

What complication of osteomyelitis is the most likely to occur? - {ASNWER}-Formation of bone abscesses

The most common complication of osteomyelitis is the formation of bone abscesses. Infection stimulates the inflammatory response in the bone and the surrounding tissue which leads to necrosis. The necrotic bone forms a sequestrum when it gets separated from the surrounding bone tissue; this sequestrum acts as a focus for ongoing infection and forms a bone abscess. Pathologic fractures, malignant transformation, and secondary arthritic changes are usually seen in osteitis deformans and also with osteomalacia and bone tumors.

What are the common causes of osteomalacia? Select all that apply. - {ASNWER}-Crohn's disease

Hypophosphatemia

Chronic kidney disease

Barbiturate therapy

Osteomalacia is a bone disorder related to vitamin D deficiency. Crohn's disease causes decreased vitamin and mineral absorption that can lead to osteomalacia. Hypophosphatemia stimulates calcium movement from bone and prevents calcium uptake in the bone which can result in osteomalacia. Chronic kidney disease interferes with the synthesis of calcitriol, the most active metabolite of vitamin D, and can cause osteomalacia. Osteomalacia can be an adverse effect of barbiturate therapy. Estrogen agonist/antagonists increase bone density and are used to treat and prevent osteoporosis. Pseudomonas aeruginosa can cause bone infection leading to osteomyelitis, rather than osteomalacia.

Which drug regimen should be prescribed to regulate the serum alkaline phosphatase levels in a patient suffering from Paget's disease who has a serum alkaline phosphatase level of 210 IU/L? - <u>{ASNWER}-</u> <u>Oral bisphosphonates</u> The x-ray of a patient shows a radiolucent appearance of bones in the pelvic region. Which other findings would confirm the diagnosis of Paget's disease? Select all that apply. - {ASNWER}-Increased uric acid levels

Increased alkaline phosphatase levels

Increased urinary hydroxyproline levels

Increases in serum alkaline phosphatase (ALP) and urinary hydroxyproline levels are the primary laboratory findings in Paget's disease and often cause an elevated uric acid because overactive bone metabolism increases nucleic acid. Decreased alkaline phosphatase levels and decreased urinary hydroxyproline would not indicate the presence of Paget's disease.

Which long-term drug therapies may cause secondary osteoporosis? Select all that apply. - {ASNWER}-Heparin

Furosemide

Cyclosporine

Aluminum/magnesium antacid

Long-term drug therapy with heparin, loop diuretics such as furosemide, immunosuppressants such as cyclosporine, and aluminumbased antacids like Mylanta may cause secondary osteoporosis. Ergocalciferol is an active form of vitamin D that is administered along with calcium for the treatment of osteoporosis. Bisphosphonates such as alendronate are also commonly used in the treatment of osteoporosis as they slow down bone resorption by binding with crystal elements in spongy, trabecular bone tissue.

The nurse completes a teaching session on safe drug administration for a patient with Paget's disease taking oral bisphosphonates. Which patient statement indicates a need for further teaching? - {ASNWER}-"I should go to sleep immediately after taking the drug."

Oral bisphosphonates can cause stomach upset, inflammation, and erosions of the esophagus. This can be prevented by remaining upright for 30 to 60 minutes after taking the medication. Oral hygiene should be maintained as long as the drug is taken. Patients taking bisphosphonates are more prone to develop osteonecrosis of the jaw, so invasive surgical procedures are to be avoided. The drug should be stopped 3 months prior to any invasive dental treatment to prevent complications.

What interventions may be utilized to manage a patient with chronic osteomyelitis? Select all that apply. - {ASNWER}-Packing the wound with bone cement bead impregnated with antibiotic

Irrigating wounds through the window of a cast

Exposing the affected area to hyperbaric oxygen therapy

Osteomyelitis wounds should be packed with beads made of bone cement impregnated with an antibiotic. This provides direct contact of the antibiotic with the offending organism. Wound irrigation can be done through the window of a cast to clean the wound. A portable