Clinical Case

A 45-year-old man with dyspnea was referred for lung perfusion scan. Extrapulmonary uptake of Tc-99m macroaggregated albumin (MAA) was noted in a small area of the liver and in the thoracic vertebrae (fig. 1); the findings were not seen in a repeated lung scan after administration of the tracer through a peripheral vein in the foot (fig. 2). Subsequent computed tomography of the thorax revealed obstruction of the superior vena cava by a tumor; pulmonary adenocarcinoma was diagnosed by transbronchial biopsy.

In superior vena cava obstruction, abnormal Tc-99m MAA uptake by the liver is a well known phenomenon as a result of collateral pathways in cavo-portal shunting. However, the visualization of thoracic vertebrae is exceedingly rare and has been reported in the literature only once. The underlying mechanism is retrograde flow through a dilated vertebral venous plexus, which results in blood draining and trapping of Tc-99m MAA in bone marrow.

REFERENCES