L’intérêt du monoloop extra-articulaire dans les reconstructions du LCA

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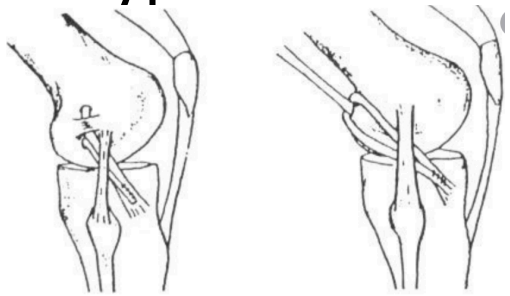
Le « monoloop » c’est quoi ?

= Plastie extra-articulaire latérale au dépend du fascia lata

Inspiré des anciennes plasties de type Lemaire ou Mc Intosh.



2 versions :

Mini - Monoloop (MML) = passage sous le LLE et fixation sur lui-même par suture non résorbable.

Monoloop (ML) = fixation au fémur au moyen d’une agrafe.

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Technique

- Prélèvement du fascia lata sur une largeur de +/- 8mm et longueur 4-7cm
- Insertion tibiale conservée
- Passage sous le LLE
  - mini-ML : retour par dessus le LLE et fixation sur lui-même par 5 sutures non résorbables.
  - ML : fixation en profondeur sur face latérale du fémur après passage en profondeur du septum intermusculaire, à l'aide d'une agrafe.

    Le tout en flexion +/-40° et rotation externe

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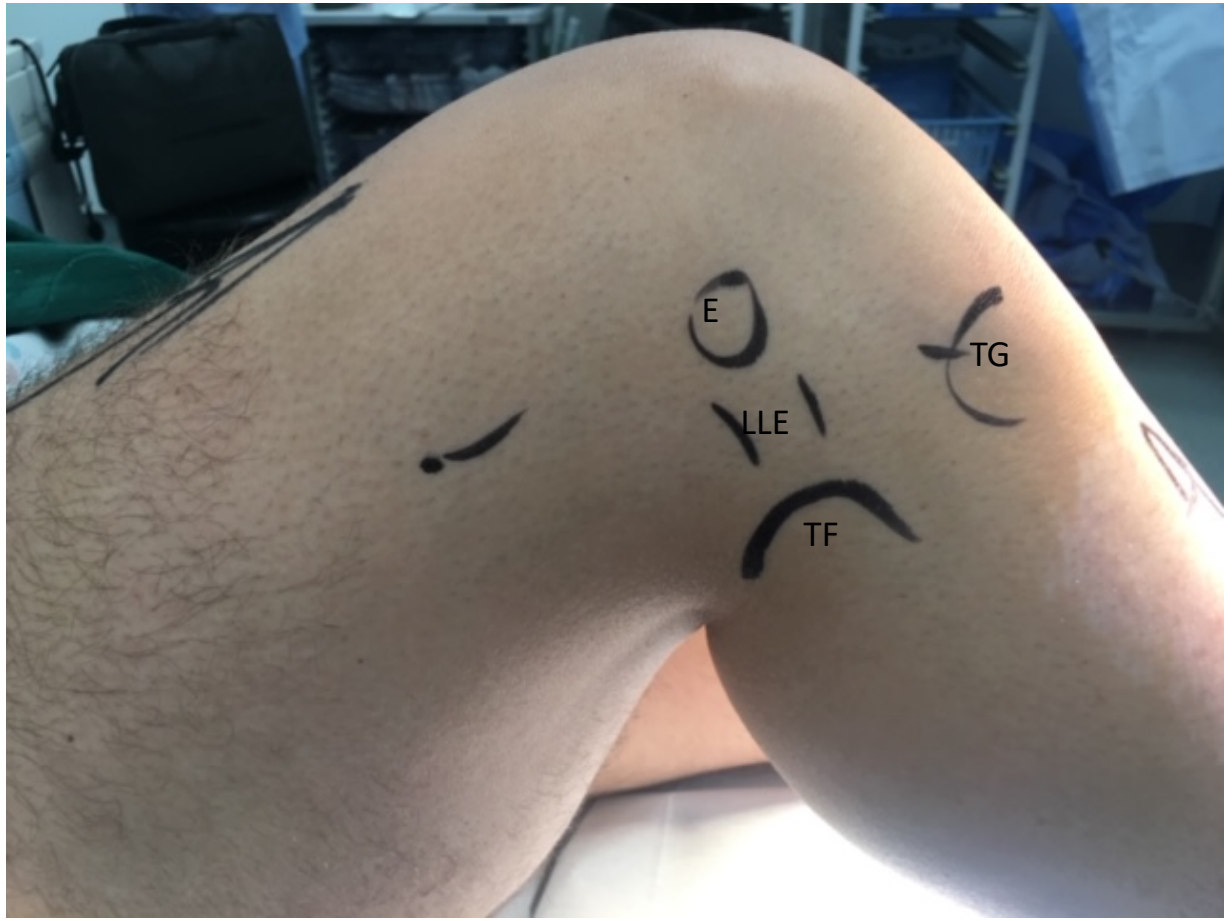
Technique



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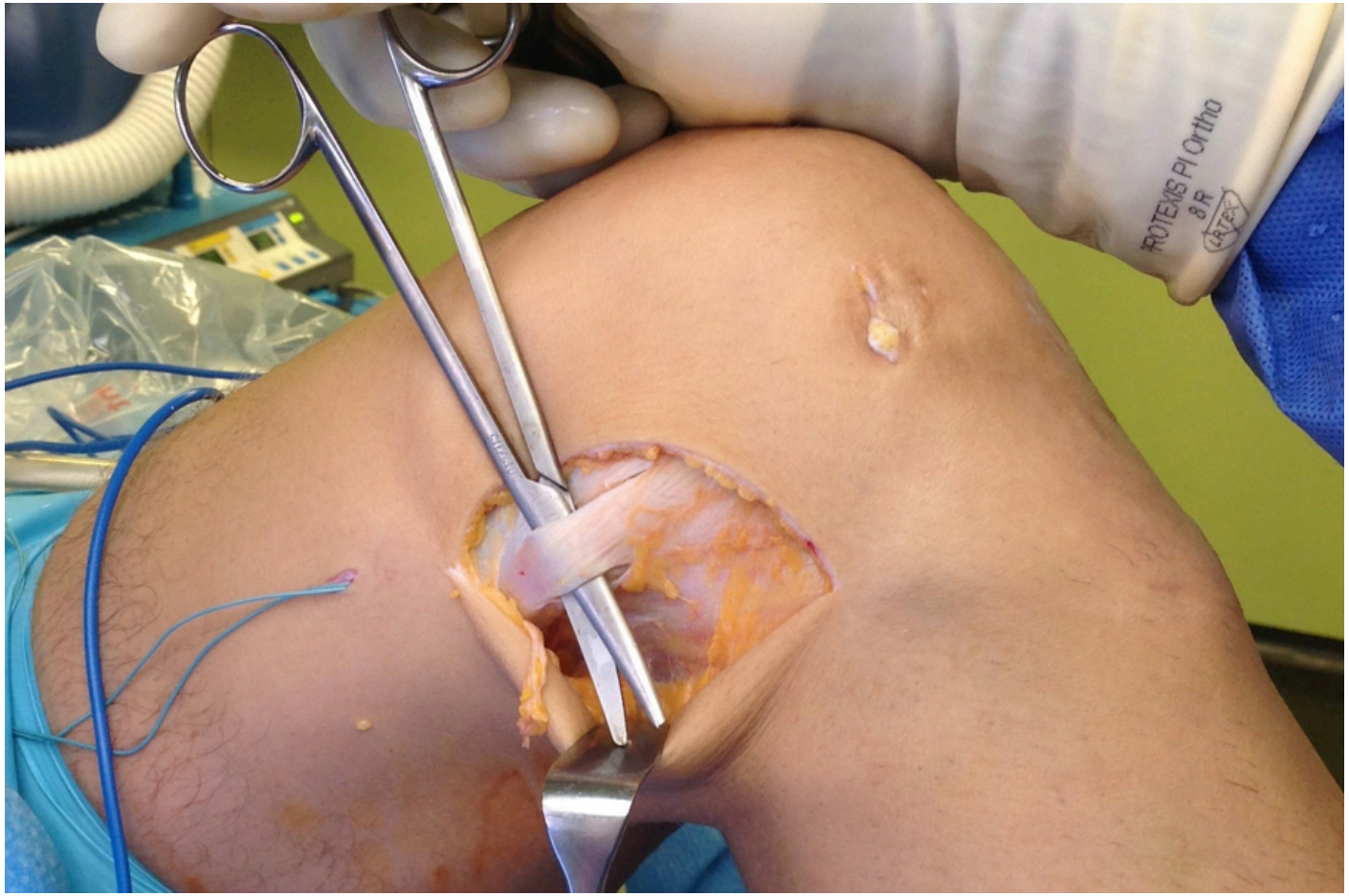

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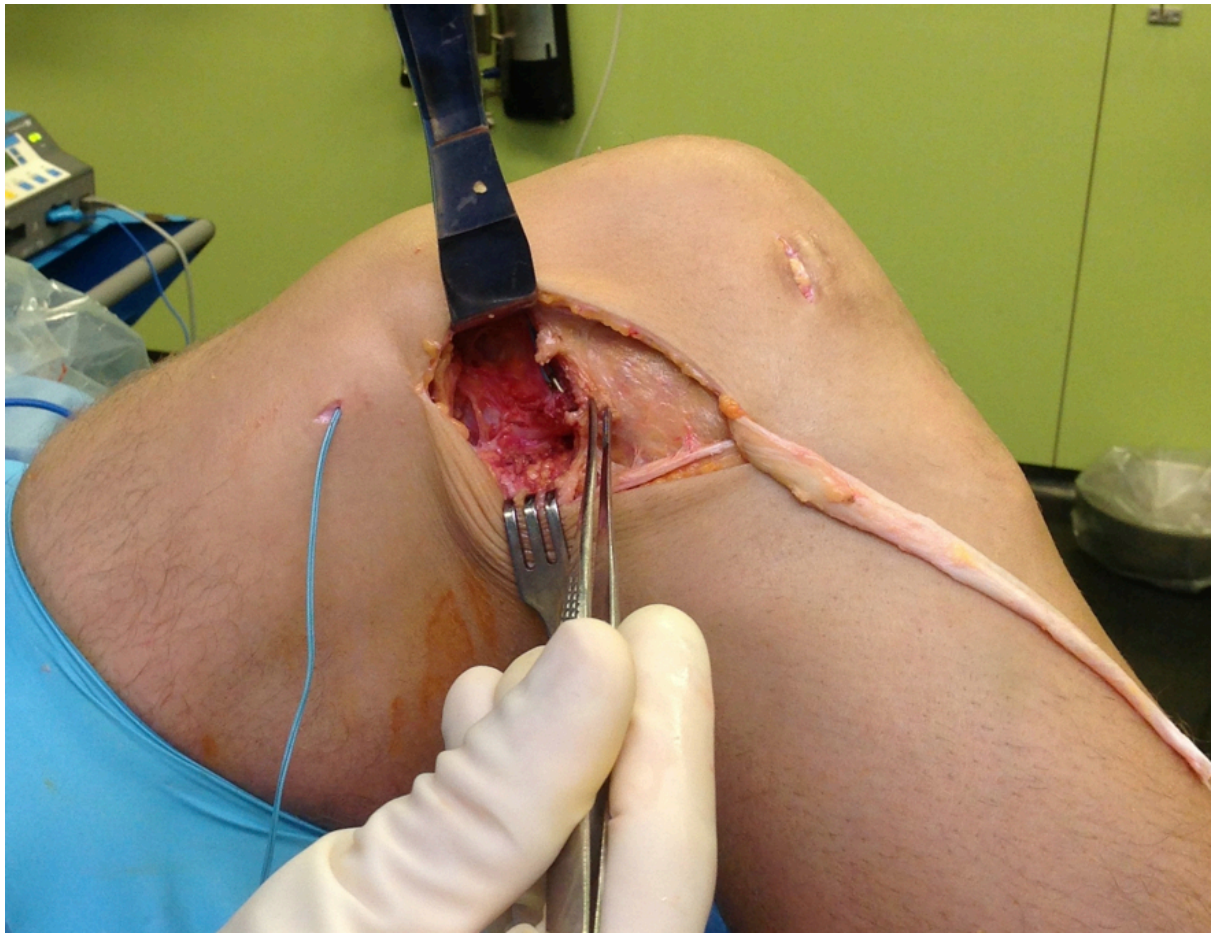

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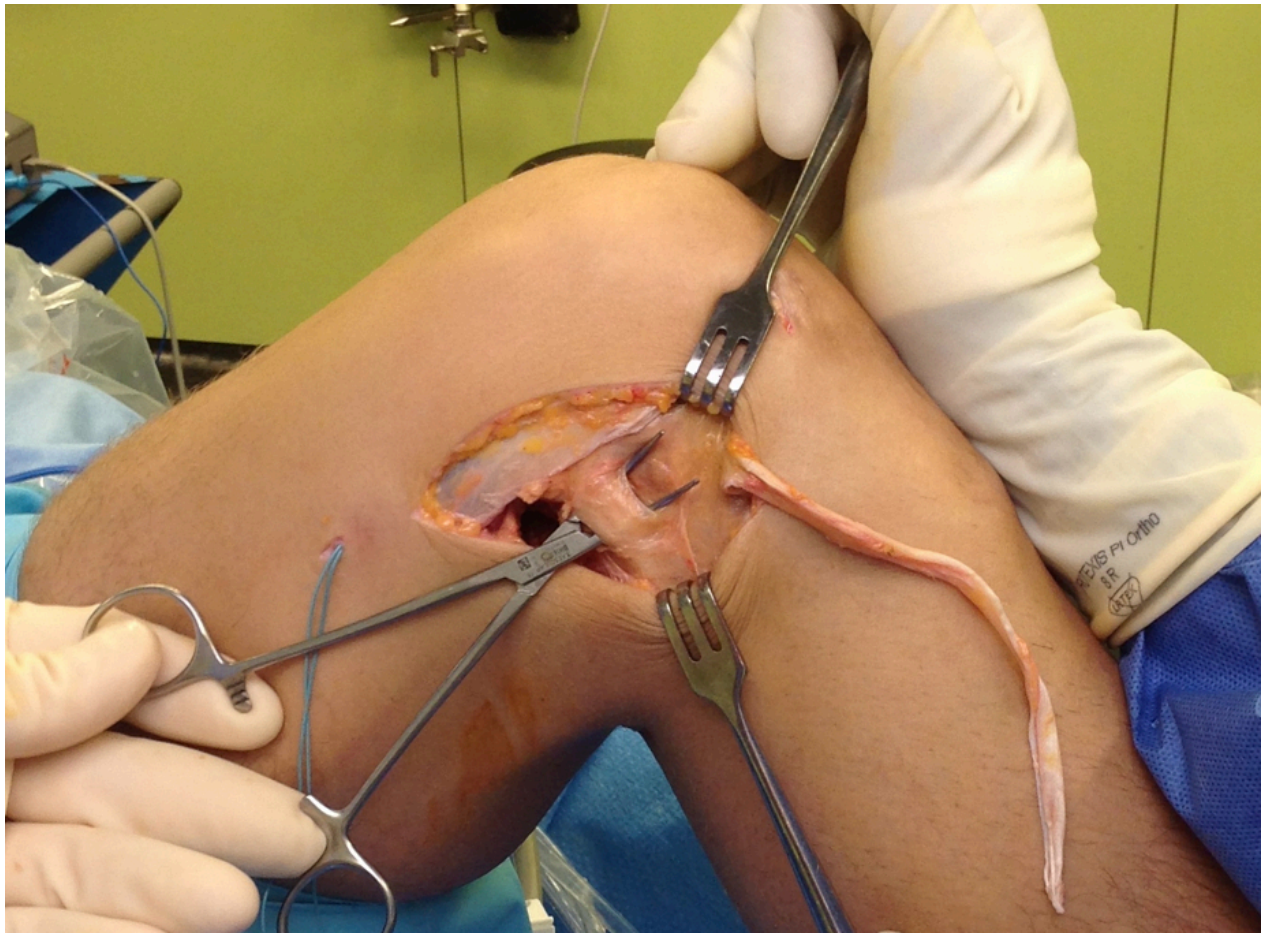

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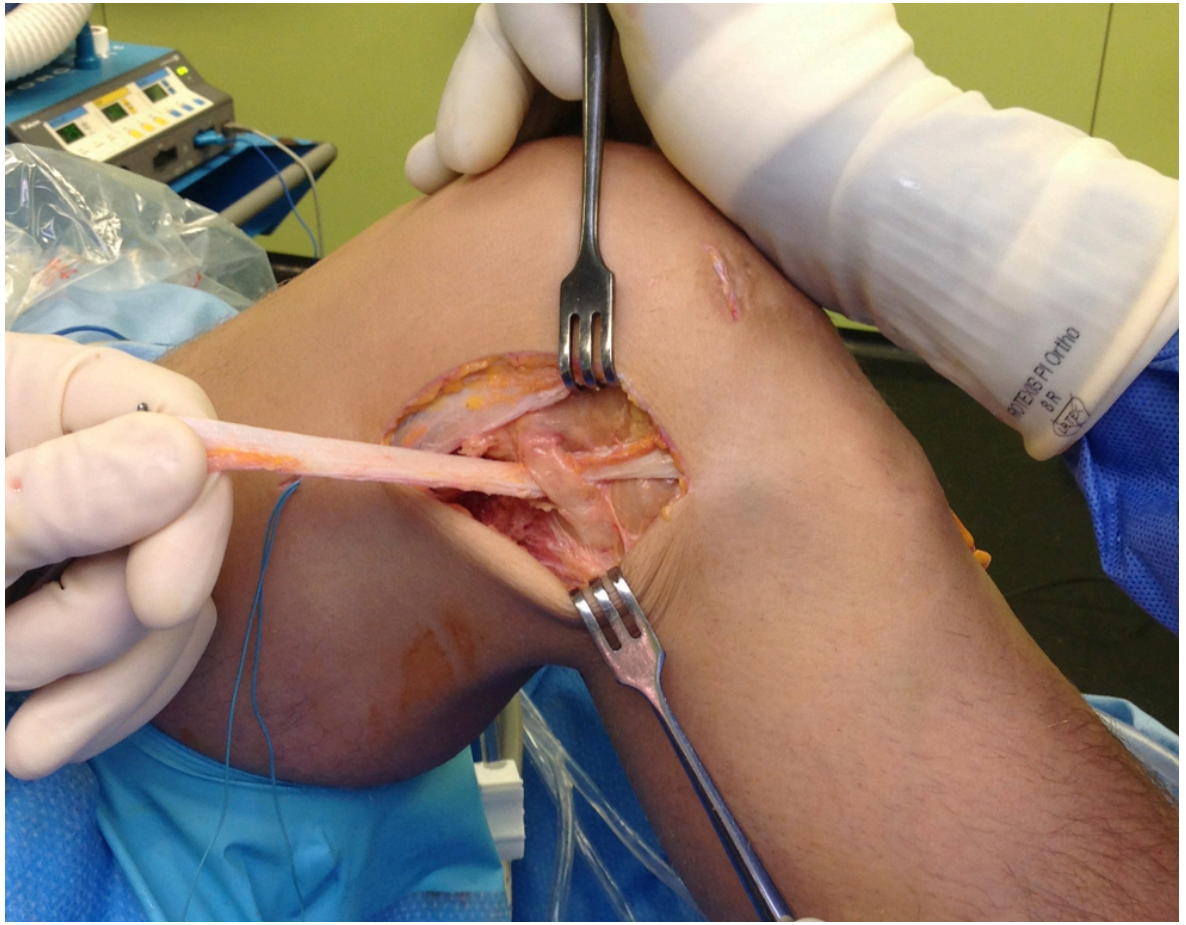

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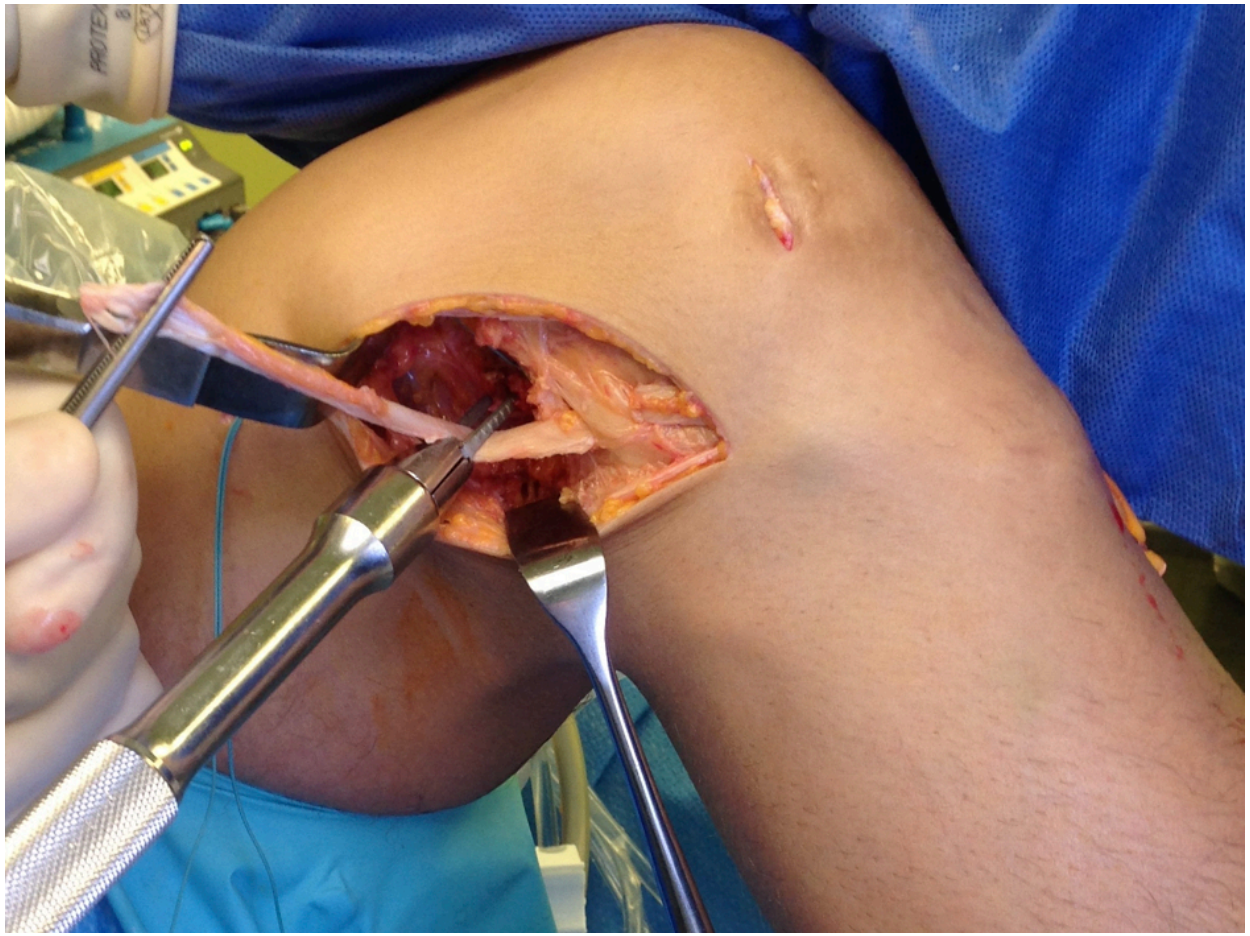

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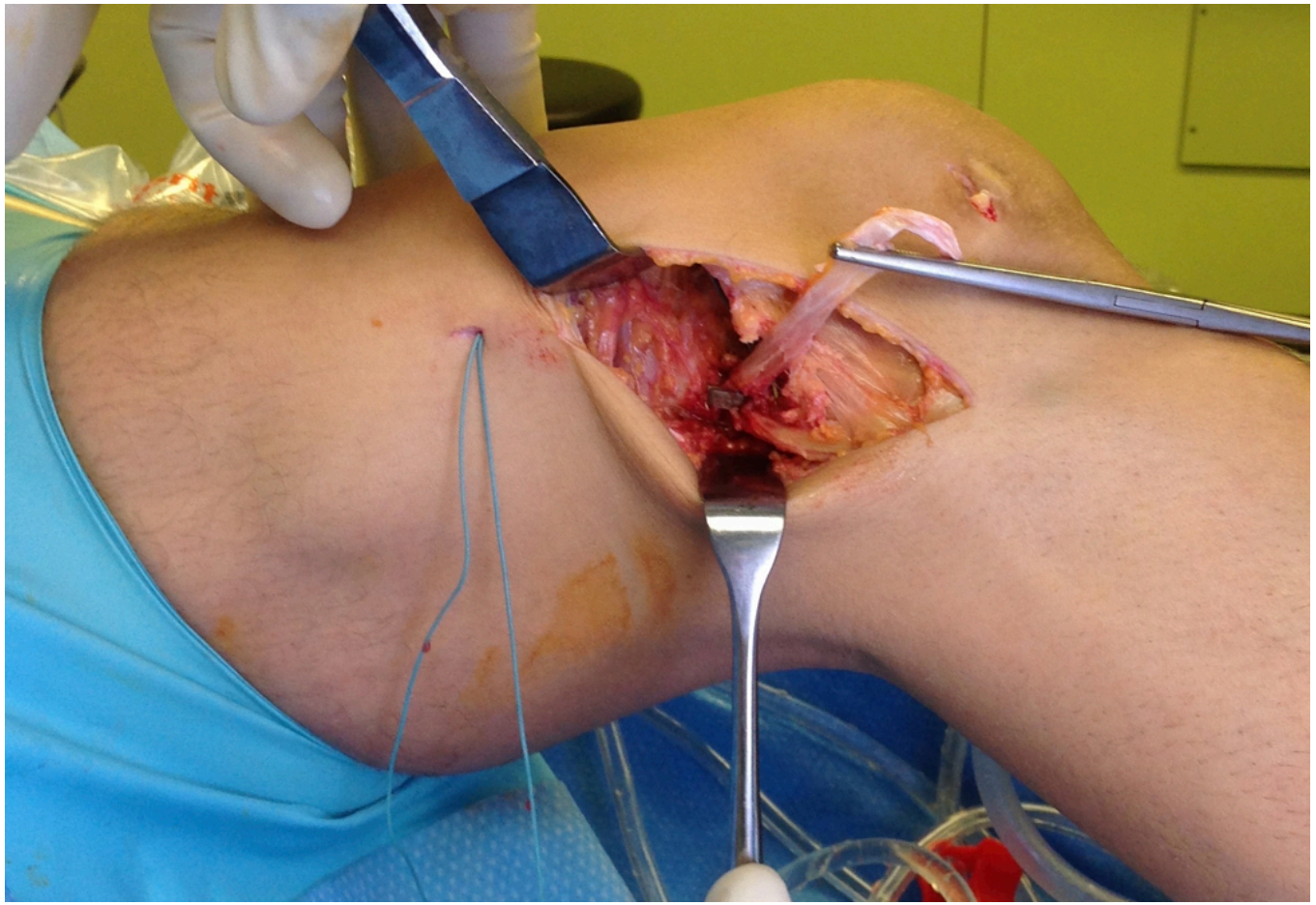

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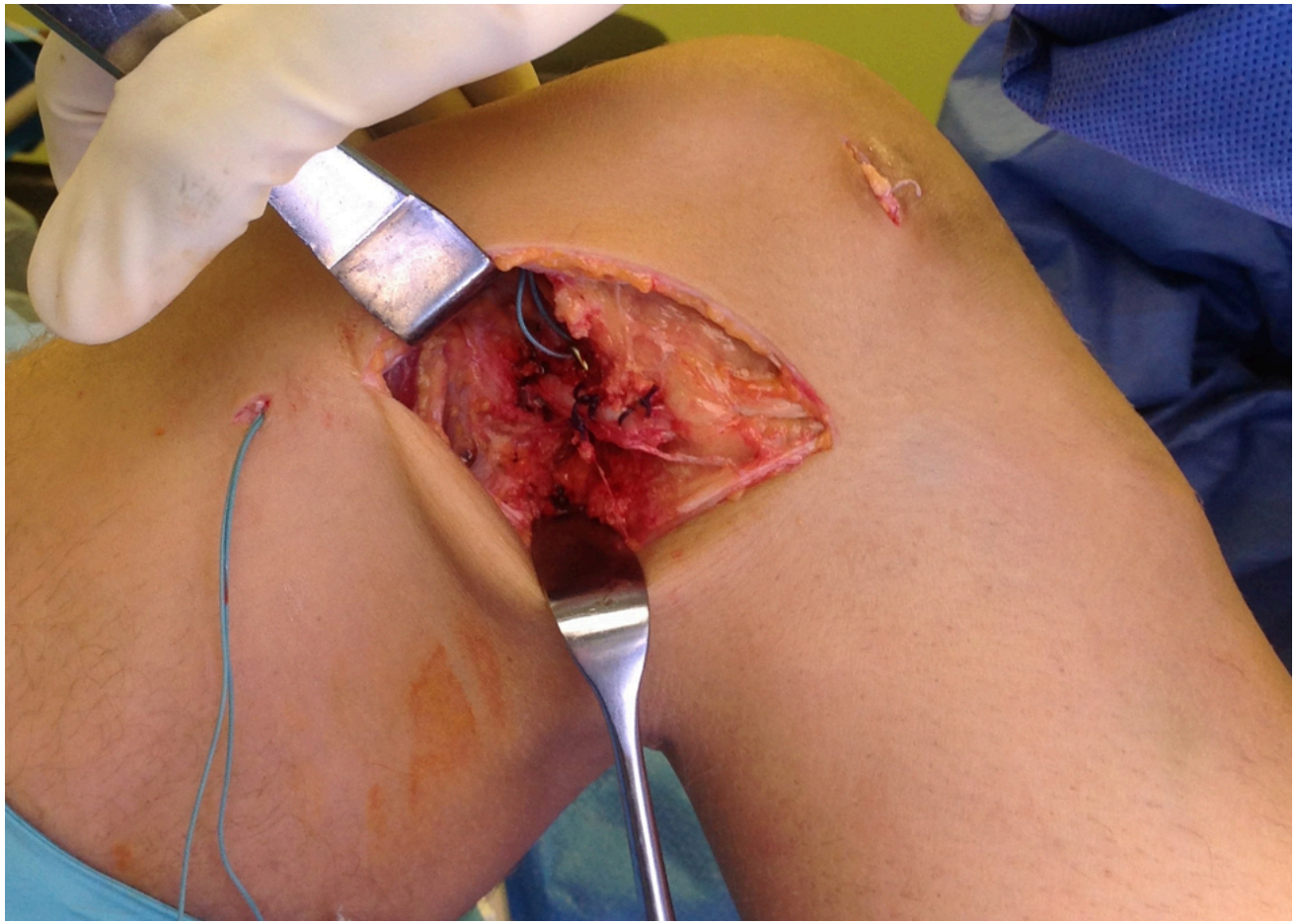

Technique

Technique

Pourquoi un monoloop ?

Réduire la rotation tibiale au moment du pivot

Frein extra-articulaire au tiroir et à la rotation

Renforce la plastie de LCA

Effet « ceinture + bretelles »

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Pourquoi un monoloop ?

Réduire le taux de récidive des « **re-ruptures** » du LCA

Incidence de >10% des ruptures après reconstruction du LCA (RLCA).

ACL Graft and Contralateral ACL Tear Risk within Ten Years Following Reconstruction

A Systematic Review

JBJS Review,2015

Results: Nine studies met the inclusion and exclusion criteria. The overall ACL graft rupture risk was 7.9% (211 ruptures in 2682 reconstructions) and ranged from 3.2% to 11.1% in the individual studies. The overall risk of

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Risque accru lors de la **1ère année** post-chirurgie

Incidence and Risk Factors for Graft Rupture and Contralateral Rupture After Anterior Cruciate Ligament Reconstruction

Lucy Salmon, B.App.Sci.(Phty), Vivianne Russell, B.Sc.(Biomed), Tim Musgrove, M.B.B.S., F.R.A.C.S., Leo Pinczewski, M.B.B.S., F.R.A.C.S., and Kathryn Refshauge, Ph.D.

Arthroscopy, 2005

Timing of Repeat Injury

The median time from reconstruction to graft rupture was 20 months (95% CI, 15-25) and the median time from reconstruction to contralateral ACL rupture was 28 months (95% CI, 27-36; $P = .001$). Importantly, there was no difference between the timing of ACL graft rupture between the HT and BPTB grafts. In the first 12 months after surgery, the incidence of ACL graft rupture was significantly higher than the

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Principalement chez les jeunes patients effectuant des **sports de pivot** (football >> basketball, etc.)

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Arthroscopy, 2005

Activity Level

Obviously, return to sports after ACL reconstruction increases exposure to activities that put the ACL at risk, particularly in those who return to competitive sports that require jumping, pivoting, and side-stepping of the knee. In the current study, the most significant risk factor for contralateral ACL injury was a return to level 1 or 2 sports that involved such maneuvers. This increased the odds of contralateral ACL injury by a factor of 10. Those patients who injured

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Principalement chez les **jeunes hommes** effectuant des sports de pivot (football >> basketball, etc.)

Rates of revision and surgeon-reported graft rupture following ACL reconstruction: early results from the New Zealand ACL Registry

Richard Rahardja[1] · Mark Zhu[1,3] · Hamish Love[4] · Mark G. Clatworthy[5] · Andrew Paul Monk[1,3] · Simon W. Young[1,2]

KSTTA, 2019

Conclusion

The rate of revision was 2.4% and the rate of surgeon-reported graft rupture was 3.5% in 7402 primary isolated ACL reconstructions. Younger age, male sex and a shorter injury-to-surgery time interval are risk factors for revision ACL reconstruction, while younger age and male sex increased the risk of a graft rupture proceeding to revision surgery.

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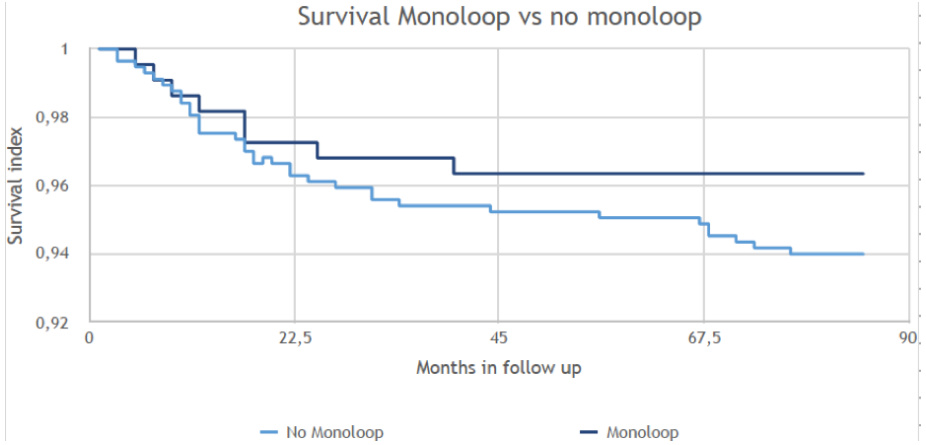
Monoloop vs no Monoloop
Retrosceptive study
785 ACL
2 surgeons
Follow-up 2-7y



3%

6%

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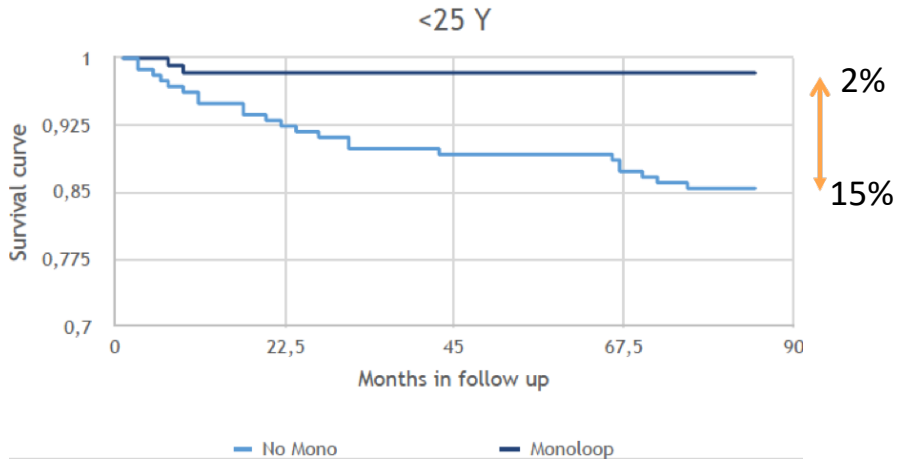

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Pourquoi un monoloop ?

Réduire le taux de récidive des « **re-ruptures** » du LCA

Augmenter le **% de retour au sport**

Eighty-three per cent of elite athletes return to preinjury sport after anterior cruciate ligament reconstruction: a systematic review with meta-analysis of return to sport rates, graft rupture rates and performance outcomes

Courtney C H Lai,[1] Clare L Ardern,[1,2,3] Julian A Feller,[4] Kate E Webster[1]

Br J Sports Med, 2018

CONCLUSION

The rate of return to preinjury level of sport following ACL reconstruction among elite athletes was 83%, and most of those who returned to sport played their first game between 6 and 13 months after surgery. Elite athletes with greater levels of athletic skill may be more likely to return to their preinjury level of sport. Five per cent of elite athletes who underwent ACL reconstruction sustained a graft rupture. The performance of elite athletes who returned to sport following ACL reconstruction was comparable with the performance of matched cohorts of elite athletes who had not undergone ACL reconstruction. These results may be used by athletes and their treating clinicians to guide realistic expectations regarding return to sport following ACL reconstruction.

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Pourquoi un monoloop ?

Réduire le taux de récidive des « **re-ruptures** » du LCA

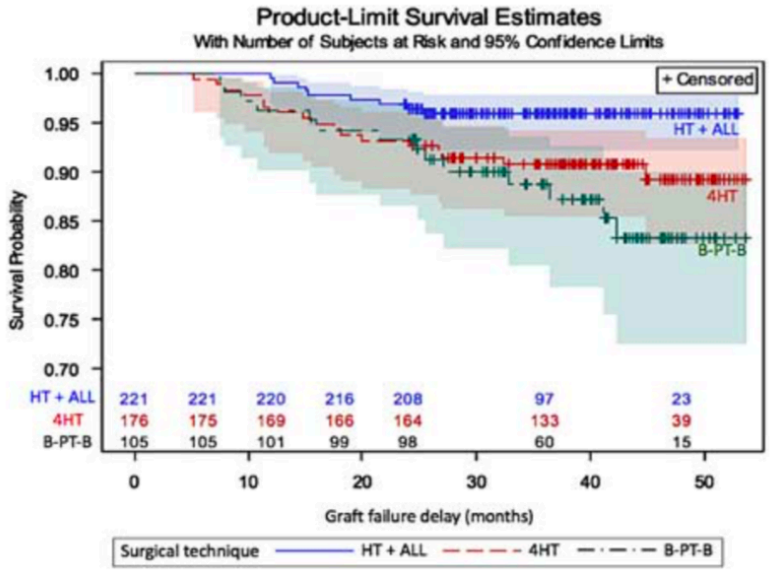
Assurer une risque de récidive le plus faible possible

Clinical Outcomes After Combined Anterior Cruciate Ligament and Anterolateral Ligament Reconstruction

Jean-Romain Delaloye, MD, Jozef Murar, MD, Mauricio Gonzalez, MD, Thiago Amaral, MD, Vikram Kakatkar, MS Ortho, and Bertrand Sonnery-Cottet, MD

Tech Orth, 2018

3,1x moins de re-rupture (HT)



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Tech Orth, 2018

CONCLUSIONS

Initial clinical studies showed that a combined ACL and ALL reconstruction is a safe and effective surgical procedure that provides significant reduction of graft rupture rate compared with isolated ACL reconstruction. In addition, it is associated with a significant protective effect on medial meniscus repairs. Further research with randomized controlled trials is needed to confirm these promising results.

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Assurer une risque de récidive le plus faible possible

Plus de complications ? **NON**

Outcome of a Combined Anterior Cruciate Ligament and Anterolateral Ligament Reconstruction Technique With a Minimum 2-Year Follow-up

Bertrand Sonnery-Cottet,*† MD, Mathieu Thaunat,† MD, Benjamin Freychet,† MD, Barbara H.B. Pupim,† MD, Colin G. Murphy,† MD, and Steven Claes,‡ MD
Investigation performed at the Centre Orthopédique Santy, Hôpital Privé Jean Mermoz, Lyon, France

Am J Sports Med, 2015

Conclusion: This study demonstrates that a combined reconstruction can be an effective procedure without specific complications at a minimum follow-up of 2 years. Longer term and comparative follow-up studies are necessary to determine whether these combined reconstructions improve the results of ACL treatment.

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Pourquoi un monoloop ?

Indications

Extra-Articular Tenodesis in Combination with Anterior Cruciate Ligament Reconstruction: An Overview

Clin sports Med, 2017

Simone Cerciello, MD[a,b,*], Cécile Batailler, MD[c], Nader Darwich, MD[d], Philippe Neyret, MD, PhD[d]

Isolated extra-articular procedures result in persistent instability and poor functional outcomes. Combined procedures involving ACL reconstruction and lateral extra-articular tenodesis or ALL reconstruction are effective in reducing the rates of residual instability. Furthermore, the literature supports the biomechanical benefits of providing an extra-articular restraint to internal tibial rotation. Currently, despite ongoing controversy in the orthopedic literature, indications for combined ACL reconstruction and EAT or ALL reconstruction include high grade pivot shift on physical examination, young age, generalized ligamentous laxity, participation in contact sports, and revision surgery without a clear reason for failure. When compared with traditional lateral EAT techniques, modern ALL reconstruction has the advantage of being more anatomic, less invasive, and associated with lower rates of persistent pain on the lateral aspect of the knee.

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Indications

Mini-Monoloop

- Sports amateurs à risque (pivot++)
- Pivot shift (trop) important
- Lésion méniscale ou chondrale associée

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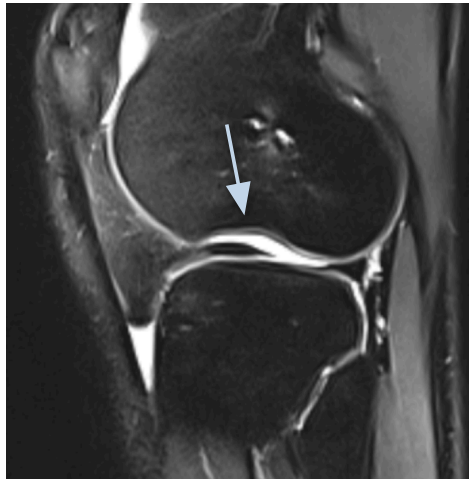
Indications

Mini-Monoloop

- Sports amateurs à risque (pivot++)
- Pivot shift (trop) important
- Lésion méniscale ou chondrale associée
- Notch fémoral important?



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Indications

Monoloop

- Hyperlaxes
- Sportif (semi-) professionnel
- Lésions ligamentaires associées (par ex. LLI gr 2)
- LCA chronique
- Révision de LCA

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Take home message

- Monoloop = procédure simple et efficace
- Cible :
    - Jeunes & sportifs
    - Pivot
    - Hyperlaxes
    - Reconstructions plus complexes
- Objectif unique = Réduire les récidives

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Merci !

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