Postural Othostatic Tachycardia Syndrome in a Female Collegiate Volleyball Player
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Background: The patient is a 21 year old female collegiate volleyball player with a history of dizziness and fainting. The patient reported signs and symptoms including rapid heart rate when vertical, nausea, fatigue, dizziness and the sensation of “heavy legs”. The patient also experienced several episodes of syncope, yet continued to participate in volleyball activities; her tolerance to exercise is sensitive to increased duration and intensity of training. Additionally, the patient experienced academic impact due to difficulty concentrating. She was initially diagnosed with orthostatic hypotension due to exertional syncope with no origin, but was later treated for costochondritis. After no significant reduction in her signs and symptoms throughout the Spring semester, the patient was diagnosed with postural orthostatic tachycardia syndrome (POTS). Differential Diagnosis: Panic disorder; chronic anxiety; excessive tachycardia; neurasthenia, idiopathic hypovolemia; emphasizing sympathetic overactivity; mitral valve prolapse syndrome and syncope. Treatment: The patient underwent a full cardiac evaluation, revealing normal heart exam and normal EKG. All POTS patients require a high salt diet, liberal fluid intake, and postural training. She was prescribed Midodrine and was recommended to take Thermostabs to add salt to the diet. She was also advised to eliminate caffeine from her diet and drink 64 - 80oz of water every day. The Midodrine was reduced after the POTS diagnosis and the Thermostabs were later changed to Salt Stick tabs due to higher sodium and electrolyte concentrations due to no improvement in her signs and symptoms. The patient is able to participate in all practices and training sessions as tolerable. She has been compliant with dietary intake of fluid and solid food, carrying emergency food high in sodium, such as pretzels, and her own Gatorade. The patient continues to report signs and symptoms and can usually predict an approaching episode, assisting in her own care. Uniqueness: Each case of POTS is unique. This particular patient is able to participate in most volleyball specific drills and also plans to participate in lacrosse in the spring despite recurrent episodes and consistent signs and symptoms. The pharmacological intervention has had limited success with the patient reporting better control of the condition with increased frequency of exercise. Conclusions: POTS is not common in the athletic population. Management involves above average fluid intake with increased sodium, to increase plasma volume. Pharmaceutical intervention is generally well tolerated, with exercise and cardiovascular conditioning developing as an adjunctive therapy. Relevant Evidence: no published relevant evidence. Word Count: 408