

## The Pelvis and Osteoporosis

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Postmenopausal females with osteoporosis are at a relatively high risk for insufficiency fractures of the pelvis. The older the patient the higher the risk: 20 percent in patients over 70. Insufficiency fractures are stress fractures due to loss in tensile strength of bone. It is commonly known that osteoporotic patients develop fractures in the vertebral bodies and in the femoral neck resulting in compression fractures and hip fractures. Other insufficiency fractures of the pelvis are not as well known. These are fractures of the sacrum, acetabulum, and pubic bone. These fractures can go unrecognized, leading to occult fracture causing serious complications.

Clinically the patient complains of low back pain and/or hip pain. Pain radiating down one leg is also an associated complaint. Many times the patient will have a history of steroid therapy, radiation therapy or rheumatoid arthritis. Steroid and radiation therapy both cause osteonecrosis and accelerate the changes in bone associated with osteoporosis. Rheumatoid arthritis is almost always associated with osteopenia due to the hyperemia caused by the inflammation and pannus formation, which slowly destroys the joint. These patients are often on medication that accelerates the loss in bone density. Many of these patients will already have compression fractures involving the spine due to the osteoporosis.

The two areas in the pelvis that are predisposed to insufficiency fractures that are commonly missed are the supra-acetabular fracture and the sacral fracture. The supra-acetabular fracture can be seen on a routine AP pelvis view, appearing as hazy bands of sclerosis immediately above and parallel to the acetabular roof. If there is any question as to whether or not a fracture is present a bone scan can be used to determine if there is a recent stress fracture.

Most stress or insufficiency fractures can be managed conservatively and will respond to treatment if diagnosed before an occult fracture occurs. If an occult fracture does occur, surgery is often needed.

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