Endoscopic treatment of chronic compartment syndrome: comparison between upper and lower limb

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Materials & Methods

• Monocentric (CHU Nîmes)
• Retrospective
• Between April 2014 and January 2018
• 25 patients, 3 surgeons
• Chronic compartment syndrome (CCS)

• Judgement criteria:
  • Pain (AVS)
  • Recovery time & level
Preoperative:

- **Pain:**
  - Middle effort Analog Visual Scale: 4,6 (0-8)
- **Diagnosis:**
  - Pressure measure after exercise
- **Sport Level:**
  - 52% leisure, 36% competition
- **Sport Type:**
  - Upper limb: Motocross (53,8%), Biking (15,3%), bodybuilding (15,3%)
  - Lower limb: Running 80%
Inclusion criteria
• All patients with recurrent SCC symptomatology triggered by the same activity, operated by endoscopic aponevrotomy
  • Lower limb: antero-lateral compartment
  • Upper limb: Anterior and posterior compartment of forearm

Exclusion criteria
• Open treatment
• Patient already operated for an aponevrotomy.
• Patients lost before 6 months after surgery
Results

• 13 upper limb / 12 lower limb
  • 60% bilateral (lower limb, p<0,05)

• Middle age 28,4 years (16—55)

• Middle follow-up: 25,5 months (2-6 years)

• Sex ratio (F): p<0,05
  • Upper limb: 5/8 (42%)
  • Lower Limb: 0/12
Results (2)

- **Effort AVS**
  - Middle 1.43 (1 upper limb, 1.87 lower limb)

- **Average recovery time**
  - Upper limb: 3.4 month
  - Lower limb: 7.4 month

- **Level decrease: (48%)**
  - 3 patients completely stop (2 lower limb)
  - Upper limb: 3
  - Lower lomb: 6

NS

p<0.01

p=0.11
Complications:

• Postoperative Hematoma: 1
• Paraesthesia of Superficial fibular nerve: 1, resolution after 1 month
• Muscle hernia: 2, in lower limb

• 0 revision
Conclusion

**Upper limb**
- Better results, shorter recovery time

**Lower Limb**
- Rarely isolated
- Need a more comprehensive assessment than only pressures measures

- Importance of differential diagnoses
  - Trapped popliteal artery, short posterior chains, short Achilles
  - CBN, entrapment neuropathy
• Merci de votre attention