EXERTIONAL Rhabdomyolysis: Current Controversies

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Rhabdomyolysis (RM) is a syndrome associated with skeletal muscle breakdown and leakage of the intracellular contents into the plasma. RM can lead to myoglobinuria, acute renal failure, and potentially life-threatening metabolic derangements. Acquired etiologies include muscle trauma and crush injuries, muscle ischemia, drugs and toxins, infections, inflammatory muscle diseases, and overexertion. Inherited etiologies include abnormalities of genes that encode for proteins involved in the glycolytic or fatty acid oxidation pathways, or in the mitochondrial respiratory chain. Exertional rhabdomyolysis (ER) is rhabdomyolysis that results from excessive physical exertion. This presentation will focus specifically on ER and discuss the following controversies in sports medicine:

1. Currently, there is no universally agreed upon definition of rhabdomyolysis. Some have defined it as an elevation of the serum enzyme creatine kinase (CK) above a set level, e.g., 5 or 10 times normal;
2. Is there guidance available to assist clinicians with deciding: which ER patients need a detailed evaluation;
3. When can an ER patient return to play/duty.
4. Does extreme exercise contribute to ER in a warrior athlete (WA)?
5. Is sickle cell trait (SCT) a culprit or an innocent confounder in ER?
6. Do dietary supplements contribute to ER in a WA?

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