Case report 410

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Radiological studies

Fig. 1. An AP roentgenogram of the left hip shows a faintly defined osteolytic process of the femoral head with a mottled appearance due to multiple small osteolytic areas. The hip joint cartilage appears intact.

Clinical information

This 39-year-old male was admitted for evaluation of progressive pain in the left hip. No history of trauma was obtained. The patient had an established diagnosis of hairy cell leukemia made seven years earlier, when pancytopenia and hepatosplenomegaly were observed. The patient was treated at different times with chemotherapy, radiation therapy for retroperitoneal adenopathy and splenectomy. The patient had been asymptomatic for the past year. The medical history was otherwise negative.

Physical examination demonstrated mild tenderness over the left greater trochanter and pain when the hip was rotated. Examination of the right hip showed no abnormality. The remainder of the physical examination was unremarkable.

Roentgenograms of the pelvis showed a mot-
Fig. 2. A CT study of both hips shows trabecular destruction of both femoral heads, considerably more marked on the left, with cortical disruption in several sites of the left femoral head. Some osteopenia appears to be present in the bones included in the study.

Fig. 3. A spin-echo sequence in a magnetic resonance scan (TR 2,000 msec, TE 70 msec) shows replacement of normal fatty marrow with low intensity in the femoral shafts and femoral necks and a somewhat higher intensity of signal in the femoral heads and trochanters which appear inhomogeneous. An effusion in each hip joint is noted (arrows point to the effusion on the left side).

ted destructive osteolytic pattern, with multiple poorly defined lytic areas in the proximal segment of each femur, particularly affecting each femoral head; the left side was involved to a greater extent than the right (Fig. 1) Bone scintigraphy was positive in the left femoral head. Computed tomography showed destructive changes in both femoral heads and necks similar to the abnormalities on the plain films (Fig. 2). Magnetic resonance images using both T1 and T2 weighted sequences demonstrated very low signal intensity with a mottled appearance of the proximal portions of the femoral shafts and a relatively greater intensity of the femoral heads and greater trochanters. No bright signal to indicate fatty marrow was appreciated (Fig. 3). Evidence of bilateral effusions in the hip joints was noted.

An aspiration of the left hip joint and a percutaneous biopsy of the left femoral head and neck were performed.