EDITORIAL

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Rhabdomyolysis

Rhabdomyolysis remains a significant cause of acute renal failure and mortality, yet carries an excellent prognosis if treated early and aggressively. In a recent issue of *Internal and Emergency Medicine*, Bagley et al. [1] provide an informative and practical review of the causes, diagnosis and treatment strategies for rhabdomyolysis.

The pathophysiologic description of rhabdomyolysis and its relation to renal failure was first elucidated by British surgeons during World War II [2]. Their keen observations of patients suffering crush injuries during the Battle of Britain led to their description of degenerative changes in the proximal renal tubules and pigment casts in the distal aspect of the nephrons. The Authors postulated that myoglobin might be one of the causal factors involved with the observed pigmented casts.

While the early descriptions of rhabdomyolysis focused on crush injuries, many other causal factors have subsequently been reported. The Authors provide a relatively succinct but valuable synopsis of the major causes of disease (see table 1 of article). In addition to direct muscle trauma, common causes of rhabdomyolysis include cocaine, overexertion and immobilisation [3]. In the USA, cocaine has emerged as potentially the most common contributor toward rhabdomyolysis with upwards of 24% of admissions being associated with this drug. Thus, rhabdomyolysis should be considered in any condition with the potential for significant skeletal muscle damage [4]. Once considered, accurate diagnosis can be rapidly obtained by serum measurement of creatinine kinase.

As the authors emphasise, the most critical intervention is high-volume intravenous fluid resuscitation. Natural disasters provide observational data that illustrate the importance of early volume resuscitation. In one instance, emergency medical technicians infused intravenous fluids to entrapped earthquake victims at the scene of a disaster. Consequently, the incidence of acute renal failure in these patients was very low. In contrast, a similar disaster occurred in which rescue personnel did not initiate intravenous therapy in the field. In this case, almost all of the entrapped patients went on to develop acute renal failure [5]. These disasters illustrate the importance of early and aggressive resuscitation.

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References