

## Paper #47

# Chronic Lateral Ankle Instability Increases the Likelihood for Surgery in Athletes with Os Trigonum Syndrome

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### Summary:

Professional athletes with chronic lateral ligament ankle injury have an approximate 10 times greater risk for os trigonum syndrome surgery compared to athletes with acute lateral ligament ankle injury.

### Abstract:

#### Purpose

The etiology and incidence of os trigonum syndrome in professional athletes is highly variable. There is a paucity of data to ascertain why some athletes evolve towards surgery whilst others remain asymptomatic. We hypothesized that lateral ligament injury to an athlete's ankle could increase the likelihood for surgery in those with os trigonum syndrome.

#### Methods

Eighty professional athletes with clinical and radiological signs of os trigonum syndrome were identified for potential associated involvement of injury to the lateral ligamentous ankle complex (acute and chronic) by Magnetic Resonance Imaging (MRI). This cohort was subdivided into 2 groups; a surgical (n=40) and a non-surgical (n=40) cohort. Division was decided if clinical hyper-planter flexion test was positive, if the ultrasound-guided injection was positive, and if no improvement was observed after 6 weeks of conservative rehabilitation.

#### Results

From the surgical cohort, 94.1% had a chronic lateral ankle ligament injury on MRI, whilst 5.9% with an acute lateral ankle ligament injury. Binary logistic linear modelling revealed that having a chronic lateral ligament injury increases the likelihood of os trigonum syndrome surgery by 10-times compared to those with an acute lateral ligament injury.

#### Conclusion

Professional athletes with chronic lateral ligament ankle injury have an approximate 10 times greater risk for os trigonum syndrome surgery compared to athletes with acute lateral ligament ankle injury.

Level of Evidence: Case - Control Study