

Clinical outcome after PCL support bracing treatment for patients with acute posterior cruciate ligament injury

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Disclosures

- Related to present study:
 - No conflicts of interest.
- Outside present study:
 - accommodations expenses from Smith & Nephew.



Introduction

- Posterior cruciate ligament (PCL) injury occurs typically due to high energy trauma.
- The optimal treatment for the isolated PCL injured knee is controversial.
- Knee function can be restored independently of the grade of laxity in acute isolated PCL tears treated non surgically.
- The aim of the present study is to evaluate the outcome of non-operative management of acute isolated PCL injuries using a PCL support brace.



Materials and Methods

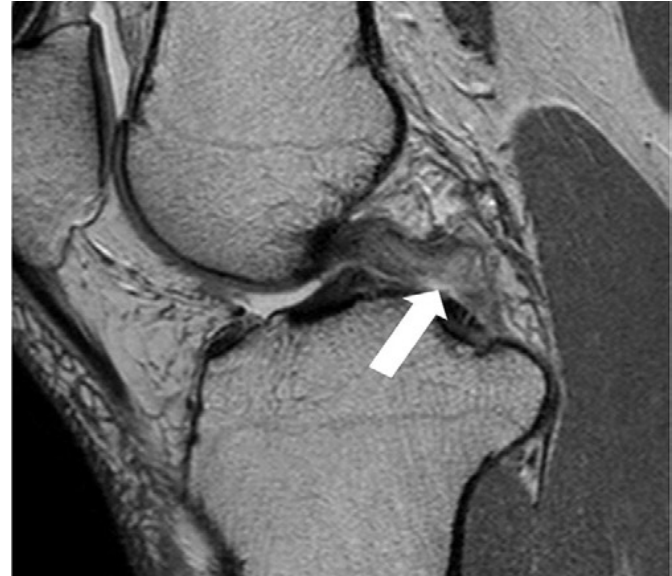
- The records of patients with PCL injury were reviewed retrospectively.
- Inclusion criteria was
 - acute (< 3 weeks) isolated PCL injury.
 - intrasubstance or distal part injury of PCL.
 - only PCL support brace (Jack brace) was used as method of treatment.
- MR scanning was performed in all patients within 2 weeks after knee injury to ensure PCL injury diagnosis.



Materials and Methods



Intact borders but increased signal inside PCL



Arrow showing one border rupture (partial rupture)



Materials and Methods

- Theoretically Jack brace will prevent posterior displacement of the tibia facilitating PCL healing in its anatomic course.
- The time of bracing was 8 weeks.
- PCL stability was evaluated clinically with KT-1000 (at 70 flexion) and functionally by one hop tests.
- IKDC, KOOS, Lysholm, Tegner, Werner and sport activity scores were used for subjective evaluation.



Results

- From March 2004 to April 2012, 36 patients with isolated acute PCL injury were treated with Jack brace.
 - 29 patients treated at Capiro Artro Clinic, Stockholm.
 - 7 patients treated at Aarhus University Hospital.
- 24 patients were evaluated at 40 months follow up.
- Age at the time of injury was 23 yrs.
- There were 14 males and 10 females.

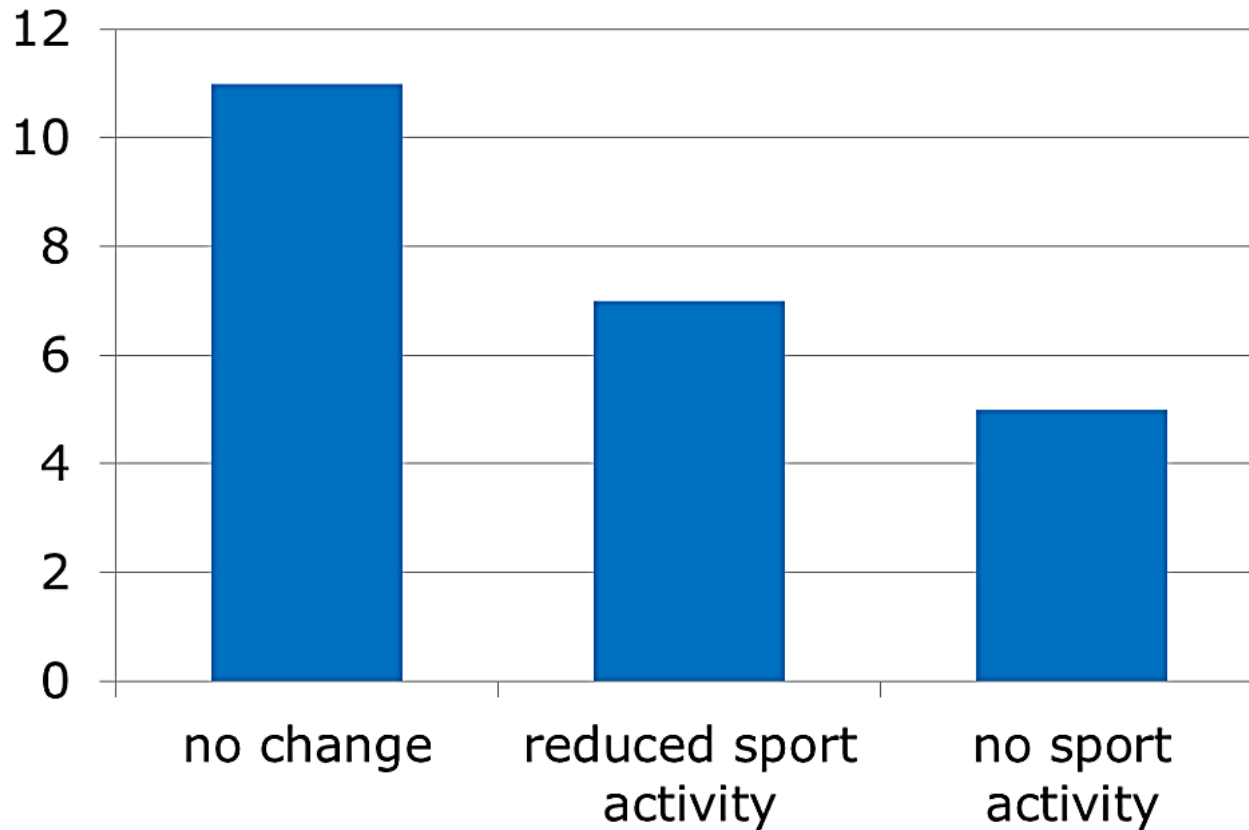


Results

- Cause of injury in the study group was:
 - sport 20 pt - traffic 2 pt - work 1 pt - others 1 pt.
- IKDC score was: - nearly normal 83,4% - abnormal 16,6%.
- Total anterior/posterior side to side difference in posterior laxity was 1 mm.
- Tegner is 7, Lysholm 86, Werner score 43 (max score 50).
- One leg hop test was 96 % compared to the uninjured leg.



Results

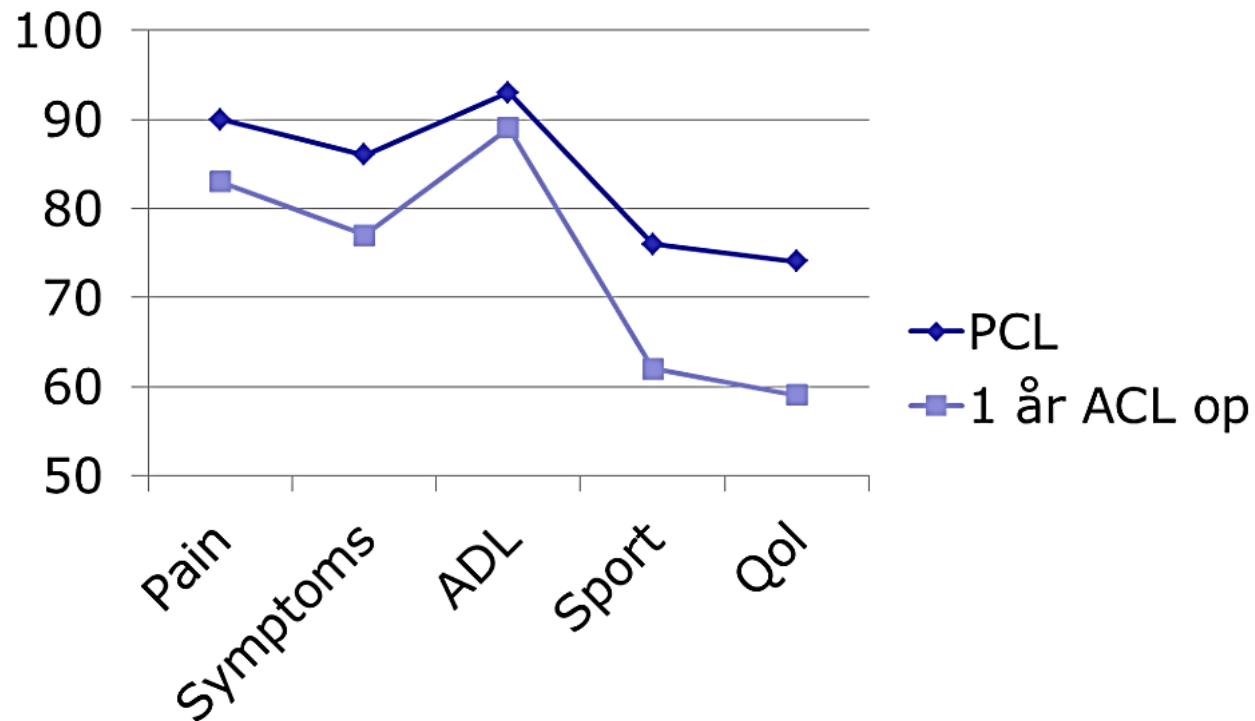


Change in the sport activity compared to before PCL injury (n=23).



Results

KOOS scores



Conclusion

- Both clinical and functional measures show satisfactory outcome following Jack brace treatment in patients with acute isolated PCL injury.



Thank you for your
attention



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