Compression with a non-elastic Velcro compression device in patients undergoing total knee arthroplasty

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Sharing knowledge and skills (2014)
Introduction

Total knee arthroplasty:

- Successful operation in the management of osteoarthritis

- Prevalence osteoarthritis in general practice in the Netherlands:
  - 14.3 / 1000 male
  - 23.8 / 1000 female
  - 20,000 operations a year (2010)
  - Increasing numbers

- Early mobilization and optimal analgesics has reduced hospital stay and morbidity without increased re-admissions
Problems in patients undergoing a knee arthroplasty are:

- Pain
- Swelling
- Decrease in knee-extension strength,
- Decrease in Range of Motion
- Wound problems (infection, dehiscence)
- Decline in functional performance
Introduction

- Our hypothesis is that the use of the Juxta Reduction Kit, applied immediate post-operatively and worn 24/7 for 6 weeks will prevent excessive swelling and initiate an earlier reduction of the swelling, allowing a more effective rehabilitation.
## Methods / design

<table>
<thead>
<tr>
<th>Usual Care / Control group (20)</th>
<th>Treatment group (20)</th>
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<tbody>
<tr>
<td>• Immediately post OP - 24u post OP bandages Elastomull Haft®</td>
<td>• Immediately post OP untill 6 weeks post OP 24/7 Juxta Reduction Kit + -Struva anti-trombosis stocking (class 2)</td>
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<tr>
<td>• From 24h untill 6 weeks post OP an anti-thrombosis stockings</td>
<td>• Rapid Recovery</td>
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<td>• Rapid Recovery</td>
<td>• Rapid Recovery</td>
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1. Feasibility study

Data collection:
- measurement protocol
- the number and reasons of patients recruited and dropped out
- wearing comfort
- possibilities to exercise
- sort and number of complications
- time required for measurements, preparation JRK, administration
2. Create a first insight in the results of the intervention with the JRK, compared with usual care (observational comparative study).

Data collection (To, T1, T2, T14, T42, T84)
- Gender, BMI, age, ASA, use of compression pre-op
- Total leg volume and knee circumference
- Pain in action and in rest
- Range of Motion
- Timed Up and Go
- Demmi
- 6 minutes walking test
- Wound aspects