

Acute Renal Failure in Horses with Rhabdomyolysis: An Insight into the Role of Oxidative Stress Injury

Maged El-Ashker*

Department of Internal Medicine and Infectious Diseases, Faculty of Veterinary Medicine, Mansoura University 35516, Egypt

Acute renal failure in horses is a potentially life threatening condition and frequently develops in clinical settings associated with increased urinary excretion of myoglobin. During physical exercise, oxygen flux to active skeletal muscles increases, which leads to enhanced production of reactive oxygen species and free radicals with a deleterious effect on cellular structures involved in physical activity. Up to now, too little information is known about the role of oxidative stress in the pathophysiologic process of acute renal failure in horses with severe rhabdomyolysis. It has been suggested that the oxidative stress might play a role in acute renal failure associated with acute rhabdomyolysis in horses; however, the precise mechanism, whether

due to free iron, heme group of myoglobin, heme protein or myoglobin itself and which free radical mechanism is involved, as well as which cellular organelles are affected, are still a matter of debate [1,2].

References

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***Corresponding author:** Maged El-Ashker, Lecturer, Department of Internal Medicine and Infectious Diseases, Faculty of Veterinary Medicine, Mansoura University, Mansoura city 35516, Egypt, Tel: 0020174803901; 0020506329195; Fax: 0020502379952; E-mail: maged_elashker@yahoo.com

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