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## ***Fibroma Causing Compartment Syndrome in NCAA Division I Athlete***

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### ***BACKGROUND***

Traumatic compartment syndrome typically presents itself following an acute trauma to structures that cause a rapid swelling of the compartment. Chronic compartment syndrome is repetitive stresses on a muscle group that cannot fully recover. Compartment syndrome can occur in patients with sports that have stop-and-start activities such as sprinters, soccer players, and football players. The patient was a Caucasian male quarterback, age 21, who had previously suffered a blow to the lateral leg compartment back in high school football. During August of his junior year of college, he complained of pressure and pain in his leg. He had presented without swelling but with tenderness at the site and it was painful to the touch. Symptoms would worsen when he began movements such as abrupt stopping, passing, or drills and he reported cramping and increased tightness within the compartment. The injury began to present itself again in August 2018. The patient was sent to obtain an MRI and Ultrasound. The outcome was a fibroma on his peroneus longus tendon causing the compartment syndrome.

### ***DIFFERENTIAL DIAGNOSIS***

Compartment Syndrome, Medial Tibial Stress Syndrome, Nerve Entrapment, Muscular Strain

### ***TREATMENT***

The patient was placed in a boot and removed from activity for two weeks to decrease the inflammation and pain. Treatment included contrast baths, leg strengthening exercises, stretching, and HIVAMAT, which is a deep oscillation tool to relax muscles and facilitate pain relief. He was in rehabilitation for most of

the season but continued to play in games and practice when there was limited pain or any issues. When he returned to play fully, the compartment syndrome progressed, and he was warranted to see a doctor for a second opinion. A specialist at the Cleveland Clinic used extracorporeal shock wave therapy to decompress and alleviate the pressure on the nerve, as well as, take away inflammation. This had a positive impact on the patient and ended up being a large component in his ability to return to play. The patient will be consulting to receive surgery in the off season.

### ***UNIQUENESS***

The compartment syndrome was caused by scar tissue and the fibroma, instead of swelling of the muscle and pooling of blood, which is the typical mechanism of injury. The use of extracorporeal shockwave therapy was also a significant discovery in learning how to care for the patient. It is important as clinicians to not get tunnel vision and keep an open mind on injury diagnosis. In this case, experimenting with different rehabilitation techniques led to a final alleviation of symptoms for the patient.

### ***CONCLUSION***

The source of pain was difficult to determine at first on why the compartment syndrome had become transitioned from traumatic to chronic. Once the source was found, the treatment was better suited for the patient. The shockwave therapy enabled the player to return to play during the season due to his symptoms diminishing. After the season ended the patient is looking into having a fasciotomy done on his leg to remove the scar tissue and fibroma.

**KEY WORDS:** *Fibroma, Compartment Syndrome, Shock Wave Therapy*