

Multiform Bone Metastases in Gastric Adenocarcinoma: A Case Report

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ABSTRACT

Gastric adenocarcinoma rarely presents with bone metastases, especially in young patients. We report the case of a 25-year-old male with well-controlled HIV and a history of gastric ulcers who presented with progressive neurological symptoms and multiform bone lesions. Imaging revealed lytic and cystic lesions in the pelvis, and endoscopy confirmed extensive gastric involvement. Biopsies confirmed disseminated gastric adenocarcinoma with bone metastases. Despite multimodal treatment, the prognosis remained poor. This case highlights an unusual metastatic pattern and the challenges in managing aggressive gastric cancer in young patients.

Introduction

Bone metastases from gastric adenocarcinoma are rare, typically occurring in advanced stages of disease and primarily in elderly patients. When present, they are usually osteolytic. Polycystic or multiform lesions as a presentation are exceptionally uncommon [1-5]. Early recognition is crucial, especially in younger individuals, where early systemic treatment may influence quality of life and survival. This report outlines a unique case of multiform bone metastases originating from gastric cancer in a young adult [6-12].

Case Presentation

A 25-year-old male with a history of well-controlled HIV infection and previous gastric ulcers presented to the emergency department with a 3-month history of progressive low back pain. He denied recent trauma or infection. Neurological examination revealed left-sided

ed Achilles areflexia, hypoesthesia of the left foot, and bilateral proximal lower limb weakness. An urgent pelvic MRI showed a polycystic lesion with a lytic border in the left sacral wing (Panel A, blue arrow), along with multiple T1 hypointense lesions throughout the pelvis (Panel B, red arrow), raising suspicion for metastatic disease. Whole-body CT confirmed the absence of extra-skeletal lesions but showed posterior thickening of the gastric antrum. Subsequent upper endoscopy revealed a large ulcerative lesion occupying almost the entire gastric surface and infiltrating into the duodenum. Biopsies of both the gastric and sacral lesions confirmed a diagnosis of diffuse gastric adenocarcinoma with bone metastases [13-15]. The patient was started on corticosteroids (dexamethasone every 8 hours) to reduce tumor edema. Palliative radiotherapy was administered to the pelvic lesions to improve mobility and pain control. Systemic chemotherapy was initiated based on the tumor's molecular profile (Figure 1).

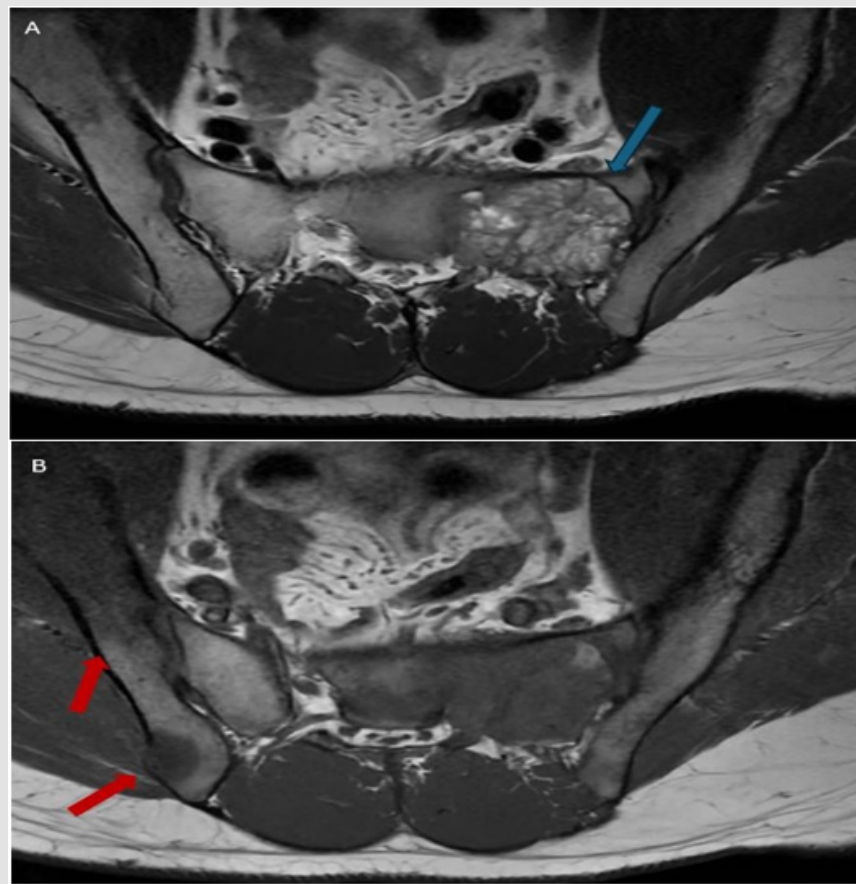


Figure 1.

Discussion

This case illustrates an atypical presentation of gastric cancer in a young patient, with initial symptoms related to bone metastases rather than gastrointestinal complaints. The polycystic morphology of the bone lesions is highly unusual and may mimic infectious or hematological conditions. The patient's young age prompted a rapid diagnostic approach, including biopsy of both gastric and bone lesions. While bone metastases from gastric cancer have been previously reported, their incidence remains low—particularly in patients under 30 [16-19]. The clinical course is often aggressive, and the prognosis is poor. Immunohistochemical studies revealed a HER2-negative, PD-L1-negative, and claudin-18-negative profile, limiting targeted treatment options. Despite this, a multidisciplinary approach including corticosteroids, radiation, and systemic chemotherapy was pursued to maximize the patient's functional capacity and quality of life.

Conclusion

Polycystic bone lesions as a manifestation of metastatic gastric cancer are extremely rare, especially in young adults. This case un-

derscores the importance of considering malignancy in the differential diagnosis of persistent back pain and neurological symptoms in young patients. Despite a prompt diagnosis and multidisciplinary management, the prognosis remains guarded in the absence of actionable molecular targets.

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