Chronic Compartment Syndrome in Collegiate Women’s Soccer Player
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Background: A 20 year old female soccer player suffers from Chronic Compartment Syndrome (CCS) of both lower legs; anterior, lateral and deep posterior compartments. Mechanism of the injury: Athlete in 2012 stated that when she ran while playing soccer, her legs from the proximal portion of her calf down to her toes went numb. Initial assessment was chronic shin splints. Athlete experienced spasms throughout both lower legs. There was no swelling of the lower leg but athlete was point tender throughout both lower legs. Passively athlete experienced no pain but actively athlete experienced pain in all directions of ROM of the ankle. No special tests were performed. Initial treatment: RICE. Strengthening with therabands in all ankle ROM. Athlete was referred to an orthopedic. Differential Diagnosis: Chronic Shin Splints, stress fractures to fibula and tibia, Deep Venous Thrombosis, Myopathies, Nerve Entrapment Syndromes, Spinal Stenosis, Tenosynovitis. Treatment: After the 2012 soccer season, a catheter was inserted into the anterior, lateral and deep posterior compartments of the lower leg to finalize Chronic Compartment Syndrome by the intramuscular pressure readings. Pressure levels were taken before exercise and then after. The results showed signs of Chronic Compartment Syndrome. Surgery was performed June 2012, following the end of the season. Surgery consisted of bilateral fasciotomy of the anterior and lateral compartment. Athlete was back to play on August 17th 2012. Symptoms did not subside and injury continued to get worse. A second surgery was performed March 2013. The surgery consisted of a bilateral fasciotomy of the deep posterior compartment. Then athlete proceeded back to play on July 28th 2013. In surgeries the pre and post-surgical treatments were the same; RICE, swim-ex, massage, electrical stimulation (for swelling) and strengthening with therabands.

Uniqueness: Chronic Compartment Syndrome is not a well understood injury and most times is misdiagnosed for chronic shin splints. This injury not necessarily is prone to any specific person. Chronic Compartment Syndrome is though seen in most athletes that exert a lot of pressure on their legs which triggers and exacerbates Chronic Compartment Syndrome. There are “treatments” for this injury, but the treatments are not always successful. With CCS, it is managing the injuries symptoms more than treating CCS. The fasciotomy surgery, does in most cases help but doesn’t get rid of the underlying problem, which is unknown. In the surgery the idea is to open up the fascial layer of the compartment and have the fascia heal to create a “larger” compartment, to essentially relieve the pressure that has built up. Eventually the pressure begins to again succeed the room that the surgery created when maximal exertion is placed on the legs. Having CCS is an ongoing process. Not to say that the surgery doesn’t work, but in some cases the surgery doesn’t get rid of the problem, it just makes it bearable. Conclusion: In soccer there are a lot of demands put on the body, mostly the lower leg. In this case study, these demands resulted in this athlete experiencing the effects of Chronic Compartment Syndrome. The surgeries that were performed on this athlete unfortunately did not get rid of the problem that she is facing since this athlete continued to be active. She is in her junior year, 2 years after diagnosis and is currently and is still experiencing the effects of chronic compartment syndrome. The athlete does state that the surgeries did help to alleviate the pain but did not solve the problem. Word count: 592