Case	(306) Diagnosis of chordoma in the emergency setting: the importance of simple x-rays
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CASE PRESENTATION

A 66-year-old male presented to the Emergency Department (ED) complaining of abdominal and lower back pain, constipation and occasional rectal bleeding. His medical history revealed alcoholic cirrhosis and several previous visits to the ED due to these symptoms the same year. However, because symptomatic relief was achieved with analgesia and laxatives in each episode, no clinical diagnosis had been achieved despite several analytical and imaging exams (Fig. 1a).

In this episode, a digital rectal exam revealed bright red blood, and analyses showed increased leucocytes and CRP, and decreased haemoglobin levels (12.2 g/dL). An abdominal CT scan was ordered on suspicion of complicated diverticulitis. However, a voluminous presacral mass suggestive of chordoma was observed instead (Fig 1b).

The patient was admitted to the service of Internal Medicine. In the following days, he underwent an MRI exam (Fig. 1c-d), a colonoscopy and a CT-guided biopsy, being finally diagnosed with infiltrative chordoma. Surgical treatment was dismissed and the patient received palliative radiotherapy.

DISCUSSION

Chordomas represent the most frequent malignant primary neoplasms of the sacrum (50%) and usually appear as osteolytic isolated lesions with calcifications. They are locally aggressive but tend to grow slowly.

Despite its low sensitivity, abdominal X-ray may be essential to detect sacral masses and constitute the initial technique of choice. In the case depicted, an osteolytic lesion was present in abdominal X-rays performed almost one year earlier, but it went unnoticed.

In the emergency setting, a CT scan may be useful to diagnose sacral masses and other entities that may cause digestive symptoms.

However, MRI is required to characterize the mass in detail and prepare the surgical approach. Despite the high specificity of these imaging techniques, the final diagnosis of chordomas can only be achieved by biopsy, preferentially under radiological guidance.

CONCLUSION

The diagnosis of slow-growing sacral masses such as chordomas may be difficult. Unless contraindicated, abdominal X-ray should be the initial imaging exam when sacral masses are suspected.

Systematic interpretation should be followed to spot subtle changes. Suspicious findings such as osteolytic lesions should call for other radiological exams, particularly CT scan in an emergency setting.

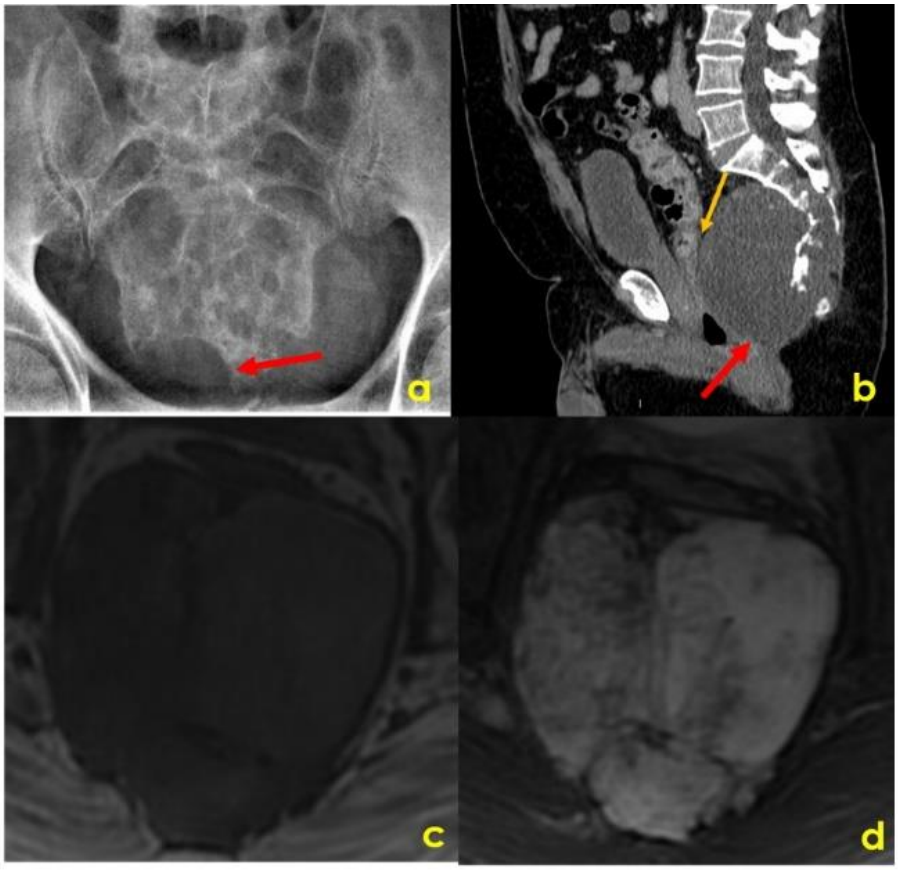

Figure 1. *Top row*: **a**. Abdominal X-ray (AP supine view, augmented) showing an osteolytic lesion in the inferior right side of the sacrum (red arrow) that went unnoticed in the ED; **b**. Abdominal CT scan (sagittal view) with intravenous contrast showing a presacral mass (red arrow) infiltrating the sacrum and compressing the rectum. *Bottom row*: Axial view of MRI (augmented) showing the same mass as in **a** and **b**, with heterogeneous hypointense signal in T1-weighted FSE (**c**) and hyperintense signal in T2-weighted FSE (**d**) images. These radiological features are suggestive of chordoma (confirmed by pathology analysis).

BIBLIOGRAPHY

- Thornton E, Krajewski KM, O'Regan KN, Giardino AA, Jagannathan JP, Ramaiya N. Imaging features of primary and secondary malignant tumours of the sacrum. Br J Radiol, 2012; 85(1011): 279–284.

- McCormick M, Schroeder T, Benham S. Sacral chordoma: a case report with radiographic and histologic correlation and review of the literature. WMJ, 2006; 105(5): 53-56.