



CASE REPORT

Multiple brown tumors mistaken for bone metastases. Computed tomography imaging findings



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Abstract In daily practice, when multiple osteolytic lesions are seen on imaging studies, metastatic bone disease is the first diagnostic impression. We herein present a case of a 45-year-old man, without any known tumor, who was evaluated for multiple osteolytic lesions with a strong suspicion of bone metastasis, but the radiological and biochemical findings suggested a hyperparathyroidism. Therefore, whenever multiple osteolytic lesions are found in a patient without any known tumor, metabolic bone diseases including hyperparathyroidism should be highly considered.

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1. Introduction

Brown tumors are focal reactive osteolytic lesions caused by hyperparathyroidism (HTP) and represent the terminal stage of the hyperparathyroidism-dependent bone pathology. Nowadays, the manifestation of hyperparathyroidism with

these lesions is extremely rare in developed countries, because of the early detection of the disease, using routine laboratory examination and early treatment of that. These benign lesions present similar radiologic findings as bone metastasis, which makes the diagnosis difficult (1,2). Here, we present a case of a man with bone pain and multiple osteolytic lesions confused initially with bone metastasis. The chondrocalcinosis seen on CT and the appearance of some of the osteolytic lesions with sclerotic borders suggest the possibility of hyperparathyroidism. Therefore, when a patient presents with unexplained osteolytic lesions, although metastatic malignancies should be ruled out first, other differential diagnosis such as metabolic bone disease including hyperparathyroidism should be kept in mind as well, in order to reach an accurate diagnosis.

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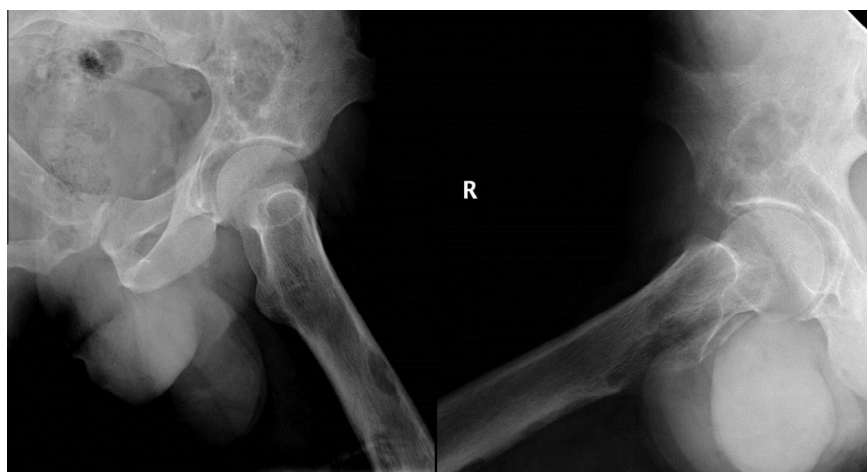


Fig. 1 Axial radiographs of the pelvis, demonstrating multiple osteolytic lesions with well-defined borders in femurs and right pubis.

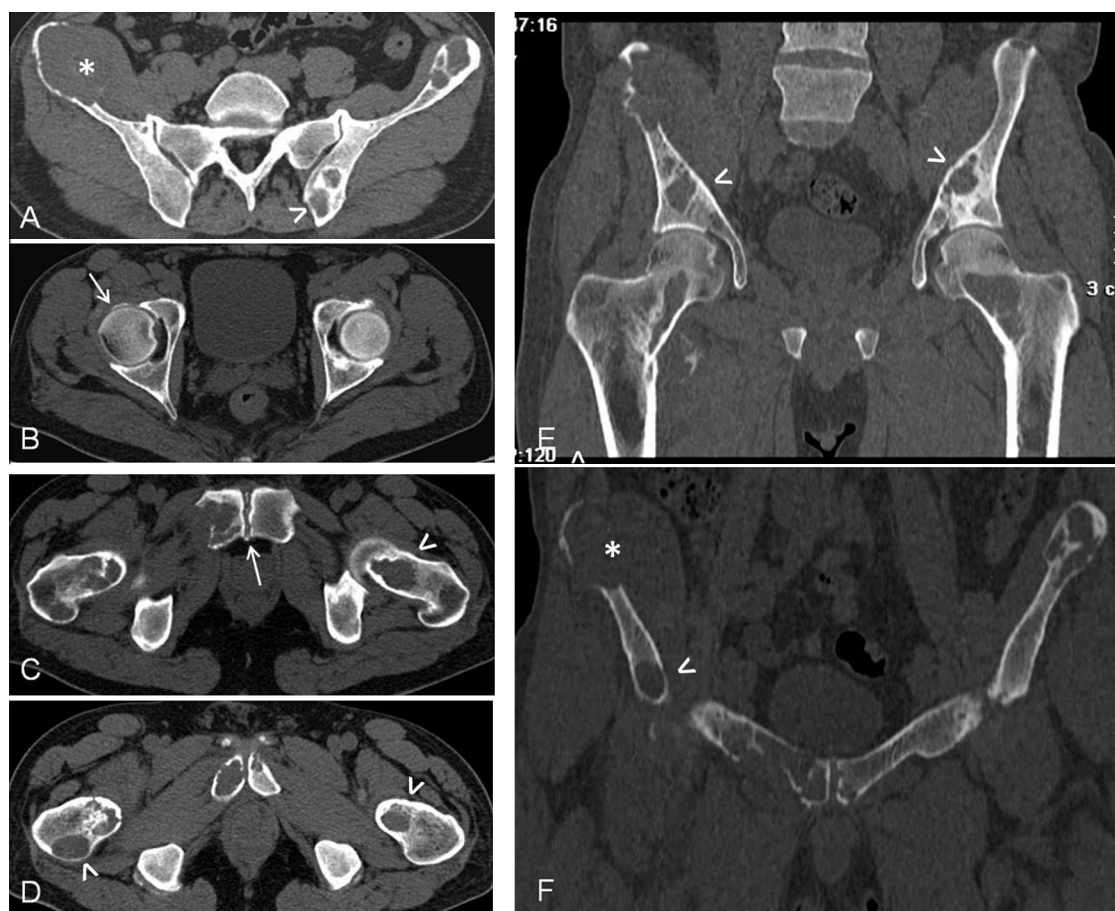


Fig. 2 Pelvic CT (axial & coronal views), illustrating multiple osteolytic lesions, some of them have well-defined or sclerotic border (^), while others are expansive with cortical destruction and associated soft tissue component (*). In addition there is chondrocalcinosis of the symphysis pubis and the right hip (arrows).

2. Case report

A 45-year-old man presented to the emergency department of another center with pelvic pain after falling. The X-ray and CT-scan revealed no fractures, but multiple osteolytic lesions

were found in the pelvic area (Figs. 1 and 2). The patient's medical history was not significant except for persistent pain in thighs and hips for more than two years. He didn't have any significant family history. He was then referred to our hospital under impression of bone metastasis. We reviewed the

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