Transverse Myelitis in a 13-Year Old Male Soccer Player

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Background: The patient, a 13-year old male soccer player reported to school nurse in the morning following soccer practice. He stated that after practice he had pins and needles in both hands off and on”. Athlete reported no trauma but did perform some routine head balls. He mentioned before going to bed he had distal to proximal paresthesia and numbness of his upper extremities bilaterally. Athlete was able to sleep without discomfort and ate breakfast in the morning. The school nurse noted good circulation to his hands and feet and full ROM and minimal pain. He was advised to see the athletic trainer prior to sports. Athlete reported to athletic trainer later that day complaining of pins and needle sensations in both arms and hands as well as chest and back. Evaluation by athletic trainer revealed reflexes, dermatomes, myotomes, cranial nerves, MMT and pulse were all WNL. The athlete was sent to Urgent Care for further evaluation. Differential Diagnosis: Concussion, Intracranial Hemorrhage, and Second Impact Syndrome. Treatment: Head CT scan did not reveal any hemorrhage or acute findings but did show brain and spine hyperintensity at C2-C3 and C3-C4. An incidental thyroid nodule was also noted. Athlete was transported to Boston Children’s Hospital in a cervical collar for further evaluation. MRI showed signal abnormality in the cervical neck region and a spinal tap was performed and showed no infection. The athlete was diagnosed with transverse myelitis that might have been related to a recent flu vaccine. The athlete received a five day course of methylprednisolone 1000mg IV q 24 hours which was tolerated well. Once discharged he was given oral steroids and received ranitidine PO script while taking the steroids for gut protection since the steroids can irritate the gut. While on steroids, his blood pressure was checked every week. He also continued taking gabapentin 100mg medication twice daily to improve sensory symptoms. The athlete went to an occupational physical therapist to improve fine hand movements specifically in the right hand. Three weeks following injury, the athlete returned back to academic classes and returned to music class playing oboe, however he did not return back to athletics or recreational activities at that time. The athlete returned back to sport following the winter break, three months following the injury. Uniqueness: The signs and symptoms of transverse myelitis include pain beginning in the neck or back and may include shooting pain down the legs and arms. Abnormal sensations have also been reported including numbness and tingling in the hands and feet. The signs and symptoms the athlete presented are similar to those of transverse myelitis but what makes the case unique is that there was no mechanism of injury and these symptoms can be familiar to those of a concussion since the athlete reported practicing head-ball drills at practice the night before. Conclusions: The onset of transverse myelitis is a gradual onset becoming more symptomatic over time. The incidence rate of transverse myelitis is 1.34 to 4.60 cases per million and the average age of incidence is ten to nineteen years and thirty to thirty-nine years of age. This information can be useful to athletic trainers because those working with these populations may want to include the first time an athlete received a flu shot to rule in or out the possibility of transverse myelitis on a pre-participation exam or medical history. Word Count: 584