TYPE I DIABETES MELLITUS IN A COLLEGIATE BASEBALL PLAYER: A CASE STUDY
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Background: A 21-year old Division III Collegiate Baseball Pitcher returning for his senior year had an insulin pump inserted to better control his Diabetes during the summer. At four and one-half years of age, the athlete developed blisters between the digits on his hands and feet and was diagnosed with the Coxsackie virus. At age six, he experienced an episode of syncope with paralysis on the left side of his body, which continued for the next twenty-four hours, resulting in a depletion of glucose in the brain. Later, the athlete experienced excessive thirst and frequent urination and had a series of laboratory tests to measure glucose levels. Urine tests were consistently positive for excessive glucose. A fasting glucose test was administered to determine the amount of glucose in the plasma. The athlete had a blood glucose level greater than 126mg/dL indicating Diabetes. Based on the results of the laboratory testing, the athlete was diagnosed with Type I Diabetes Mellitus. Differential Diagnosis: Acute Pancreatitis, Pancreatic Enzyme Deficiency, Anemia, Hypoglycemia, Hyperglycemia.

Treatment: When first diagnosed with Diabetes, the athlete was prescribed a low glucose diet and ½ unit of insulin during the day and in the evening. When he entered college, the athlete continued on a regular insulin dosage consisting of Lantus (42 units a night) and Humalog (1 unit for every 10 grams of carbohydrates and 1 unit for every 20 points that his blood glucose level exceeded 130 mg/dL). To better control his Diabetes, especially during his baseball season, his primary care physician suggested an insulin pump. After the insulin pump was inserted his medication was changed to Novolog (insulin) and he was instructed to maintain his blood glucose levels between 80 and 150 mg/dL, with a goal of between 70 and 100 mg/dL. Uniqueness: Type 1 Diabetes Mellitus is a condition in which the pancreas produces little to no insulin commonly beginning in childhood or adolescence and called juvenile diabetes or insulin dependent diabetes mellitus (IDDM). The cause of the disease is unknown but it is believed that the immune system is affected by a virus or microorganism that destroys beta cells in the pancreas that produce insulin. Elevated plasma glucose levels increase the release of insulin in the body. When plasma glucose levels decrease, insulin secretion by the pancreas is suppressed. Ketoacidosis can occur when the body has not received enough insulin. The warning signs of ketoacidosis are thirst, frequent urination, high blood glucose levels, high levels of ketones in the urine, fruity odor in the breath, nausea and vomiting. Normal blood glucose levels should be between 74 and 106 mg/dL. It is uncommon for a collegiate baseball player to participate with an insulin pump. The insulin pump delivers rapid or short acting insulin 24 hours a day through a catheter placed under the skin. When eating a meal or a snack, the athlete activates the pump releasing a bolus to control the effects the carbohydrates consumed. If a sudden increase in glucose is detected, a bolus can also be used to bring these levels back to their target range. Conclusion: Since the athlete had the pump inserted, he has not had to modify his diet or alter his insulin intake. His blood glucose levels are stable and he has had a successful baseball season without complications. Key Words: Type 1, Diabetes Mellitus, IDDM, glucose, insulin