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Chikungunya Virus: A Case Study of the Emerging Vector-Borne Disease

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The acute phase involves a sudden onset of fever, chills, headache, myalgia, and arthralgia. The disease can rapidly progress to severe symptoms, including joint pain that can last for weeks to months. The disease is prevalent in Southeast Asia, Africa, and the Americas. Over the last decade, the vector-borne disease has become more common, particularly in parts of India, Africa, the Americas, and Southeast Asia. The disease is caused by the Chikungunya virus (CHIKV), an arbovirus transmitted by Aedes aegypti and other mosquito species. The virus is spread through the bite of infected mosquitoes, and there is no effective vaccine or treatment available for CHIKV.

Pathophysiological Process

Understanding the pathophysiology of CHIKV is important to appreciate the processes that lead to the development of symptoms. The disease is characterized by an inflammatory response in the joints, which can result in severe joint pain. The pathogenesis of CHIKV is not fully understood, but it is believed that the virus enters the body through mosquito bites and replicates in the host's cells. The virus then spreads to other tissues and organs, causing a variety of symptoms.

Nursing Implications

Nurses play a crucial role in the management of patients with CHIKV. They should be aware of the clinical signs and symptoms and be equipped to provide appropriate care. Patients with CHIKV may experience severe joint pain, fever, and other symptoms, and nurses must be prepared to provide pain relief and support. Nurses should also be knowledgeable about the importance of early diagnosis and treatment to prevent complications.

References


Case Study

A 28-year-old woman visited Mumbai, India in September 2010 and reported many mosquito bites. Twelve days into her trip, she experienced a sudden onset of fever, chills, hypoglycemia on the bridge of her nose, and severe joint pain in her wrists, ankles, and elbows. She was treated with an oral anticoagulant and discharged after three days with no recurrence (Schwartz, Giga, & Boggel, 2014).

After her recovery from acute illness, she still experienced considerable joint pain and restricted range of motion in her wrists, neck, and ankles. She was referred to a rheumatologist for evaluation. A blood sample revealed the presence of CHIKV antibodies, with the aid of viral mutations and PCR. CHIKV was found in the blood sample, and the patient was diagnosed with CHIKV.

Conclusion

CHIKV is now a global vector-borne disease, affecting 1.2 million people in the Americas alone. 2500 cases were reported to the CDC from recent travelers in 2014 (Gaines, 2015). The CDC provides the amount of resources to providers regarding updates on the spread of the disease and prevention. Nurse practitioners need to be aware of the pathogenesis and symptoms of CHIKV in order to prevent and manage the disease properly.

Pre-travel counseling about mosquito bite prevention is the best way to protect people from CHIKV in this globalized world.

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