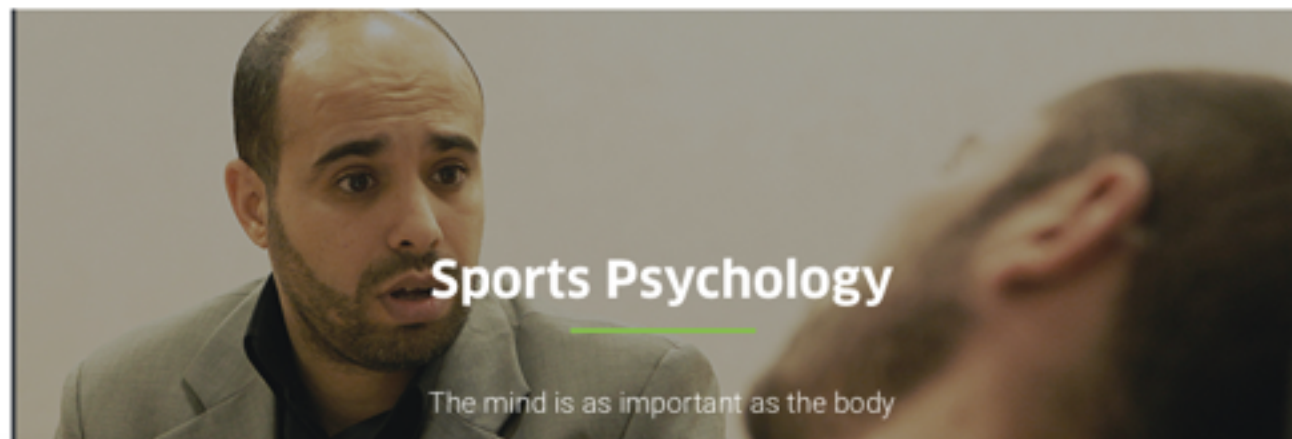
- 5 combined ACL re-revisions with proximal tibial anterior closing wedge osteotomy.
- Combined ACL re-revision with proximal tibial anterior closing wedge osteotomy restores knee stability and function



Psychological context

Sports Psychology

As part of our commitment to achieving clinical service excellence in sports medicine, Aspetar's psychology unit provides both pre and post-operative psychological support for all registered athletes in Qatar. While these services are available for all surgical patients.



Indications

Does the patient really need “x th” revision?

- Needs and Expectations of the patient?
- Is the patient ready to have surgery and physiotherapy?
- Explain the goal of the procedure (stability ≠ pain ≠ stiffness).
- Risks and benefits

Take Home Message

- **Understand** the full history, causes and clinical (including psychologic) status.
- **Imaging** assessment: quality of bone, hardware, joint line, deformity.
- **Plan** your surgery (bone grafting, different fixations)
- **Explain** to the patient.

Discuss the case with your colleagues