

# Asymptomatic pulmonary cement embolism

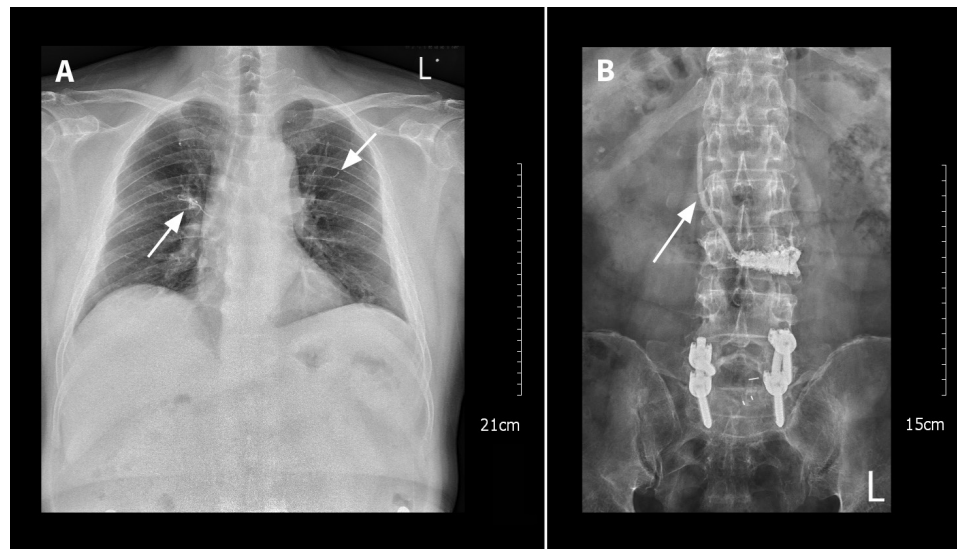
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**A** 59-year-old man presented for follow-up of an abnormal chest radiograph (Figure 1A), which had been ordered as part of a routine health examination. One year prior, he had sustained a compression fracture and traumatic spondylolisthesis because of a car accident. Treatment included percutaneous vertebroplasty at L3 and pedicle screw augmentation at L5 and S1.

The patient did not have fever, dyspnea, cough or hemoptysis. There was no tenderness in the chest wall, and breath sounds were normal bilaterally. Computed tomography of the chest showed multiple linear hyperdense foreign bodies at the pulmonary arteries bilaterally. Radiography of the lumbar spine showed previous vertebroplasty at L3 with cement migration via the ascending lumbar vein (Figure 1B). Because of the extensive distribution of cement, we offered the patient anticoagulation treatment, which he agreed to, after a discussion of the uncertainties and possible complications of this treatment.

Pulmonary cement embolism is a known complication of vertebroplasty.<sup>1</sup> Bone cement may migrate into the vertebral venous plexus and from there, it can enter the thoracic, followed by the pulmonary, venous systems.<sup>1</sup> Incidence estimates vary widely from 2% to 26%.<sup>2</sup> The management of asymptomatic pulmonary cement embolism remains uncertain; our decision was informed by an analysis of a case report by Krueger and colleagues that suggested anticoagulation treatment only for centrally distributed



**Figure 1:** (A) Chest radiograph in a 59-year-old man showing linear high-density lesions near the right hilar area (thick arrow) and bilateral lung fields (thin arrow). (B) Plain film radiograph of the lumbar spine showing previous cement vertebroplasty at L3 and pedicle screw augmentation at L5 and S1. Migration of cement into the ascending lumbar vein (arrow) at L3 can be seen.

emboli.<sup>3</sup> In situations where there is limited, poor-quality evidence, as in this case, decision-making may be complex, variable and often dependent on the values and preferences of the patient.

## References

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