Idiopathic Thrombocytopenic Purpura in a Female High School Swimmer

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Background: Our subject is a 14-year-old female high school swimmer. In early January of 2009, she noticed several idiopathic ecchymotic areas on her body. She frequently experienced headaches and occasionally suffered epistaxis. The subject took a CBC as part of a routine medical check up. This test took place on February 13, 2009. The subject's platelet count was abnormally low at 13 K/cmm (normal range=150-450 K/cmm), however, other CBC indices were normal. Her signs and symptoms matched those of several acute diseases, and so she was referred to a pediatric specialty hospital for a more complete medical evaluation on February 14, 2009. Upon admission to the pediatric hospital, a new CBC test was performed: platelets- 7 K/cmm, white count- 7.9 with ANC of 4000, hematocrit- 39 **Differential Diagnosis:** idiopathic thrombocytopenic purpura, disseminated intravascular coagulation (DIC), acute leukemia, drug-induced thrombocytopenia, hypersplenism, systemic lupus erythematosus (SLE), human immunodeficiency virus (HIV). **Treatment:** By the process of elimination, a diagnosis of idiopathic thrombocytopenic purpura (ITP). Leukemia was ruled out with a normal white count. ITP presents itself in otherwise healthy subjects who have cases of thrombocytopenia. Subjects with ITP only show signs of bleeding correlated with their low platelet count. To elevate her platelet count, the pediatric hospital gave the subject intravenous immunoglobulin therapy (IVIG). Two days later (2/16/09), the IVIG treatment had elevated her platelet count to 41 K/cmm. The subject spent a total of three days in the hospital. Our subject's platelet labs results in the first five weeks following the diagnosis were: 2/25/09- 3 K/cmm (another IVIG treatment administered at this point); 3/02/09- 122 K/cmm; 3/05/09- 181 K/cmm; 3/09/09- 126 K/cmm; 3/10/09- 123 K/cmm; 3/16/09- 26 K/cmm; 3/18/09- 17 K/cmm. At this point, she received a treatment of IV WinRho (human antiserum) to raise her platelet count. The WinRho was given in hope of fewer side effects than the IVIG (significant headache and nausea). However, she did not respond well to the WinRho with shaking, fever, and nausea. She did not receive subsequent WinRho or IVIG treatment because of the side effects. **Uniqueness:** Her physicians were hopeful that she had the acute version of ITP. 90% of patients who are diagnosed with ITP will recover within six months. However, since she still had symptoms after six months, she is now considered a chronic sufferer of ITP and will likely have life-long effects of the condition. This condition is more likely to be diagnosed in females (female-to-male ratio is 2.6:1). More than 72% of patients older than 10 years of age are female. **Conclusion:** She has not received any additional IVIG treatments since 2009. The platelet level has bounced up and down until finally maintaining an "acceptable" level of 30-50 K/cmm by reducing stress and fatigue in her lifestyle. Our subject no longer participates in sporting activities. Because of the risk of hemorrhage during childbirth, her physicians recommended she not have children. Hormone therapy helps to regulate her menstrual cycle that has lasted up to 32 days. She also suffers from occasional depression, which she can correlate to times when her platelet counts are lower. She also notices moderately frequent bleeding when brushing and flossing her teeth. Unfortunately for our subject, a simple procedure such as a tooth extraction requires a blood transfusion and a night of hospitalization. Although ITP is a relatively rare

condition, athletic trainers need to consider it among the differential diagnoses in those who bruise and bleed easily. **Word Count:** 570