www.jcimcr.org

JCIMCR OPEN ACCESS Journal of Clinical Images and Medical Case Reports

ISSN 2766-7820

*Clinical Image*

*Open Access, Volume 4*

# Monostotic paget's bone disease of the pelvis

***Fatima Zohra Benbrahim*; Asaad El Bakkari; Hajar Zebbakh; Hatim Essaber; Soukaina Allioui; Hounayda Jerguigue; Youssef Omor; Rachida Latib***

*Department of Radiology, National Institute of Oncology, UHC Ibn Sina, Mohamed V University, rabat, Morocco.*

***Corresponding Author: Fatima Zohra Benbrahim**
Department of Radiology, National Institute of Oncology, UHC Ibn Sina, Mohamed V University, rabat, Morocco.
Email: fzohrabenbrahim93@gmail.com

Received: May 20, 2023
Accepted: Jun 09, 2023
Published: Jun 16, 2023
Archived: www.jcimcr.org

DOI: www.doi.org/10.52768/2766-7820/2460

## Abstract

Paget's disease is a metabolic disorder of the elderly characterized by an excessive bone resorption followed by an excessive and anarchic bone formation responsible for a bone remodeling. It is often asymptomatic of fortuitous discovery. Conventional radiology and CT scans often allow the diagnosis to be made with certainty. Alkaline phosphatases mark activity and therapeutic response.

***Keywords:*** Bone's disease; CT scan; Monostotic.

***Abbreviations:*** PDB: Paget's Disease of the Bone.

## Description

A 63-year-old woman, recently diagnosed with right breast cancer, was referred for a CT scan for extension workup. The CT scan revealed an enlarged right coxal bone with cortical thickening, thick trabeculae and multiple areas of sclerosis, responsible for cortico-medullary dedifferentiation, respecting the joint space confirming the diagnosis of Paget's disease in the right hemi-pelvis (Figure 1). She was asymptomatic, and her serum alkaline phosphatase was slightly elevated at 182 U/L (normal values: 30-120 U/L).

## Discussion

Paget's disease is a chronic, non-inflammatory metabolic disease of unknown origin characterised by focal lesions of bone resorption and increased, disorganised bone formation associated with marrow fibrosis and increased vascularisation [1].

Usually asymptomatic, but occasionally symptomatic, diagnosed at the bone remodeling stage where bone distortion and expansion lead to musculoskeletal events, bone fragility , neuromuscular or cardiovascular complications, or a sarcomatous transformation [2].

PDB has a predilection for the axial skeleton, affecting the pelvis in 21-75% of cases. However, its monostic form is the least frequent (10-35%) [3].

Paget's disease usually begins in one site and progresses throughout the bone, without extending to adjacent bones [4].

Conventional radiology and CT can show distinctive radiological signs of each phase.

The initial phase is characterized by geographic osteolysis with an increased resorption border.

The intermediate phase of osteosclerosis where Paget's disease is most often diagnosed is marked by cortical thickening, bone expansion, cortico-medullary dedifferentiation due to the creation of a new endosteal bone impinging on the medullary cavity with accentuated trabecular marks (Figure 1).

In the late osteosclerotic form, excessive bone neoformation is apparent, manifesting as a diffuse increased bone density and size [5].

Bone turnover markers, especially alkaline phosphatase, reflect osteoblastic activity and can be used as a marker of therapeutic response [5].

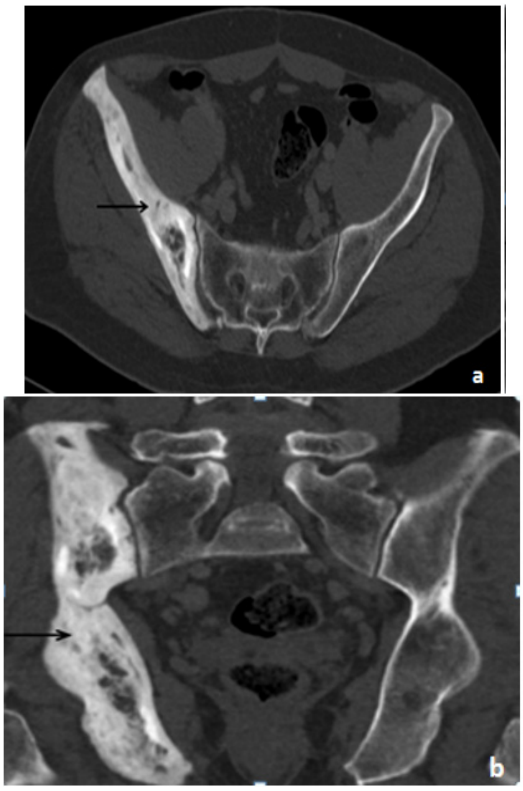


**Figure 1:** Axial **(a)** and Coronal **(b)** CT of the pelvis showing right coxal cortical thickening, intra trabeculation with course thick trabeculae, bone expansion, and multiple areas of sclerosis, (arrow) consistent with Paget's disease.

## Declarations

**Author's contributions:** All authors contributed to this work.

All authors have read and approved the final version of the manuscript.

**Conflicts of interest:** The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

## References

1. Seitz S, Priemel M, Zustin J. Paget's disease of bone: Histologic analysis of 754 patients. J Bone Miner Res. 2009; 24: 62-69.
2. Cook GJ, Maisey MN, Fogelman I. Fluorine18-FDG PET in Paget's disease of bone. J Nucl Med. 1997; 38: 1495-1497.
3. Guma M, Rotes D, Holgado S, Monfort J, Olivé A, et al. Paget's disease of bone: study of 314 patients. Med Clin (Barc). 2002; 119: 537e40.
4. Moore TE, Kathol MH, El-Khoury GY, Walker CW, Gendall PW, et al. Unusual radiological features in Paget's disease of bone. Skeletal Radiol. 1994; 23: 257e60.
5. Cortis K, Micallef K, Mizzi A. Imaging Paget's disease of bone-from head to toe. Clin Radiol. 2011; 66: 662-672.