

Atypical Cause for Sclerotic Bone Disease

Sir

A 54-year-old male presented with epigastric discomfort, weight loss, and hip pain. He did not have any history of fever, night sweats, bony deformities, renal stones, lower urinary tract symptoms, or other co-morbidities. On examination, he was pale with stable vitals. He had no palpable lymphadenopathy. Diffuse bony tenderness was present, and movements were restricted at hip joints. Other systemic examinations showed no abnormality. Blood investigations revealed microcytic anemia. (Hemoglobin 9.7 g/dL and Mean Corpuscular volume 77.5 fL). He had low serum iron 38 µg/dL, and a total iron binding capacity of 221 µd/dL. Serum total alkaline phosphatase was elevated (592 U/L).

His albumin-corrected serum calcium (8.7 mg/dL) and fasting serum phosphate (4.2 mg/dL) were normal. Other biochemical investigations were within normal limits. He underwent an upper Gastro-intestinal endoscopy which revealed a proliferative growth on the greater curvature of the stomach [Figure 1a] from which a biopsy was performed which showed gastric mucosa infiltrated by tumor arranged in sheets, clusters, and occasional glands composed of atypical cells with round to oval hyperchromatic nuclei, inconspicuous nucleoli and moderate amounts of eosinophilic cytoplasm diagnostic of moderately differentiated adenocarcinoma [Figure 1b]. His X-ray of the pelvis was done [Figure 1c] which displayed a diffuse sclerotic disease and a biopsy from the posterior superior iliac spine revealed sclerotic bone trabeculae with atypical cells positive for cytokeratin suggestive of metastatic carcinoma [Figure 1d]. Radiotherapy is indicated in symptomatic painful bony metastases. As 3-4 weeks is usually required for it to take effect, analgesics may need to be given in the interim for optimum pain management. After the poor prognosis was explained by the medical oncology team and a plan for treatment with palliative intent was made, the patient wished to follow up at his hometown and further work-up could not be completed.

Gastric adenocarcinomas metastasizing to the bone without pulmonary and hepatic metastasis have been reported in less than 20 cases previously.^[1,2] Patients with metastatic gastric carcinoma have a poor prognosis, with a median survival of as low as 3 months. Other malignant lesions that can cause osteosclerotic metastasis include prostate carcinoma (most common), breast carcinoma, transitional cell carcinoma (TCC), and neuroendocrine tumors.^[3] The mainstay of treatment for osteoblastic metastasis is radiation therapy for pain as well as bisphosphonates which are effective with both osteolytic and osteoblastic metastases.^[4,5]

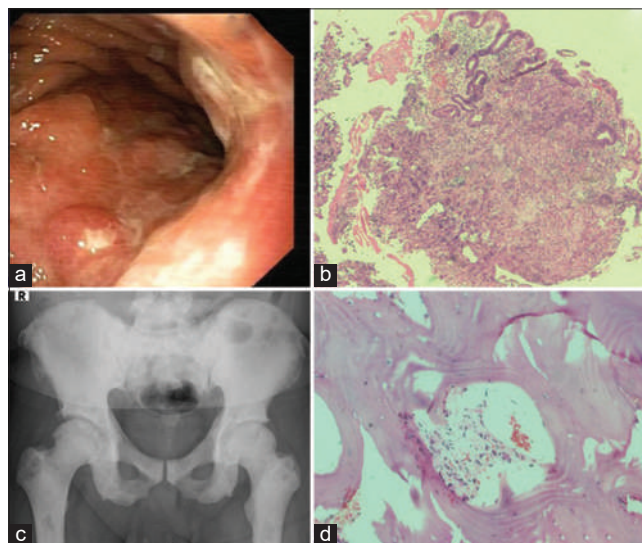


Figure 1: (a) Upper GI scopy showing a proliferative growth in the stomach. (b) Gastric biopsy showing moderately differentiated adenocarcinoma. (c) X ray Pelvis showing diffuse osteosclerosis. (d) Bone biopsy displaying metastatic carcinoma

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Manasa G. Reddy, Khushboo Agarwal, Reshma Kurian¹,
Shailaja Balakumar¹, Jinson Paul, Nitin Kapoor, Kripa E. Cherian,
Thomas V. Paul

Departments of Endocrinology and ¹Pathology, Christian Medical College,
Vellore, Tamil Nadu, India

Address for correspondence: Dr. Kripa E. Cherian,
Department of Endocrinology, Diabetes and Metabolism,
Christian Medical College, Vellore(TN) - 632 004, Tamil Nadu, India.
E-mail: kripaec@gmail.com

REFERENCES

- Okazaki J, Muguruma N, Kitamura S, Kimura T, Okamoto K, Miyamoto H, *et al.* Paraneoplastic hypocalcemia developed in gastric cancer accompanied by osteoblastic metastasis. *Intern Med*

2017;56:1345-9.

2. Anagnostopoulos G, Sakorafas GH, Kostopoulos P, Margantinis G, Tsiakos S, Pavlakis G. Early (mucosal) gastric cancer with synchronous osteosclerotic bone metastases: A case report. *Eur J Cancer Care (Engl)* 2010;19:554-7.
3. Ali Mohammed Hammamy R, Farooqui K, Ghadban W. Sclerotic bone metastasis in pulmonary adenocarcinoma. *Case Rep Med* 2018;2018:1903757. doi: 10.1155/2018/1903757.
4. De Felice F, Piccioli A, Musio D, Tombolini V. The role of radiation therapy in bone metastases management. *Oncotarget* 2017;8:25691-9.
5. Polascik TJ, Mouraviev V. Zoledronic acid in the management of metastatic bone disease. *Ther Clin Risk Manag* 2008;4:261-8.

Submitted: 05-Mar-2023**Revised:** 11-Apr-2023**Accepted:** 16-May-2023**Published:** 30-Oct-2023

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:



Website:

<https://journals.lww.com/indjem/>

DOI:

10.4103/ijem.ijem_97_23

How to cite this article: Reddy MG, Agarwal K, Kurian R, Balakumar S, Paul J, Kapoor N, *et al.* Atypical cause for sclerotic bone disease. *Indian J Endocr Metab* 2023;27:463-4.

© 2023 Indian Journal of Endocrinology and Metabolism | Published by Wolters Kluwer - Medknow