Exercise Induced Rhabdomyolysis
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Background: On August 20th 2013, a 20 year old division III male soccer player complained of severe bilateral cramping in the quadriceps, hamstrings, and gastrocnemius during a preseason conditioning session. The athlete was transported into the athletic training facility for examination where cramping continued for over an hour. As the athlete began to complain of a "sore throat," the team physician and head athletic trainer came to the decision to refer the athlete immediately to the hospital. The athlete gave urine and blood specimens to assess for renal dysfunction, hydration levels, and creatine kinase (CK) levels. The athlete tested negative for any renal dysfunction but was found to be severely dehydrated and his creatine kinase levels reached 3000 micrograms/liter. Due to the positive findings, the athlete was diagnosed with rhabdomyolysis. Differential Diagnosis: Sickle Cell Trait, Muscle Soreness, Renal Dysfunction.

Treatment: The athlete underwent intravenous therapy to improve his hydration levels and was released from the hospital later that night. Upon release the athlete was instructed to rest and drink plenty of fluids. He went for further blood testing two days later and a week later after the initial cramping episode. His follow up testing showed that his creatine kinase levels were returning back to normal. After the second blood testing, his creatine kinase levels were within a normal range, thus he was able to begin a progressive return to play program. The athlete’s return to play included light aerobic exercises during the beginning stage, progressing to more sports specific exercises, and eventually return to full practice. Uniqueness: Rhabdomyolysis is usually diagnosed to those who carry the Sickle Cell trait and/or those whose CK levels are 5 times greater than the normal level. The average normal level is 120 micrograms/ liter. The patient’s levels, when measured at the hospital, were 17 times higher than the normal level. If he was not treated as quickly as he was, he could have suffered kidney damage or even renal failure. Conclusion: Cramping is a very common condition among athletes ranging from all age groups leaving most athletic trainers to dismiss it as simply not drinking enough fluids or not eating properly. However stretching, whether active or passive, and drinking sports drinks, high in electrolytes, does not always solve the underlying issue. This case was a perfect example of when routine cramping turned into a possibly fatal condition. Even though rhabdomyolysis is not commonly seen, it is still important to identify the signs and symptoms as early as possible to avoid any further complications that the athlete or patient might encounter. Word Count: 438