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Implications of Underlying Pathophysiology of Osteomyelitis in Diabetics for Nursing Care

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Implications of Underlying Pathophysiology of Osteomyelitis in Diabetes for Nursing Care

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Pathophysiological Processes

**Signs and Symptoms**
- Because osteomyelitis is an infection of the bone, the first indication of the disease is bone pain, pus, fever, or signs of infection.
- The presentation of symptoms such as redness, warmth, and tenderness can be slow, and the disease may be difficult to diagnose.
- The disease is associated with high mortality, and many patients with osteomyelitis die of sepsis or secondary infections.

**Underlying Pathophysiology**
- The pathophysiology of osteomyelitis starts with some sort of insult to the bone that may be hereditary in origin or from a primary wound or a proximal source of osteomyelitis. The disease then spreads to the deeper structures and finally to the bone, as described by Malik et al. (2013, p. 138).
- Staphylococcus aureus is the most common invading pathogen that causes osteomyelitis. As with any other infections, the pathological process with osteomyelitis includes signs of proinflammatory cytokines, acute osteoclastogenesis (bone resorption), osteocytes, chondrocytes, thrombosis, and necrosis. (Hatzenbuehler, et al., 2013, p. 1028).
- The pathological process starts with some sort of insult to the bone that may be hereditary or secondary to an injury or infection. The disease then spreads to the deeper structures and finally to the bone, as described by Malik et al. (2013, p. 138).

Significance of Pathophysiology

The significance of the pathophysiology of osteomyelitis lies in the implications that the infectious process has for treatment, diagnosis, and nursing care. Treatment of osteomyelitis is complicated by the pathogen-induced bone destruction and remodeling. Newer therapies and diagnostic tools will help provide better patient care and prevention will be obtained through enhanced research.

References


Additional Sources


Journal of Wound Care, Jun2013, Vol. 22 Issue 6, p318-325, p

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