**Unusual Syncope Episode in a Female Cross-Country Athlete: A Case Report**

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**Background:** We present the case of a 19-year old female collegiate cross-country athlete who experienced seven syncopal episodes from October 2004 through November 2004. Each episode was during competition and usually occurred between the first and third kilometers of the course. Syncope was preceded by difficulty breathing and disrupted vision. Each episode was either evaluated by the supervising certified athletic trainer or physician covering the event. Evaluation showed stable vital signs with blood pressure within normal limits, active heart of 152 beats per minute and normal pupillary reflexes. Past medical history revealed two syncopal episodes while in high school and a family history of Brugada Syndrome (sudden cardiac death). Testing was unremarkable for acute and chronic cardiac issues and the athlete was allowed to continue competing as tolerated. **Differential Diagnosis:** Brugada syndrome, aortic stenosis, mitral valve prolapse, right ventricular dysplasia and neurocardiogenic syncope. **Treatment:** The athlete was referred to a cardiologist and neurologist for testing. The athlete underwent a series of echocardiograms, cardiac monitoring (Holtor), and a head-up table tilt test. Neurocardiogenic syncope, a failure of the brain to adequately regulate the body’s heart rate and blood pressure was suspected. Lexapro®, fludrocortisone and breathing education were prescribed for the athlete to recognize and overcome pre-syncopal episodes. **Uniqueness:** Etiology of neurocardiogenic syncope is unknown and not highly prevalent in athletics. This well-trained athlete followed medication and breathing therapy routines yet still experiences episodes. The athlete was unable to continue her collegiate career due to reoccurrence of symptoms. **Conclusions:** Neurocardiogenic syncope occurs when there is a loss of consciousness secondary to a sudden reflex vasodilation, bradycardia, or both. A sudden drop in blood pressure leads to decreased blood flow to the brain resulting in dizziness or fainting (syncope). Failure by the sports medicine staff to recognize symptoms consistent with neurocardiogenic syncope can lead to the athlete not performing at an optimal level and may cause other trauma due to loss of conscious. Neurocardiogenic syncope is considered to be a benign condition as episodes are self-limiting. Understanding the pathophysiology of neurocardiogenic syncope is necessary to guide appropriate management and to prevent future episodes. Finally, more randomized controlled clinical trials are needed to assess the efficacy of the various treatment strategies used. **Word Count:** 368