Unexpected finding in computed tomographic pulmonary angiography

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Study conducted at Hospital Mater Dei, Belo Horizonte, MG, Brazil

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A 78-year-old woman was admitted to the hospital with nausea and abdominal pain. She had a history of lumbar fracture secondary to corticosteroid use and underwent an uneventful vertebroplasty at L1-L2 three months before admission. Laboratory tests and an abdominal computerized tomography showed acute pancreatitis.

Three days later, she complained of dyspnea and had a transient thoracic pain. No hemodynamic instability was detected. A thorax computed angiotomography was performed, which showed dense intravascular masses located inside the arteries for the right superior, inferior, and middle lobes, suggestive of pulmonary cement emboli (PCE) (Figure 1). Respiratory symptoms disappeared and no relation was found between PCE and actual symptoms. The patient was submitted to a cholecystectomy, and recovered well.

PCE is a possible systemic complication associated with vertebroplasty or kyphoplasty¹. The reported prevalence (4.6% to 23%) may be an underestimation, as PCE

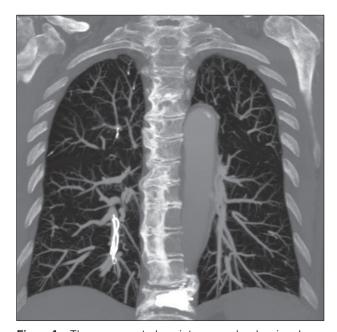


Figure 1 – Thorax computed angiotomography showing dense intravascular masses.

screening is not routinely undertaken²⁻³. Cement emboli may reach the pulmonary circulation through the perivertebral venous system, the azygos and cava veins¹. Its clinical presentation varies from an asymptomatic picture to sudden death¹⁻³. The management of PCE is not well established. No treatment is indicated in asymptomatic patients, but surgical removal, heparinization, or anticoagulation with vitamin K antagonists may be considered⁴.

It is suggested that PCE may be prevented by appropriate patient selection for surgery, improved surgical techniques, and good image screening by fluoroscopy during the procedure¹⁻⁴.

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