N311 Care Plan 1

Madalyn Goble

Lakeview College of Nursing

N311: Foundations of Professional Practice

Dr. Michele Hartke

9/25/2023

Demographics (5 points)

Date of Admission	Client Initials	Age	Gender
9/18/2023	NH	87	Female
Race/Ethnicity Caucasian	**Occupation** Retired Bookkeeper	**Marital Status** Widowed	**Allergies** N/A
Code Status Full Code	**Height** 4 feet 7 inches	**Weight** 166 pounds	

Medical History (5 Points)

Past Medical History: The client has a history of obstructive sleep apnea, restless leg syndrome, vitamin D deficiency, hypocalcemia, essential hypertension, vitamin B12 deficiency, iron deficiency, and peripheral artery disease.

Past Surgical History: The client received a transcatheter aortic valve replacement in 2017, a cardiac catheterization in 2017, a hysterectomy in 2017, a colonoscopy in 2013, cataract removal of the left eye in 2014, and cataract removal surgery of the right eye in 2018.

Family History: The client's father was diagnosed with stomach cancer.

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use): The client denied any tobacco, alcohol, or drug use.

Admission Assessment

Chief Complaint (2 points): The client complains of a nonhealing wound/ulceration at the base of the left great toe.

History of Present Illness – OLD CARTS (10 points): The client began noticing symptoms of the chief complaint three months ago. The client, who has had diabetes for 30 years, was taking care of her toenails when a wound was formed on the left big toe. The wound did not heal properly, and the client has been experiencing pain for the three months following the formation of the injury. The client described the pain as burning and stated that she had decreased sensation in the area surrounding the wound. When asked what makes the pain worse, the client said walking and putting pressure on the toe increases her pain. The injury to her toe has also caused the client to develop pain in her left foot. The client also stated that she does not want to walk around as much due to the increased pain associated with walking. The client expressed that resting helps to alleviate her pain. The client also mentioned that she had previously been given antibiotics to treat the toe shortly after the injury occurred. However, these were not successful. Due to this, the client is now in the hospital seeking treatment. When asked to describe her pain on a 0-10 scale, the client rated her pain as a 3 or 4.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): The client has been diagnosed with acute osteomyelitis of the left foot.

Secondary Diagnosis (if applicable): The client has also been diagnosed with spinal stenosis of the lumbar region and type 2 diabetes mellitus with diabetic neuropathy and long-term use of insulin.

Pathophysiology

Pathophysiology of the Disease, APA format (20 points):

Pathophysiology of Osteomyelitis

Osteomyelitis is a disease that is very common in people with diabetes. This is because diabetes compromises both the immune system and vascular blood supply. Osteomyelitis begins when bacteria enter the blood vessels, Haversian and Volkmann canals. From there, bacteria spread throughout the bone. Due to this invasion, the body initiates its immune response to try and rid the body of the harmful bacteria. As a result of the immune response, the intramedullary, or inside of the bone, increases pressure and decreases blood flow to the affected area. The infection, combined with the inflammation, leads to bone necrosis. If the disease should reach the periosteum, the primary supplier of blood to bone, lack of blood flow will lead to further necrosis. This necrotic tissue becomes a breeding ground for the bacteria to grow and spread. After nearly five weeks post-infection, the bone may stimulate new growth to surround and block off the infection. This creates a lesion that could indicate the disease has now become chronic (Urish, 2020).

Signs and Symptoms of Osteomyelitis

Osteomyelitis is a disease that is hard to diagnose. This is because there are few specific characteristics of the disease. However, an article published in 2018 states, “The pathology of osteomyelitis is characterized by severe inflammation, impairment of vasculature, and localized bone loss and destruction” (Kavanagh, 2018). These symptoms can correlate with many diseases, but that does not mean they do not help diagnose osteomyelitis. The disease is difficult to diagnose, but clients with these symptoms can point providers in the right direction.

Diagnosis Osteomyelitis

Diagnosing osteomyelitis is a multi-step process. A provider must first measure a client’s c-reactive protein and erythrocyte sedimentation rate, their radiological images, and their blood culture. After obtaining these results, a provider must assess the client for osteolytic abnormalities around the bone. An MRI scan should be obtained to determine if there is any inflammation. Once a diagnosis of osteomyelitis is confirmed, a bone biopsy or sampling is needed to help providers plan the best course of treatment for the client (Urish, 2020).

Pathophysiology References (2) (APA):

Kavanagh, N., Ryan, E.J., Widaa, A., Sexton, G., Fennell, J., O'Rourke, S., Cahill, K.C., Kearney, C.J., O'Brien, F.J., & Kerrigan, S.W. (2018, April). Staphylococcal osteomyelitis: Disease progression, treatment challenges, and future directions. *Clinical Microbiology Reviews, 31*(2).

Urish, K.L., & Cassat, J.E. (2020, July). Staphylococcus aureus osteomyelitis: Bone, bugs, and surgery. *Infection and Immunity, 88*(7).

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
07:22 a.m.	71 bpm	125/48 mmHg Diastolic pressure is low	18 breaths per minute	97.3^{O}F oral	93% on room air

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
07:51 a.m.	0-10	Left foot originating from the left great toe	3 or 4	Burning	Resting makes the pain better