

Clinical Image

[Translated article] Usefulness of Contrast Ultrasound in Ruling Out Local Recurrence After Radiation Therapy for Lung Cancer



Utilidad de la ecografía con contraste para descartar recurrencia local tras radioterapia sobre cáncer de pulmón

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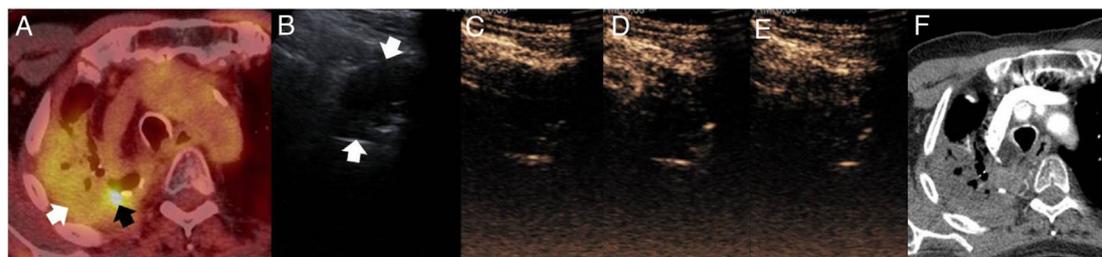


Fig. 1. Patient with lung adenocarcinoma treated with chemoradiotherapy. (A) PET/CT with FDG. Axial fusion image in mediastinal window showing a hypermetabolic focus (black arrow) surrounded by post-treatment fibrotic changes (white arrow). (B) Chest ultrasound of the right apical region showing a large homogeneous intrathoracic lesion (white arrows). (C–E) Ultrasound images obtained after administration of 2.4 mL of ultrasound contrast at 5 s (C), 30 s (D), and 55 s (E). No pathological contrast uptake was observed throughout the scan. (F) Chest CT image with intravenous contrast in the mediastinal window showing fibrotic changes and absence of local recurrence 4 years after the PET/CT scan.

We report the case of an 81-year-old man with a history of right apical lung adenocarcinoma (T4N0M0-IIIa) treated in 2012 with radical chemoradiotherapy. In January 2017, the patient was referred for suspected tumor recurrence after an episode of hemoptysis.

Fiberoptic bronchoscopy with biopsy was negative, so a PET/CT study with FDG was performed, which showed a fibrotic-like consolidation in the right upper lobe with a suspicious focus of greater metabolic activity (Fig. 1A). A contrast-enhanced chest ultrasound (SonoVue®, Rovi, Spain) to complete the study and biopsy of the suspected area was agreed by our multidisciplinary committee. The ultrasound showed no areas of contrast uptake within the consolidation (Fig. 1B–E), suggesting fibrosis associated with radiation therapy,¹ so we decided to continue patient follow-up. Ultrasound

findings that demonstrate tumor recurrence show late uptake of the contrast agent (more than 7 s after intravenous administration) followed by early or late washout.² After 4 years of follow-up, the suspected recurrence has not been confirmed (Fig. 1F).

Contrast-enhanced lung ultrasound has been shown to be useful in differentiating multiple diseases, increases ultrasound-guided biopsy yield,² and can circumvent the aspiration of benign lesions.

References

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