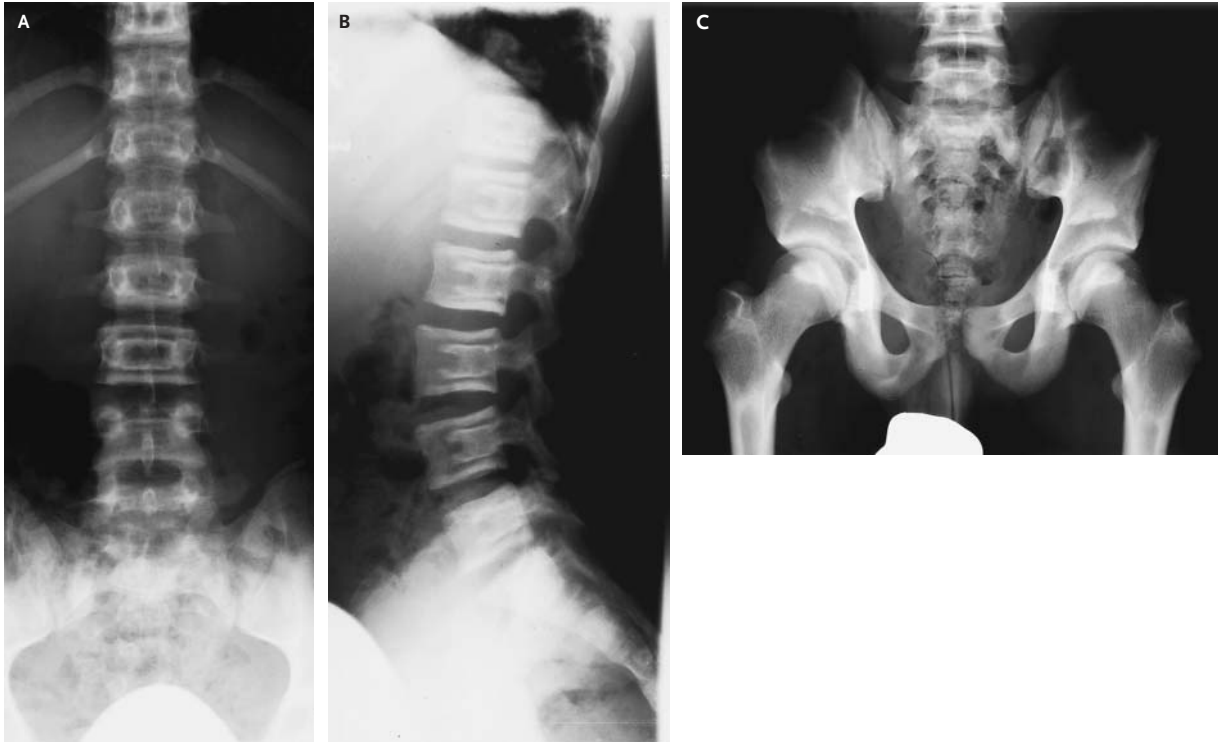


IMAGES IN CLINICAL MEDICINE

Bony Ghosts — Residual Effects
of Severe Growth Arrest

A 16-YEAR-OLD BOY REPORTED A TWO-TO-THREE-MONTH HISTORY OF back pain during sports activities. The pain radiated to the buttocks, but without signs of sciatica. The patient had no history of trauma. His parents had noticed that he had had a growth spurt several months previously. The clinical examination revealed isolated shortening of the hamstrings. Intensive physical therapy resolved the pain. At nine years of age, the patient had undergone a five-month course of corticosteroid therapy for a relapse of severe Schönlein–Henoch purpura with acute nephritis and hematuria, arthralgia, and gastrointestinal involvement. The disease caused a global growth arrest with increased mineralization of the compact substance of bones. After he had recovered, the outlines of dense mineralization were still visible in radiographs of the growing lumbar vertebrae (Panel A, anteroposterior view, with patient standing; Panel B, lateral view) and the pelvic girdle (Panel C, anteroposterior view); they look like annular rings or “bony ghosts.”

The appearance of “bone in bone” resembles the lines of retarded growth (Harris lines) in long bones. This phenomenon has no clinical significance, but it is a reminder of a severe growth arrest during juvenile bone maturation. The density of the bony ghosts is related to the severity and duration of the growth arrest and disappears slowly with further trabecular remodeling.

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