

Graft Tightening for Recurrent Laxity After Primary Hamstring ACL Reconstruction

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Introduction

- Restoration of knee laxity after ACL reconstruction is not well correlated with subjective patients satisfaction.
- Side to side difference (SSD) less than 3 mm indicates restoration of the stability.
- Any soft tissue graft may become loose with time leading to instability recurrence.

Purpose

- We describe the surgical treatment of 3 patients who underwent ACL reconstruction using a quadrupled tendon graft and developed progressive postoperative laxity and functional instability.
- In all patients the graft was retightened repositioning the proximal, femoral attachment.

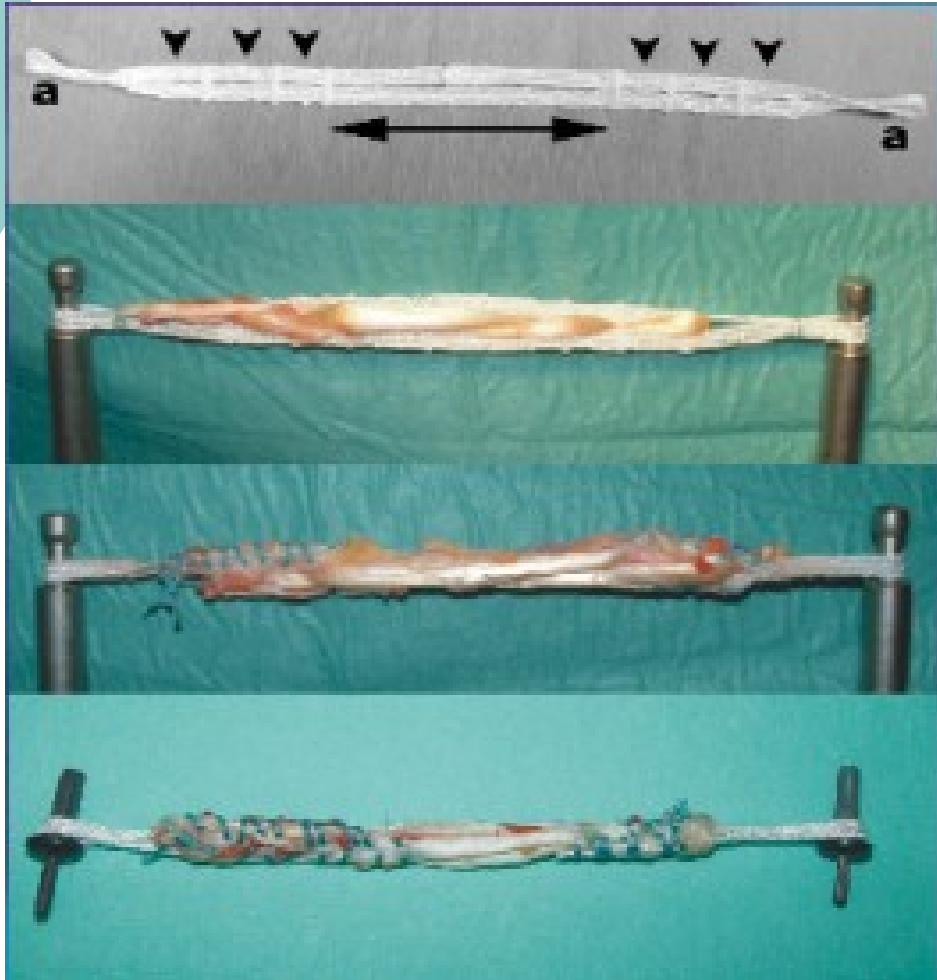
Patients-Methods

- 3 male patients with postoperative laxity of the ACL following hamstring reconstruction
- The mean time between injury and reconstruction was 23 months
- One patient developed progressive atraumatic laxity of the knee during the first two postoperative years and the instability recurred. (SSD increased from 3 to 6 mm)
- The other two patients sustained a new twisting injury to their knees after 17 and 22 months respectively. Following the new injury SSD increased from 0 and 3 to 5 and 7 mm, while the pivot shift was 1+ and 2+ respectively.

Patients-Methods

- In all patients primary ACL reconstruction was performed with the Buttohole Soffix surgical technique, employing the over-the-top femoral route
- Arthroscopic and MRI evaluation showed preservation of the integrity of the graft, while arthrometric examination revealed progressively increasing laxity.

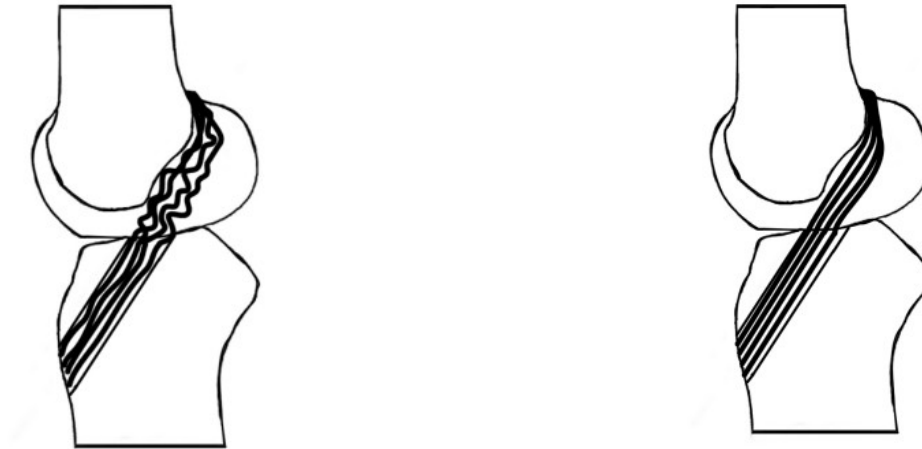
Surgical Technique



- The Soffix tape consists of a double looped polyester tape with 3 holes at either end.
- The tendons are interwoven and secured with a non-absorbable suture.
- The middle part of the tape is cut out, so that no artificial material remains in the joint

Surgical Technique

- The over-the-top site was approached, the graft was mobilized by sharp dissection and was reattached at a more proximal position.
- The tibial tunnel was left intact.



Results

- The patients had been followed up for a mean time of 12 months (9-16).
- Postoperatively the SSD was 1, 1 and 2 mm respectively.
- At one year the SSD was 2, 2 and 3 mm respectively and the pivot shift was negative.
- Functional instability was absent and all patients returned to their previous activity level.
- According to the IKDC scale the clinical result was excellent (2 cases) or good (1 case).
- Pivot shift was negative in all patients.
- Range of motion was full in all patients.



Conclusion

In selected patients the ACL autograft can be retightened using the Buttonhole Soffix surgical technique

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