Rhabdomyolysis- Diagnosis and Treatment

Ngonidzashe Chifamba

Otterbein University, ngonidzashe.chifamba@otterbein.edu

Follow this and additional works at: https://digitalcommons.otterbein.edu/stu_msn

Part of the Nursing Commons

Recommended Citation
Chifamba, Ngonidzashe, "Rhabdomyolysis- Diagnosis and Treatment" (2016). Nursing Student Class Projects (Formerly MSN). 168.
https://digitalcommons.otterbein.edu/stu_msn/168

This Project is brought to you for free and open access by the Student Research & Creative Work at Digital Commons @ Otterbein. It has been accepted for inclusion in Nursing Student Class Projects (Formerly MSN) by an authorized administrator of Digital Commons @ Otterbein. For more information, please contact digitalcommons07@otterbein.edu.
**RHABDOMYOLYSIS – DIAGNOSIS AND TREATMENT**

Ngonidzase Chifamba, MSN Student
Otterbein University, Westerville, Ohio

**Introduction**

Rhabdomyolysis results from the rapid breakdown of skeletal muscle fibers, which leads to leakage of potentially toxic cellular content into the systemic circulation (Hamel et al., 2015, p. 621). Rhabdomyolysis is a syndrome that is characterized by muscle necrosis and the release of intracellular muscle constituents into circulation leading to complications and disease. Rhabdomyolysis symptoms range from minor body aches to life threatening disease and acute kidney injury. The clinical features of rhabdomyolysis include myalgia, muscle weakness, myoglobinuria and muscle swelling that develops over hours to days (Nance & Mammen, 2015, p. 793).

Working in a prison unit I have witnessed several cases of patients that are to be treated for rhabdomyolysis, I have been captivated by these cases and I will attempt to understand the mechanisms of the syndrome. Given the number of cases that are presented to the unit and are eventually diagnosed with rhabdomyolysis it is pertinent for an advanced nurse practitioner to understand the pathophysiology of the disease. Understanding the mechanisms of the disease will help in diagnosis thus timely treating the condition hence improving patient outcomes. Most of the cases encountered are non-traumatic exertional rhabdomyolysis as inpatients. They do not have much to do with the prison camps and they do their exercises such as squats or push-ups unknowingly causing rhabdomyolysis.

**Pathophysiological Processes**

- Clinical manifestations and complications of rhabdomyolysis result from muscle cell death, which may be triggered by a variety of initiating events (Torres, Helmstetter, Kaye, & Kaye, 2015).
- The classic triad of symptoms of rhabdomyolysis consists of myalgia, weakness, and muscle tenderness (Torres, Helmstetter, Kaye, & Kaye, 2015).
- Muscle weakness, myalgia, muscle tenderness, and muscle tenderness.
-Pathology of rhabdomyolysis includes myoglobinuria and muscle swelling.

**Signs & Symptoms**

- The classic triad of symptoms of rhabdomyolysis consists of myalgia, weakness, and muscle tenderness (Torres, Helmstetter, Kaye, & Kaye, 2015).
- The signs and symptoms of the disease must be closely monitored and closely followed (Torres, Helmstetter, Kaye, & Kaye, 2015).
- The signs and symptoms of the disease must be closely monitored and closely followed (Torres, Helmstetter, Kaye, & Kaye, 2015).

**Significance of Pathophysiology**

Rhabdomyolysis is a significant feature of the disease, giving rise to the pathways of the disease and the signs and symptoms of the disease. Understanding the pathways of the disease helps a clinician understand what to expect and how to properly manage a patient (Torres, Helmstetter, Kaye, & Kaye, 2015).

**Implications for Nursing Care**

Treatment of Rhabdomyolysis requires early recognition of the disease and early intervention with timely complications set in. Implications of nursing care involves providing ongoing nursing care. The treatment of rhabdomyolysis includes fluid replacement via intravenous therapy. “Volume repletion with saline is essential to avoid hypovolemic shock and acute kidney injury” (Gina & Pach, 2016, p. 2). Nursing care will include sequential monitoring of urine output or volume, color and specific gravity to guide continued fluid resuscitation. The nurse should be vigilant to ensure no major complications occur. "Serial physical examinations and laboratory studies are indicated to monitor for compartment syndrome, hyperkalemia, acute oliguric or non-oliguric renal failure, and disseminated intravascular coagulation" (Muscal & DeDusum, 2015).

The next key step is identification and correction of the inciting cause (e.g., trauma, infection, or toxins) (Muscal & DeDusum, 2015). Finding the causative agent and eliminating it will ensure the patient will recover without further complications. Trying to treat the problem without eliminating or correcting the inciting agent will prolong the process of healing or worsen the patient’s condition. Correction of electrolyte, acid-base, and metabolic abnormalities will be achieved with no difficulty if the causative agent has been removed.

**Conclusion**

Rhabdomyolysis is a major clinical challenge; it manifests itself in different nonspecific symptoms which makes it difficult to diagnose hence can easily lead to systemic complications. The prognosis of rhabdomyolysis depends on the severity of the complications resulting from the syndrome and the underlying cause. When treated early and aggressively, an episode of rhabdomyolysis has an excellent prognosis (Zutt, Van der Kooi, Lenthorn, Wanders, & De Visser, 2014, p. 657). Clinicians should be aware of the symptoms of the syndrome and be ready to intervene in a timely manner to reduce it complications. Clinicians should also be proactive in treating the patients they work with to ensure they know the likely cause of the syndrome and how to prevent it.

**References**


Hamel, Y., Marrese, A., Masuia, F., Labrador, F., Gallenstein, L., Romero, N., …De Loisy, F. (2015). Acute rhabdomyolysis and disseminated intravascular coagulation. The nurse should be vigilant to ensure no major complications occur. "Serial physical examinations and laboratory studies are indicated to monitor for compartment syndrome, hyperkalemia, acute oliguric or non-oliguric renal failure, and disseminated intravascular coagulation" (Muscal & DeDusum, 2015).


