

Background

- Os trigonum is a congenital bony ossicle located on the posterior talus, with reported prevalence in the general population between 12.7-23.5%.
- An increased prevalence is seen in classical ballet dancers, with os trigonum being the cause of 30% of posterior ankle pain.
- While an os trigonum is often asymptomatic, athletes that undergo repetitive and/or forced plantar flexion motions such as dancers, soccer players, and runners are at risk for os trigonum syndrome.



Purpose

This systematic review examined the current literature for best available evidence for treatment and rehabilitation for os trigonum syndrome in athletes.

Methods

Data Sources

- PubMed
- Search conducted in May 2019

Inclusion Criteria

- Athlete or dancer population
- Diagnosis of os trigonum
- Intervention performed

Exclusion Criteria

- Unavailable in English
- Surgical technique focus
- Os trigonum not the primary diagnosis

Data Extraction

- Chosen conservative or surgical interventions
- Return to activity/outcome measures
- Modified Downs and Black Risk of Bias Tool

Results



INCLUDED ARTICLES

18 articles total
 1 Randomized control trial
 2 Retrospective cohort
 15 Case series/report
 *All articles had moderate/high risk of bias



STUDY PARTICIPANTS

250 Total athletes
 61% Dancers
 20% Soccer Players
 8% Track and Field
 10% Other/not reported



CONSERVATIVE INTERVENTION

Corticosteroid Injections
 NSAIDS
 Activity Modification
 Physical Therapy Treatment



SURGICAL INTERVENTIONS

10 utilized open procedure
 8 utilized endoscopic procedure
 2 studies compared the two



RETURN TO ACTIVITY

Time Frame: 2 wks - 5 mos
 Outcome Measures varied
 98% of athletes returned to previous level of activity

Conclusions



No standardization of conservative care



No consensus on open vs endoscopic excision



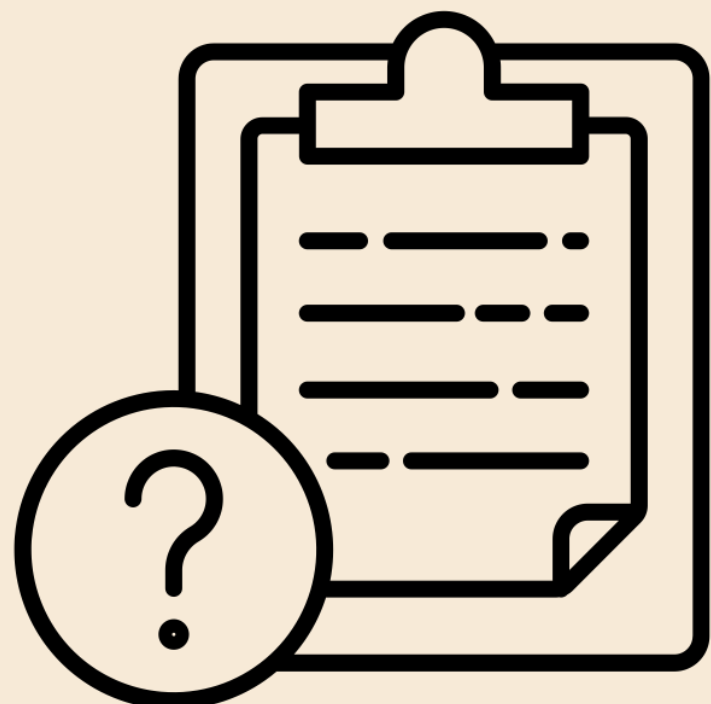
Generalizability among other athletic populations?



More rigorous studies needed!

Clinical Relevance

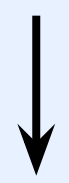
This review gives an overview of current management of os trigonum syndrome and highlights the gaps in the literature. This is especially relevant in treating athletic populations that are at increased risk due to repetitive and forced plantarflexion motions.



No gold standard exists for conservative treatment or clinical practice guidelines

Conservative

Conservative treatment is the first line of treatment. Treatment/interventions can include strengthening, flexibility, and ankle/foot orthoses.



Surgical Intervention

If conservative treatment fails, surgical intervention is performed either as an endoscopic or open excision procedure.



Post- Surgical

Exercises designed toward sport-specific strengthening, flexibility, education, and graded progression toward return to activity.

Acknowledgements

We would like to thank our Duke SOM librarians Leila Ledbetter and Jordan Wrigley for their contributions.