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Pulmonary Cement Embolism

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Abstract

We would like to present a rare case of incidental pulmonary cement embolism in a 70 years old female who was investigated for malignancy. She was asymptomatic from the finding and decision was made for routine observation. We would also like to present a management recommendation of pulmonary cement embolism.

Keywords: Pulmonary Cement Embolism; Percutaneous Vertebroplasty; Images

Case Presentation

A 70 years old female was referred by her GP for an investigation into weight loss and anaemia. Subsequently, a computed tomography (CT) scan of her body found dense material in the right main pulmonary artery and in the right upper and middle segmental arteries (Figure 1). Our patient had undergone percutaneous vertebroplasty (Under direct fluoroscopy calcium containing polymethylmethacrylate is injected into a collapsed vertebra to maintain its height and relieve associated pain) to the T8 vertebra 2 years previously. No immediate complications were recorded post-procedure and her back pain improved. Although subsequent chest x-ray radiograph (CXR) report did not mention any radio-opaque material, calcification can be seen on close inspection (Figure 2). An asymptomatic cement embolism was diagnosed. As our patient had no respiratory symptoms or compromise no respiratory interventions or investigations were proposed.

Pulmonary cement embolism was first described in 1997.1 It is not an uncommon complication of percutaneous vertebroplasty with an incidence rate of 3.5% to 23% according to a systematic review.2 Management guidelines remain to be agreed but are largely dictated by the presence or absence of symptoms. In symptomatic cases or in the case of a central thrombus conventional pulmonary embolism management for 6 months is the agreed strategy to prevent further thrombus exten sion whilst the cement is endothelialised. A simple clinical follow up is recommended in asymptomatic patients. With the increasing use of vertebroplasty, we would anticipate that the incidence of cement embolism and its striking radiological appearances will increase in the COPD population in particular as patients survive exacerbations more commonly than ever before.3 It will be imperative that we identify and manage patients correctly.

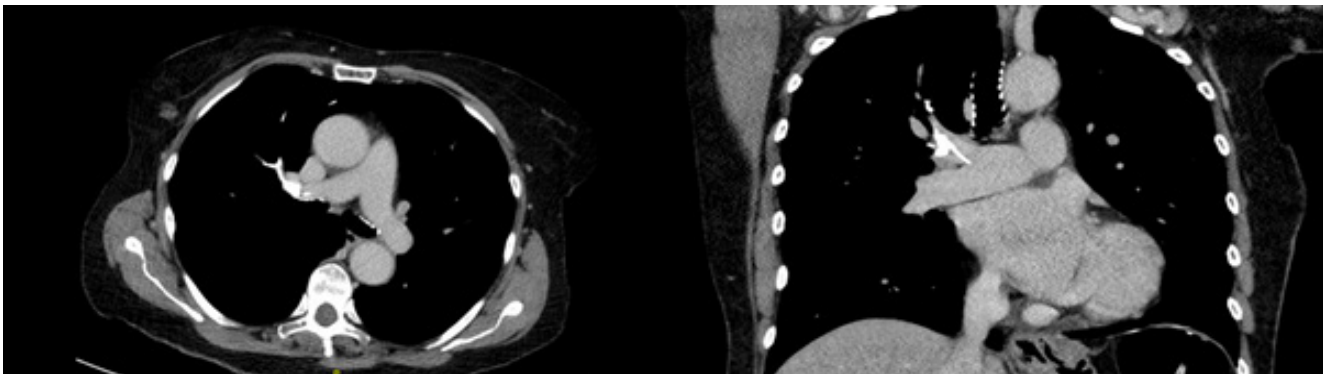

Figure 1: Axial and Coronal CT showing pulmonary cement embolization in the right main pulmonary artery and segmental arteries.

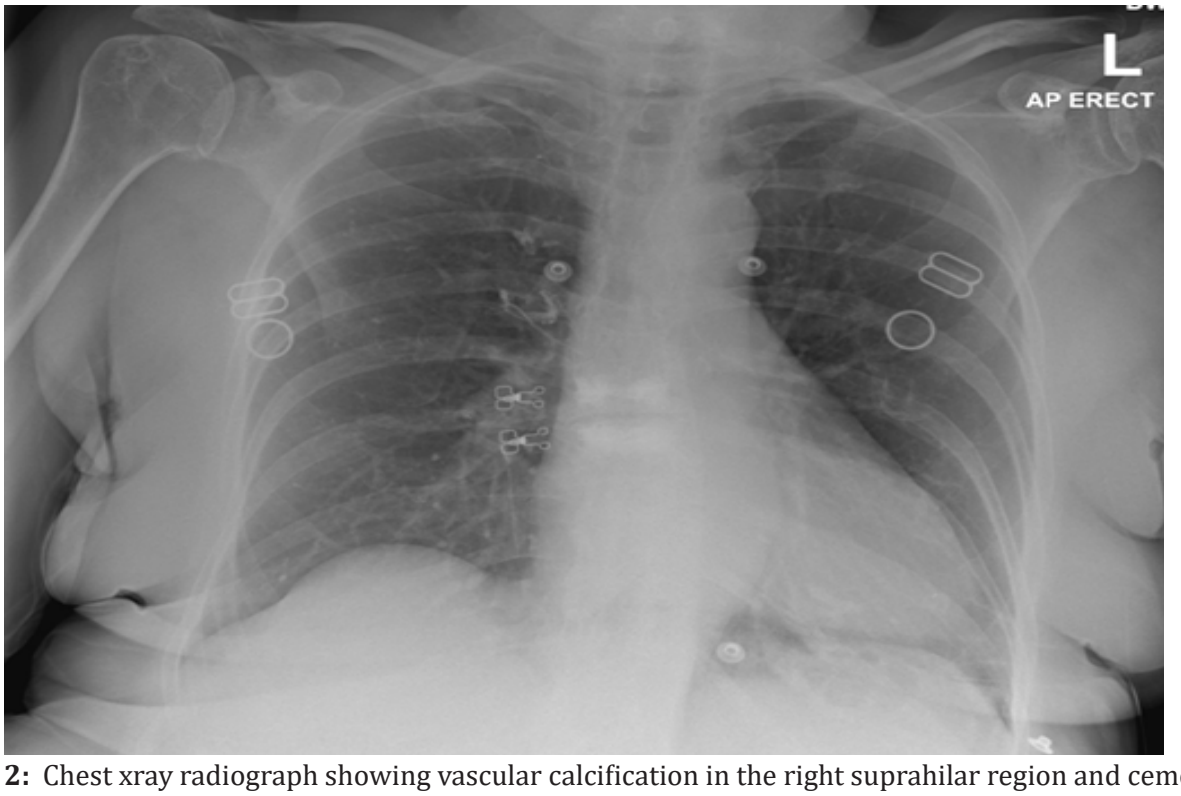

Figure 2: Chest xray radiograph showing vascular calcification in the right suprahilar region and cement in the vertebral bodies.

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