Uncommon cause for chest pain

Preyander Thakur Singh,1 Deepak Burad,2 Julie Hephzibah,3 Thomas Vizhalil Paul1

DESCRIPTION
A man aged 26 years presented with pain in the left side of the chest for 9 months, which was increasing on respiration and movement. However, patient did not have exertional dyspnoea, fever, skin lesions, history of trauma, weight loss or loss of appetite. On examination, patient had localised tender swelling on the lower part of left side of the chest with no other bony deformity or facial asymmetry. Chest X-ray posteroanterior view (figure 1) revealed radiolucent expansile lytic lesion in the left eighth rib. Clinical biochemistry revealed an elevated alkaline phosphatase at 224 U/L (normal: 40–125), calcium 9.5 mg/dL (normal: 8.3–10.4), phosphate 4 mg/dL (normal: 2.5–4.6) and 25-hydroxyvitamin-D 28 ng/mL (normal: 30–75). Tc99m-labelled methylene diphosphonate bone scan (figure 2) revealed increased tracer uptake only in the left eighth rib. The biopsy of the affected rib was performed which on histopathological examination (figure 3) showed irregular trabeculae of woven bone lacking osteoblastic rimming, set in a fibrous stroma suggestive of fibrous dysplasia. Patient was treated with an oral bisphosphonate (alendronate 70 mg once weekly) and was reviewed after 6 months, there was a significant reduction in the pain.

Fibrous dysplasia is a rare benign bone disorder caused by the postgenetic activating mutation of GNAS 1 gene. It is characterised by replacement of normal bone marrow with fibrous tissue due to abnormal osteoblastic activity leading to increase in osteoclast activity. It can be either monostotic (involving one bone) or polyostotic (involving multiple bones). Craniofacial bones, ribs and proximal femur are the most frequent locations in monostotic forms.
McCune-Albright syndrome should be suspected in patients with polyostotic form of fibrous dysplasia. Bone pain is the most common symptom with proximal femur, tibia and facial bones being the common bones involved, however can involve any bone in the body. \textsuperscript{1} Bisphosphonate therapy can be used to reduce pain in some patients. \textsuperscript{2}

**Contributors**  PTS: wrote the manuscript. DB, JH, TVP: reviewed the manuscript. PTS, DB, JH, TVP: finally approved the manuscript.

**Funding**  This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests**  None declared.

**Patient consent**  Obtained.

**Provenance and peer review**  Not commissioned; externally peer reviewed.

**REFERENCES**
