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Investigating Duchenne’s Muscular Dystrophy

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Many patients with DMD are admitted with heart failure and respiratory failure because the muscles of the heart become weak. Although there is no cure, supportive therapy is available to help these patients live through complications of this disease process. New technology is also allowing these patients to have an increasingly normal life outside of the hospital. These patients hold a very special place in the hearts of many nurses. They overcome many hardships and still strive even though most odds are against them.

Significance of Pathophysiology

As muscle units die and the total number of functional muscle units decreases, weakness occurs, and eventually leads to contractures (Do, 2014). This process is responsible for the overt symptoms and gradual progression of the disease. This progression occurs in ascending fashion, starting with minimal weakness, leads to a wheelchair bound patient, and ends up causing respiratory and cardiac failure in the end stages of the disease (Do, 2014).

Signs and Symptoms

Young ones usually present with disorder or delayed motor development, muscle weakness, and speech delays in early childhood (Brennan et al., 2014). The first symptoms almost always show up prior to the age of six years. Parents may notice their young child with DMD having a hard time standing up, walking, or climbing stairs, and many will eventually need a walker to get around (Brennan, 2014). Initial blood tests obtained are remarkable for an elevated creatine kinase (CK) and then diagnosis is made by genetic testing after showing a mutation in the dystrophin gene (Brennan et al., 2014).

Eventually with progressive muscle dysfunction, cardiac complications occur. This occurs in at least 90% of patients with DMD, but shows up at varying ages (Ashworth, Super, & Helmer, 2014). Most of these patients initially develop heart disease characterized by arrhythmias in the broad inferolateral wall of the left ventricle and then the lateral free wall (Ashworth et al., 2014). Other symptoms that occur as DMD progresses include a walking gait, shortness of breath, fatigue, difficulty concentrating, and often a psychological disorder with learning and memory.

Although intelligence is not affected by DMD, some challenge with diabetes, disabilities or behavioral issues may occur. Not to mention, individuals may looks deteriorated on picture to them. It can be very rewarding for nurses who care for these special individuals to be able to educate families on the pathophysiology behind the DMD as well as be able to educate families on the pathophysiology behind the DMD. Nurses should have an understanding of the most severe muscular dystrophies and be able to explain the pathophysiology to families. It is important that patients with DMD, especially in the early stages. DMD is the most common form of childhood muscular dystrophy, and it affects 1 in every 4,000 male newborns (Ruitin, Straub, Bushby, & Gibron, 2014). Today, many young adults with DMD are admitted with heart failure and respiratory failure because the muscles of the heart become weak. Although there is no cure, supportive therapy is available to help these patients live through complications of this disease process. New technology is also allowing these patients to have an increasingly normal life outside of the hospital. These patients hold a very special place in the hearts of many nurses. They overcome many hardships and still strive even though most odds are against them.

Duchenne Muscular Dystrophy (DMD) is an X-linked neuromuscular disorder characterized by progressive, generalized muscle weakness, and wasting of muscle (Kaspar, Allen, & Monetnaro, 2009). DMD is the most common form of muscular dystrophy, and it affects 1 in every 4,000 male newborns (Ruitin, Straub, Bushby, & Gibron, 2014). Diagnosis is usually made between the ages of three and six and tissues with DMD do not typically live past the age of thirty (Kaspar et al., 2009). Because the appearance of symptoms is usually between the early childhood years, nurses typically have the chance to work closely with patients and families throughout disease course of DMD.

Supporting families of patients with DMD, especially in the early stages. It is important that patients with DMD, especially in the early stages. It is important that patients with DMD be able to educate families on the pathophysiology behind the DMD. Nurses should have an understanding of the most severe muscular dystrophies and be able to explain the pathophysiology to families. It is important that patients with DMD, especially in the early stages. It is important that patients with DMD, especially in the early stages. It is important that patients with DMD, especially in the early stages.

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