DIAGNOSIS OF SUBARACHNOID HEMORRHAGE IN A 35-YEAR OLD MALE HIGH SCHOOL SOCCER COACH: A CASE STUDY

Loy, C. P, Rutgers Preparatory School, Somerset, New Jersey

**Background Information:** A 35-year-old male high school soccer coach slipped and hit his head during practice. He complained of a severe headache that pulsed towards his occipital bone. The patient had no past medical history of head injury and was not on medications. On exam, there were no visible lacerations or deformity over the injury site, cervical spine was nontender. The right pupil was dilated and the right eye was deviated inferior and lateral. The headache was a sudden onset after he stated that there was a popping feeling in his head. During the evaluation the patient suddenly began to complain of nausea and photophobia. **Differential Diagnosis:** concussion, subarachnoid hematoma, epidural hematoma, subdural hematoma skull fracture. **Treatment:** Based on rapidly worsening status and conduction, the decision was made to immediately refer. An urgent noncontrast Computed Tomography (CT) scan was performed immediately, followed by a lumbar puncture and a Cerebral Angiogram. Patient was diagnosed with a subarachnoid hematoma (SAH). An underlying aneurism was confirmed. The intracranial aneurism was located at the middle cerebral artery bifurcation near the Circle of Willis. Neurosurgical clipping was performed by placing a small titanium clip across the neck of the aneurysm stopping blood flow. Ten days following SAH, the patient remained in the neuroscience ICU, where staff watched closely for signs of bleeding, vasospasm, hydrocephalus, and other complications. Magnetic Resonance Imaging (MRI) of the brain showed normal post-op images. The patient returned home two weeks after surgery, and to coaching after 14 weeks. **Uniqueness:** Over 30,000 episodes of SAH occur annually in America. Risk increases with age and is more common in women of African decent. 10% of patients will die before they reach the hospital, 40% will die in the hospital within one month of the hemorrhage. SAH comprises half of spontaneous atraumatic intracranial hemorrhages, usually as the result of aneurismal, leakage, or rupture. **Conclusion:** SAH is a sudden bleeding between the arachnoid membrane and the pia mater surrounding the brain. SAH is a life-threatening condition and patients must be stabilized and referred immediately. Patients usually present with the sudden onset of ‘the worst headache of my life’. SAH is associated with high morbidity and mortality. The importance of early recognition and treatment is equal to the importance of early diagnosis. Diagnosis of SAH requires a thorough history and a very high index of suspicion. Once considered, an accurate diagnosis requires an understanding of the role of diagnostic CT, lumbar puncture, magnetic resonance imaging and cerebral angiography. Athletic Trainers must be able to recognize cardinal features and symptoms immediately. Having the ability to quickly stabilize and deduce potentially life-threatening conditions allows Athletic Trainers to provide optimal care. This case stresses the importance in utilizing an evidence-based approach to establish differential diagnosis when treating medial pathologies. **Word Count:** 487