

# Clinical manifestation of osteomyelitis nursing essay



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Osteomyelitis is the inflammation of the bone. This can be due to bacteria, fungi and germs PubMed Health 2012. Bone destruction, necrosis and formation of new bone or also called as involucrum are all features of chronic osteomyelitis. Osteomyelitis are characterised into two types depending where the infection originates. Homogenous osteomyelitis where the culprit of the infection such as bacteria, fungi or germs enters the bone through the lymphatic and circulatory systems and lodged in the small vessels, causing blockage in the bone. The bone will be deprived of oxygen supply that causes thrombosis, ischaemia and eventually the bone will die, known as sequestrum (Marek 2007). The characteristic of bone inflammation is the accumulation of fluid, increased vasculature and leukocytes in the area. Bone's caniculi will be sealed by exudates through the metaphysis, bone marrow cavity and into the cortex. As a result, this will lead to the formation of new bone by osteoblast, known as involucrum. The infected materials escape through the opening of the involucrum into the soft tissues. The infectious materials will weaken the cortex of bone making it more prone to fracture (Marek 2007).

Exogenous osteomyelitis is the infection starts at the soft tissues affecting the muscles and connective tissues that lead to the formation of abscesses oedema or this is known as Brodie's abscesses (Marek 2007).

## **Clinical Manifestation of Osteomyelitis**

The clinical manifestation of osteomyelitis generally includes general malaise or weakness, headache, anorexia and fever. The site of infection will exhibit redness, swelling, warm to touch, tender and usually contains purulent material (Marek 2007).

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The high dose intravenous antibiotic treatment for Mr. Andrews of three to eight weeks is necessary to kill the causative agents of the infection and prevent its reoccurrence (Marek 2007).

### **What is PICC and the complications associated with the device?**

Peripherally inserted central catheter or PICC is a soft, long plastic tube inserted into the superficial vein proximal to the basilic or cephalic vein. The PICC is place for medication treatment such as antibiotic, chemotherapy and total parenteral nutrition (TPN) (California Pacific Medical Center 2012).

Complications of the PICC are includes infection, occlusion, thrombosis and air embolism. Infection usually occurs either inside or on the insertion site. The area becomes swollen/tender, red and fever. The PICC line should be flush before and after the procedure to ensure patency of the line thus, preventing blood clot or thrombosis. The line should remained clamped and close after being used to prevent air from entering into the system (Erickson & Field 2007).

### **What information should be included in the nurse's documentation of the dressing change?**

When changing the dressing the nurses should observe for signs and symptoms of systemic infection such as redness and swelling or any abnormalities on the surrounding area (Monahan et al 2007, p 1592). The documentation should include the date and time of dressing change, appearance of the wound or infection site, may take a photo of the infection or trace the wound using tracing paper. The location of the infection should be documented, any signs of granulating tissue or presence of slough

material, purulent discharge and its amount and ask for patient of any pain around the site.

### **What observations should be noted related to the exudates collected in the haemovac?**

The exudates collected in the haemovac should be noted. The amount or volume, color, odour and consistency should all be documented on the wound chart. The new data collected should be compared from the previous data to ensure that the wound discharge is decreasing. If not, the wound is not probably healing and infection is still going on. In this case, this should be reported to the doctor.

### **Each of the medication below is prescribed for Mr. Andrews. For each provide the therapeutic drug classification and discuss the purpose of the medication for Mr. Andrews and potential adverse effect(s) that the nurse should monitor.**

Linezolid (Zyvox) oral - is an antibacterial agent that inhibits the protein synthesis of the bacteria. This drug is use to treat infection on Mr. Andrews hip (Tiziani 2010, p 129). Some of the adverse reaction includes lactic acidosis, nausea and vomiting and low level of bicarbonate. If patient experience recurrent nausea and vomiting this should be reported to the doctor immediately (McKinnell, Jr. nd).

Enoxaparin (Clexane) sub-cut - is an anticoagulant medication use to prevent the formation of clot. This is usually given to patient after surgery and bedridden patient (Tiziani 2010, p 137). Patient should be monitor for any sign and symptoms of bruising or pain on the site, bleeding,

haematoma, difficulty breathing or anything that is unusual (Tiziani 2010, p 138).

Docusate Sodium (Coloxyl with Senna) oral - is a laxative drugs use to prevent constipation. Mr. Andrews may experience constipation as a side effect to pain medication. This drug is given to alleviate restraining during defaecation . Some of the common side effects of the drugs includes: nausea, abdominal bloating and flatulence (Tiziani 2010, p 612).

Tramadol hydrochloride (Tramal) oral- is a synthetic opioid analgesic for the treatment of pain. The adverse effects of the drug include nausea, anorexia, constipation, vomiting, dry mouth and many others. Important nursing consideration to consider if given to patient is to ensure that the patient will not develop dependency on the drugs Tiziani 2010, p 655). This drug will help alleviate Mr. Andrews' pain due to surgical incision from his hip infection.

Paracetamol (Panadol) oral - is an analgesic and anti-pyretic medication. It is a short acting pain relief drug that is usually given in conjunction with slow release pain medication such as Tramadol. Avoid using with other Paracetamol drugs to prevent overdose and liver problems. Monitor patient for sign of overdose like nausea, lethargy, abdominal pain, hypotension, sweating and hypoglycaemia (Tiziani 2010, p 11-12).

## **Conclusion**

If a wound is not looked after it can become a serious illness and even cause death. Osteomyelitis is one of the serious complication related to surgery, it is really a nasty disease that could paralysed or killed someone if left  
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untreated. A proper monitoring and right treatment of the disease is the key to managing and controlling the adverse possible complication osteomyelitis can bring. The drugs used to treat the infection, surgery to the removed the dead tissues, maintaining aseptic technique during wound dressing and proper monitoring and documentation of the wound are essentials to keep the wound healed. There are also some important things to consider in giving the drugs to the patient to ensure that the drugs effectively does its intended job and there should be no major side effects to the patient.