

Early knee contracture after ACL reconstruction: experience from rehabilitation department

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- Complete knee extension is a goal of the first week after surgery.
- At my hospital, length of stay is short, only 3 days, due to overload and FU interval is 1 month.
- At early FUs, there is usually knee contracture which hinders the rehabilitation.



Our study about the effectiveness of Physical therapy

- Time: 2011-2014 (438 reconstructed cases)
- Incidence at the first FU (4 weeks postop.): 47%
- Time needed to treat: 2.5 months
- Release surgery rate: 6%
- A FU of 4 months is needed before decision for revision

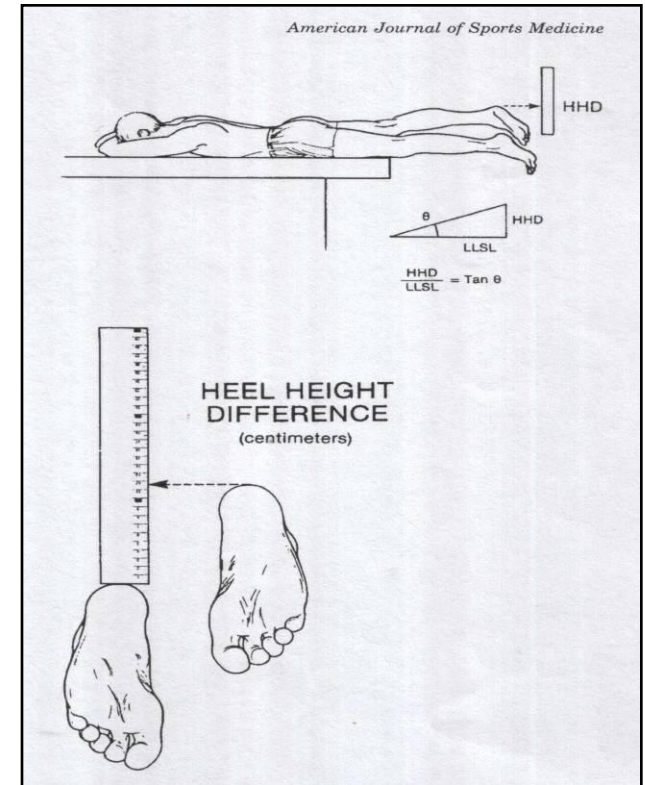
Detection of knee contracture

- Goniometer is clinically not reliable when knee ROM is of 0-10 degrees
- Heel-height difference is an alternative



Heel-height difference (HDD)

- Difference of 1 cm \neq knee contracture of 1.2°
- Normal: $HHD \leq 2\text{cm}$ (2.4°) (IKDC type A $\leq 3^\circ$).



Schlegel TF, Boublik M, Hawkins RJ, Steadman JR (2002). Reliability of heel-height measurement for documenting knee extension deficits. *Am J Sports Med.* 30(4):479-82

Anderson AF, Irrgang JJ (2006). The International Knee Documentation Committee Subjective Knee Evaluation Form. *Am J Sports Med* 34(1):128-135

Physical therapy

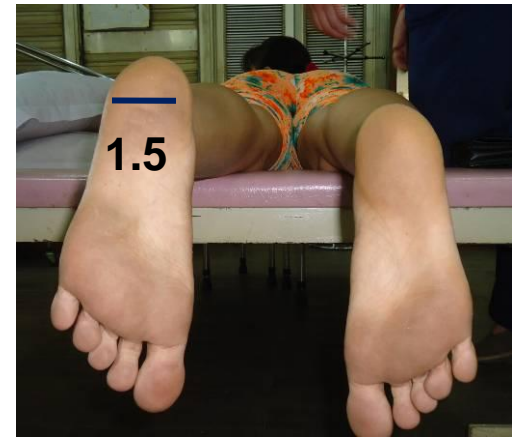
- Introduced by physical therapist
 - Pain, swelling control
 - Stretching
 - Long brace at night to prevent the stretched knee to contract again



Brace quality



First FU, 3 weeks postop.



3.5 months



Aluminum frame is bent

In case of long swelling of knee joint or even suspected infection, knee needs to be placed in full extension

- In our study, there are 4 cases. But only one needs to be operated because of too late physical therapy.



7 months after reconstruction

Infection at surgery site lasted 4 months.



4 months
after release



8 months
after release

Genu recurvatum: be careful



4-week
HDD = 10 cm



6-week
HDD = 5 cm



Right knee (reconstructed) has just got 0° extension at 6-week postop.
Left knee is in hyperextension of 10°

It is suggested to decelerate the rehabilitation in some studies.

Summary

- Although knee contracture early after ACL reconstruction may be temporary but it needs a special attention.

Thank you for your attention!