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Scientific Medical Sample

From a historical perspective, it is postulated that the first reference to this syndrome can be found in the Book of Numbers, from a description of one of the plagues of Egypt during the exodus: the characteristics of the people suffering are remarkably similar to rhabdomyolysis, having occurred during the consumption of quail by the people of Israel and their resultant intoxication due to hemlock herbs consumed by the quail.

In more modern times, the first reference to the syndrome can be found in the description of “crush injuries” by Bywaters and Beall that occurred in World War II during the Battle of London. The extent of medical knowledge at that time included understanding the etiology of the initial injury, but the resulting ongoing muscle damage and renal failure were not known to be affected by the mechanism of reperfusion. Once the pressure on ischemic tissue is relieved, toxic material is released into the bloodstream, known as the phase of reperfusion, causing the crescendo of events leading to rhabdomyolysis. Available data indicates that pressure-induced injury is dependent on the length of muscle compression time, with skin erythema being evidenced in as little as 2 hours following the application of pressure. Typically, studies of pressure-induced rhabdomyolysis have focused on two groups: patients positioned at length in surgery and patients comatose secondary to drug and/or alcohol ingestion. However, one prospective study concluded that almost half of all medical rhabdomyolysis patients were elderly (> or = 65 years), with the syndrome due to muscle compression and/or infection. This study did not include physical therapy interventions.

Research on reconditioning, defined as an exercised recovery from muscle injury/atrophy, has predominantly focused on animal studies with hind limb unloading in rats. Results from this research have been contradictory, with some studies showing increased muscle fiber regeneration and others indicating incomplete DNA recovery with reduced muscle size. Evidence of reconditioning research following Rhabdomyolysis was not identified in the literature.

The most recent review of rhabdomyolysis literature by F.Y. Kahn in 2009 concludes that there is a lack of level I evidence from which to determine the best management of the disease. What can be found are abundant case reports with descriptive analyses, all acknowledging that acute treatment begins with the management of complications, including acute renal failure (ARF), by fluid resuscitation, immediately following diagnosis. No studies discussed post-hospital discharge management. Having received a patient with this diagnosis in home care, and encountering the gap in the literature, the foundation for my case report was established.

This case report is unique in that it describes the physical therapy management of a patient with rhabdomyolysis as a result of prolonged immobilization; at this time, the diagnosis, as reviewed in the literature, has not yet been associated with physical therapy treatment. This case reports also seeks to report a therapeutic treatment program designed to aid in her recovery from the effects of the diagnosis.