Cuboid syndrome

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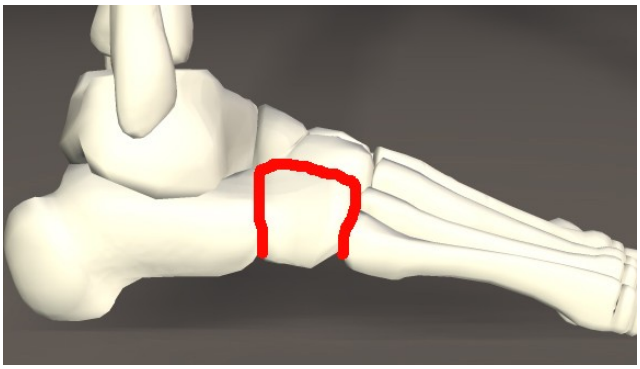
Introduction
Cuboid syndrome has been reported as effecting 4% of athletes however it is a poorly recognised and often misdiagnosed condition. There is little published literature and therefore much speculation still exists as to the condition and its treatment. A review of 3600 injured athletes by Newell and Woodie (1981) found that cuboid syndrome was diagnosed in 4% of their athletes, with the condition seeming to be far more common in ballet dancers.

Etiology
This is unclear in most cases; however there seems an association with acute foot movements such as both landing, and ankle inversion. An overuse component has also been noted in ballet dancers.
Excessive pronation of the midtarsal joint can cause calcaneocuboid unlocking with increased motion occurring at this joint. The peroneus longus can exert a greater mechanical pull beneath the cuboid and contributes to the theorised cuboid displacement which is not great enough to be detected radiographically. Severe subluxations are not common and in fact the amount of trauma necessary to displace the cuboid usually causes a fracture. It may be more accurate to consider this syndrome more of a joint dysfunction with joint irritability rather than a true subluxation.

Examination
Discomfort is palpated dorsally around the cuboid articulations in the classical "n" appearance. Patients complain of pain which can be severe enough to cause the foot to give way. Plantolaterally there may be peroneus longus discomfort where it runs along its cuboid groove. Pain and weakness on resisted ankle eversion are common findings.

Movement of the midtarsal joint toward a pronated position often elicits pain and patients frequently cannot perform a single legged heel raise.



The classical cuboid "n" spot

Treatment
Taping techniques such as a low dye taping can assist in reducing calcaneocuboid motion and work exceptionally well. By contrast some authors consider that the cuboid can be manipulated back into position. Pressure from the practitioners thumbs is applied to the plantomedial aspect of the cuboid whilst rapidly plantarflexing the foot. Joint mobilisations consisting of passive A-P cuboid gliding have also been found to be effective in its treatment.
A pronated foot type is often associated with cuboid syndrome and thus the use of orthotic devices (especially if taping is effective) can yield excellent and often immediate results.

Take home messages

- Check for "n" spot pain
- Discomfort on midtarsal joint pronation
- Pain on resisted eversion and a poor single legged raise
- Low dye taping can work exceptionally well
- Check for excessive foot pronation
- Orthotic therapy to stabilise the midfoot