



# The Clinical Picture



**FIGURE 1** A radiograph of the tibia illustrating the abnormalities of Paget's disease of bone. Note the bowing and increased bone density and coarsened trabeculae. Other than the bowing, this lesion may be asymptomatic.



**FIGURE 2** A radiograph of the skull illustrating the characteristic "cotton-wool" patchiness of Paget's disease of bone. This appearance is the result of both osteolytic activity and increased deposition of coarse, chaotic bone.

## Radiographic findings in Paget's disease of bone

### PRESENTATION

Paget's disease of bone is a relatively common disorder, estimated to occur in about 3% of people over the age of 40. Its cause is unknown.

In its early phase, resorption of bone by osteoclasts is excessive. This is followed by replacement of the marrow with connective tissue and blood vessels. In some cases, this hypervascularization can cause high-output heart failure.

Also, bone formation increases, although this new bone is coarse, dense, and chaotic in structure.

### RADIOGRAPHIC STUDIES

Often Paget's disease of bone is asymptomatic and is detected during radiography or laboratory testing for another complaint.

In the tibia above (**FIGURE 1**), note the anterior bowing and increased bone density and coarsened trabeculae.

The skull of another patient (**FIGURE 2**) shows the results of the early changes of osteolytic activity, or "osteoporosis circumscripta." Other areas exhibit increased bone density from increased osteoblastic activity. This results in the patchy, cotton-like texture. Overgrowth of bone can lead to audiovestibular abnormalities and hearing loss, or even entrapment and atrophy of the optic nerve.