Chagas Disease: A Dangerous Kiss

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Recommended Citation
Maynard, Stephen, "Chagas Disease: A Dangerous Kiss" (2014). Master of Science in Nursing (MSN) Student Scholarship. 49.
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Chagas Disease: A Dangerous Kiss

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Introduction

Parasitic infections are a common occurrence worldwide and are often more common in low income countries. While these infections are associated with poor communities in the United States, these diseases effect people within the United States and are more common than realized. One specific parasitic infection known as human Chagas disease is caused by Trypanosoma cruzi. Chagas disease is an infection that occurs from the parasite T. cruzi and was named for the Brazilian physician Carlos Chagas who discovered the disease. According to Stampert and Meymandi, 2014. The disease was initiated in 2014. According to Centers for Disease Control and Prevention (CDC, 2014), Chagas disease can be one of the vector borne transmission of parasitic infections. The CDC (2014) considers Chagas disease a priority to its severity, the number of people infected, and the ability to prevent and treat the disease. According to Stampert and Montgomery (2010), there is a substantial knowledge deficit among physicians about Chagas disease. This is concerning when one considers the harmful effects of the disease and the amount of people infected in the United States. Chagas disease can be transmitted to humans through defecation of feces from the individual infected with Chagas disease. Awareness of the disease is important because of the number of individuals infected in the United States and the substantial knowledge deficit among healthcare professionals practicing in different levels to be aware of Chagas disease. The designation of being a priority for action (CDC, 2014) is important for healthcare professionals practicing in different levels to be aware of Chagas disease. The number of individuals with chronic Chagas disease will present with cardiac symptoms as the disease process attacks cardiac muscle leading to heart failure (Custer et al., 2012). It is also important to recognize the risk posed to the population through deforestation of blood and solid organ. Blood is now being tested for the disease (Custer et al., 2012).}

Pathophysiological Processes

A 53-year-old female presents to the emergency department with complaints of left eye pain, headache, daily fevers up to 102°F on exam, asymptomatic, decreased energy, decreased appetite, and a brittle rash. The patient had just recently returned from a three-week trip to Costa Rica. The patient stayed in a small village in Costa Rica that did not have netting to cover the windows and bed. The patient did not have any symptoms until 2 days after her return to the United States. Initially the patient was seen for left eye swelling and pain and was treated for conjunctivitis and an allergic reaction. The patient did not respond to these treatments, which prompted a referral to the emergency department. Upon physical exam at the emergency department the patient vital sign were all within normal limits, temperature 37.1°C, heart rate 91 beats/min. Blood pressure 98/62 mmHg, respiratory rate 18 breaths/min, and oxygen saturation 98% on room air. The patient was in no apparent distress. There was periorbital edema and mild erythema of the left eye without discharge. The right eye was normal. All other physical examinations were unremarkable (Carter, Juliano, Montgomery, & Qvarnstrom, 2012).

Currently there are more than 300,000 individuals infected with Chagas disease in the United States (Woodhall, Jones, Cantey, Wickins, & Montgomery, 2014). The disease is an endemic across Central and South America, but the parasite that carries the disease has been found in the United States and there have been documented cases of vector-borne infection in the United States (Woodhall, et al, 2014). The disease will persist for the life of the patient unless treatment is initiated. Left untreated the disease has potential life threatening effects including apical aneurysm, heart failure, mega colon, apical aneurysm, and thrombocytopenia. The risk of stroke is increased (Woodhall, et al, 2014). The disease also carries potential congenital effects including hepatosplenomegaly, anemia, or thrombocytopenia. Treatment is indicated for Chagas disease in patients younger than 18 and for most adults younger than 50 who do not have cardiomyopathy. Drugs used to treat Chagas disease are not approved by the Food and Drug Administration but are available through the CDC (Woodhall, et al, 2014).

Case Study

When discussing symptoms and signs of Chagas disease we look at the two phases the disease occurs in, acute and chronic. In the acute phase of Chagas disease caused by T. cruzi symptoms are mild and often not seen. Symptoms include fever, headache, enlarged lymph glands, difficulty breathing, chest pain, and abdominal pain. Some individuals have a purple swelling to the lid of one eye, called Roma sign, after the initial bite from the triatomine bug (Chagas disease, 2010). In the chronic phase of the disease individuals infected with Chagas disease in the United States will present with cardiac symptoms as the disease process attacks cardiac muscle leading to heart failure (Custer et al., 2012). The disease presents severe complications if left untreated. The CDC lists Chagas disease as a priority for public health action (CDC, 2014). The designation of being a priority for action implies that it is an urgent public health problem. The disease process and risk factors. In doing this we can positively impact the lives of those infected with Chagas disease and prevent long term complications. Understanding diseases such as these are important as the world we live in becomes smaller.

Signs and Symptoms

Nursing Implications

References

Chagas disease (american trypanosomiasis) fact sheet (revisted in february 2010). (2008). World Health Organization. (Huprikar, S., Bosserman, E., Patel, G., Moore, A., et al., 2012). Transplantation: infections in the United States: Chagas disease. (Custer et al., 2012). Understanding at risk populations, immigrants from areas where Chagas disease is endemic, individuals who have traveled to areas of the world where Chagas disease is endemic, can help the healthcare provider recognize Chagas disease and the limits disease impact on patients. In screening and treating the disease in the acute phase long-term effects of chronic Chagas disease can be prevented. Chagas disease has been responsible for 30,000 to 45,000 prevalent cases of cardiomyopathy leading to heart failure (Custer et al., 2012). It is also important to recognize the risk posed to the population through deforestation of blood and solid organ. Blood is now being tested for the disease (Custer et al., 2012). The risk of transmission through organ transplantation is low but does exist. In 2011 it was shown that with 10 percent of organ procurement organizations test for T. cruzi (Huprikar et al., 2013). Understanding at risk individuals who are potential donors may help to increase the number of organs tested for T. cruzi infection (Custer et al., 2012). Individuals who test positive are referred to a physician for further evaluation and treatment as the test is not confirmatory for the disease (Custer et al., 2012). The public needs to be made aware of diseases such as Chagas disease. This is the responsibility of healthcare providers at all levels. Individuals learning the country and traveling to an area where Chagas disease is endemic need to be educated on signs and symptoms and methods of prevention. If these individuals become infected by T. cruzi they will hopefully understand symptoms and not let acute Chagas disease develop into the chronic form.

Conclusion

Chagas disease is a burden to the United States health system with over 300,000 individuals infected (Woodhall et al, 2014). The disease presents severe complications if left untreated. The CDC lists Chagas disease as a priority for public health action (CDC, 2014). The designation of being a priority for action implies that it is an urgent public health problem. The disease process and risk factors. In doing this we can positively impact the lives of those infected with Chagas disease and prevent long term complications. Understanding diseases such as these are important as the world we live in becomes smaller.

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