Revisiting the Prevalence of Associated Co-Pathologies in Chronic Lateral Ankle Instability

Ibukunoluwa Araoye, MS; Cesar de Cesar Netto, MD, PhD; Bahman Sahranavard, MD; Parke W Hudson, BS; Brent Cone, BS; Zachariah Pinter, BS; Caleb Jones, BS; Shelby Bergstresser, BS; Sung Lee, BS, Ashish Shah, MD.
Disclosures

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Introduction

• Ankle sprains account for 30% of athletic injuries, making them the most common athletic injury\textsuperscript{1}
• In basketball, the chance for a second ankle sprain is as high as 70%\textsuperscript{2}
• Overall, there is a 20%-40% chance of having recurrent ankle sprains\textsuperscript{1,2}
• Recurrent sprains propagate mechanical and functional imbalances resulting in chronic lateral ankle instability\textsuperscript{2}
Introduction

• As a result of continued ankle instability, anatomic injuries may develop in surrounding structures including the peroneal tendons and chondral surfaces.

• Such associated injuries are common and may be important for long-term outcomes even after surgery.
Introduction

• The frequency of some of these associated injuries has great variation in the literature
  • Taga et al. and Okuda et al. report osteochondral lesion occurrence rates over 60% while DiGiovanni et al. and Odak et al. report occurrence rates under 25%
  • The purpose of this study is to re-examine the frequency of occurrence of certain co-pathologies in chronic lateral ankle instability

DiGiovanni BF et al. Foot Ank Int 2000;21(10), 809-15
Odak SO et al. Foot Ank Int 2015;36(9), 1045-9
Materials and Methods

- After IRB approval, we retrospectively reviewed 386 cases of lateral ankle ligament repair at our institution between June 2006 and November 2016.
- All patients had undergone at least 6 months of conservative management including ankle bracing and/or physical therapy without improvement.
- Excluded: age less than 18, gross traumatic event, history of ipsilateral subtalar arthrodesis, cases without accessible intra-operative reports.
Materials and Methods

- We reviewed intra-operative reports for the presence of the following associated co-pathologies
  - Peroneal pathology (including split tendon pathology)
  - Talar osteochondral defects
  - Ankle Impingement
  - Low-lying muscle belly of the peroneus brevis muscle
Results – Slide 1

• 166 cases total included (48 males, 118 females); 20 were revisions
• Mean age = 39 ± 13.4 years; Mean BMI = 31.41 ± 7.5 kg/m²
• Mean follow-up = 44 ± 46 weeks
• Two senior surgeons performed 87% (145/166) of cases
Results – Slide 2

• Peroneal pathology (72.3%, 120/166)
  • 57.6% = tenosynovitis; 36.6% = peroneus brevis split lesion; 5.8% = peroneus longus split lesion
• Ankle impingement (41%, 69/166)
  • 46.4% anterior; 27.5% posterior; 24.6% combined
Conclusions

• The distribution of chronic lateral ankle instability co-pathologies agrees with most literature,\textsuperscript{3,4} however the occurrence of osteochondral lesion may be over-estimated\textsuperscript{5,6}

• Vigilant exploration for associated lesions, especially peroneal pathology and ankle impingement is essential

• Although the role of a low lying muscle belly of peroneus brevis in chronic lateral ankle instability is uncertain, we report its high occurrence
References


