Old injury, same old trouble

Nicola Maffulli

Periosteal high volume image-guided injection of recalcitrant medial collateral ligament injuries

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Medial Collateral Ligament

• Primary medial stabiliser of the knee
• Commonly injured – skiing, rugby union, soccer, American football
• Mechanism – direct blow to lateral side or externally rotated tibia on fixed femur

Management

• Subset of patients - chronic, debilitating injury
  • poor function
  • recurring pain
  ➡️ Recalcitrant MCL injury

The Intervention

• Periosteal high volume image guided injection (PHVIGI)
• 12 mL (10 mL 0.5% bupivacaine HCl + 25-50 mg hydrocortisone acetate)
• Periosteal attachment (femoral/tibial) – under US guidance
• Strip and irritate periosteum ➡️ recommence healing

PHVIGI

• Safe, relatively cheap, 1 injection, RTS quickly
• Used at London Independent for treatment of recalcitrant MCL injury
• Does it work?
Methodology

- All patients who received PHVIGI in 3 years (n=28)
- Study specific questionnaire and 2 copies of IKDC subjective knee form (prior to PHVIGI and at follow up)
- Sporting details, improvement on VAS, overall recovery, RTS, other management

Results

- 68% response rate
- 3 excluded due to concomitant injury/arthroscopy
- Mean age 33.3 (SD = 10.6) years
- Mean duration of symptoms 5.4 (SD = 6.6) months
- Mean follow up 8.9 (SD = 8.2) months

Demographics

<table>
<thead>
<tr>
<th>Patient</th>
<th>Sex</th>
<th>Age</th>
<th>Hours</th>
<th>Level</th>
<th>Duration</th>
<th>RTS</th>
<th>Recovery</th>
<th>VAS %</th>
<th>IKDC %</th>
<th>Change</th>
<th>F/U (mts)</th>
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<td>71</td>
<td>43.6</td>
<td>4.5</td>
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Return to Sport

- Returned to same level 67%
- Lower level 7%
- Unable to return 13%
- Not attempted 13%

Improvement on VAS

Mean percentage improvement after PHVIGI was 76% (95% CI, 63.9 – 87.1)

IKDC (1)

Mean improvement in IKDC scores ~42% (95% CI, 35.0 – 48.9)
IKDC (2)

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**Discussion**

- Of note: no peri/post procedure complications in 87.5%
- All had significant pain relief immediately
- Positive results

**Limitations**

- Sample size
- No control group
- Recall bias

**Conclusion**

- PHVIGI – Beneficial and safe for use in recalcitrant MCL injury
- In our setting, common
- Suitable for professional athletes – RTS relatively quickly
- Large, prospective, RCT needed

If you wish to know more...
Thank You...

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