Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal Infection in an Adolescent Football Athlete
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**Background:** A 16 year-old male football athlete reported to the athletic trainer complaining of involuntary tics causing his head to rotate unilaterally to the right. The patient stated that the symptoms began the previous day however he had been feeling better since the initial episode. However, he reported the symptoms after having to leave football practice as a result of the repeated involuntary head movements. He also complained of a headache and back pain, but did not report any chills, nausea, vomiting or dizziness. His personal medical history included a bout of pneumonia and a concussion he suffered two years prior. The patient denied any alcohol, drug or performance enhancing drug use. His father stated that he has never acted like this before and has no previous history of psychological disorders. Upon assessment, the patient appeared fidgety and could not remain still while he was symptomatic. There were no remarkable findings during assessment other than the obvious tics that were observed. The patient was referred to the emergency department due to the continued tics.

**Differential Diagnosis:** Stress related disorder, Lyme disease, Tourette’s syndrome, Sydenham chorea, allergic reaction, reflex sympathetic dystrophy, focal seizure.

**Treatment:** At the emergency department, cardiovascular, respiratory, neurological, gastrointestinal, genitourinary, musculoskeletal, and pain assessments were all negative. Plain film radiographs and computed tomography without contrast were negative. Elevated leukocyte levels were noted following urinalysis and elevated plasma levels of potassium and creatinine were observed. A drug screen was also performed and found to be negative. The patient was diagnosed with a tic disorder and prescribed .5-mg of Xanax. He was cleared to return to sports even though the tic was still consistent. The athletic training staff used heat and manual therapy on the upper trapezius and sternocleidomastoid in an attempt to relax the muscles and diminish the tics. They also performed passive static stretching on the same muscles. When the patient relaxed, the tic would diminish for the duration of the therapy. The athletic training staff decided that it would be safer to wait to return to participation until the tics had resolved completely. At the suggestion of another parent, the patient was referred to his pediatrician who identified a high strep level following an overnight strep test. The pediatrician diagnosed the patient with pediatric autoimmune neuropsychiatric disorder associated with streptococcal infection (PANDAS) and prescribed amoxicillin. The tics ceased within a few days and he returned to full participation without complication.

**Uniqueness:** Although PANDAS commonly affects younger children, it also can occur in the older teenage population. It is easily missed or confused with other diseases as it was with this particular case. It would be very easy and useful to add a strep test to the variety of tests done when an adolescent presents with symptoms with an unknown cause or etiology. It also has a variety of signs and symptoms associated with it.

**Conclusions:** Sudden onset of obsessive compulsive disorder (OCD) or a tic should raise suspicion for PANDAS and the need for referral. More research is needed to discover the true etiology of this condition.

**Relevant Evidence:** A child may be diagnosed with PANDAS when OCD and/or tic disorders suddenly appear following a strep infection or if the symptoms of OCD or tic symptoms suddenly become worse following a strep infection. **Word Count:** 546.