

CLINICAL IMAGE

A kidney-shaped polycystic mass on the back of a hemodialysis patient

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Question: A 75-year-old male hemodialysis patient presented with an approximately 10 × 20 × 5 cm kidney-shaped mass under his left shoulder blade which made lying down for hemodialysis uncomfortable. It had evolved rapidly during the last 2 weeks without history of

Key Clinical Message

Multicystic back masses can be of infectious, metastatic, or local pre- or malignant origin. We present a case of a rapidly evolving mass in a hemodialysis patient with severe “chronic kidney disease-associated mineral bone disease” (CKD-MBD), that also highlights limitations of chest x-ray for diagnosis of bone disease.

Keywords

Chronic kidney disease-related mineral bone disease, end-stage renal disease, hemodialysis, multicystic back mass.

injury to the site, pain, or constitutional symptoms (Fig. 1A). Ultrasound revealed a multicystic mass (Fig. 1B) and a large pleural effusion. How would you further investigate this finding?

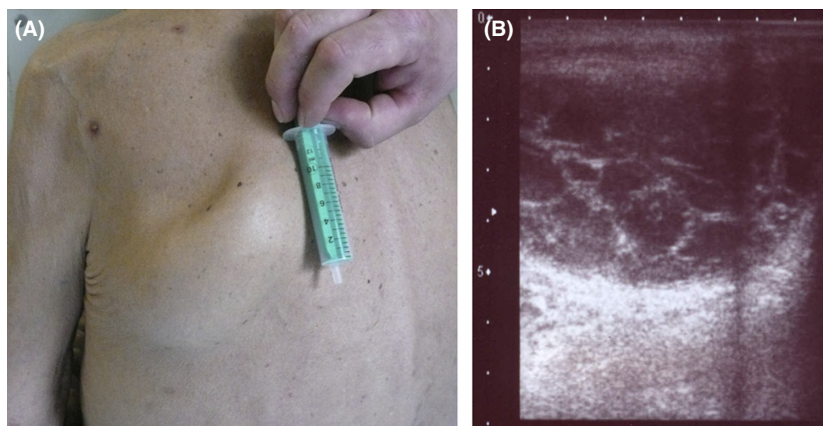


Figure 1. The patient's back (A) and an ultrasound image revealing a multicystic mass with fluid of low echogenicity and no evidence of increased vascularization (B).

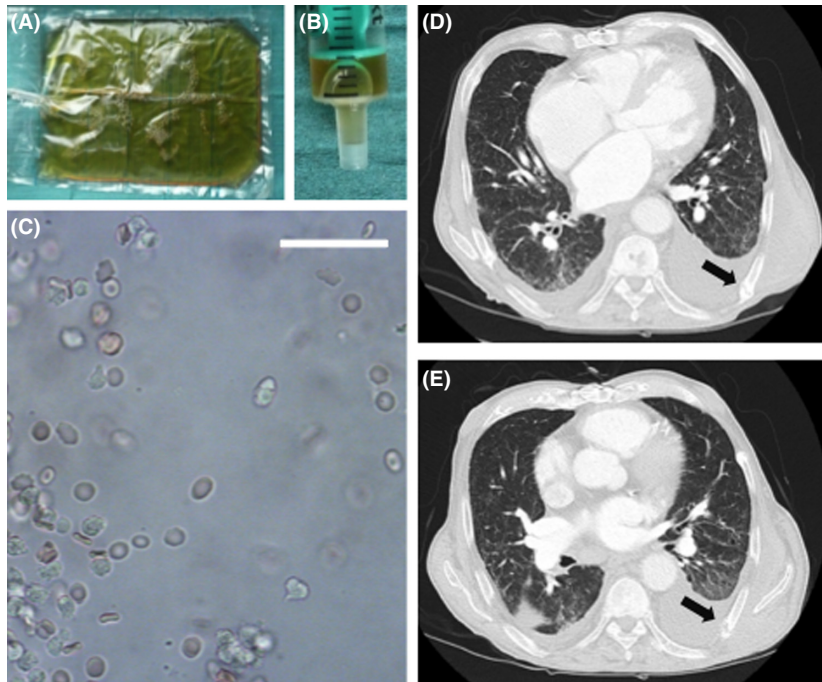


Figure 2. (A, B) Macroscopic appearance of the pleural tap (A) and cyst fluid (B). Pleural effusion was a transudate (LDH 87 U/L, in blood 175 U/L, albumin was 12 g/L in effusion and 34 g/L in blood). In contrast, LDH was 798 U/L and albumin was 21 g in cyst fluid indicating different origins. Calcium was 1.65 and 1.91 mmol/L, respectively, and phosphorous 1.0 mmol/L in both, making spontaneous calcification unlikely. (C) Microscopic image of the cyst fluid (40x original magnification, size bar indicates 50 μ m) showed few erythrocytes and leukocytes and no crystals or malignant cells. (D, E) CT scan of the thorax revealed partially healed rib fractures underlying the swelling (arrows).

Answer: Cyst and pleural fluid was investigated for evidence of infection, malignant cells, and crystals indicative of extrasosseous calcification, a common entity in patients with end-stage renal disease, especially at sites of subcutaneous heparin administration [1]. Fluid was clear (Fig. 2A and B) and microscopic examination showed few erythrocytes and leukocytes (Fig. 2C). On CT scan of the thorax, there was no evidence of communication between the lesion and the pleural space. However, it revealed several partly healed rib fractures directly underlying the lesion (Fig. 2), undetectable on chest X-rays. Taken together, these results suggest an organizing hematoma. Organizing hematomata may impose as multicystic formation [2] even suggestive of malignoma [3, 4]. Consistent with this diagnosis, this patient's mass resolved spontaneously over the ensuing 3 months.

Conflict of Interest

None declared.

References

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