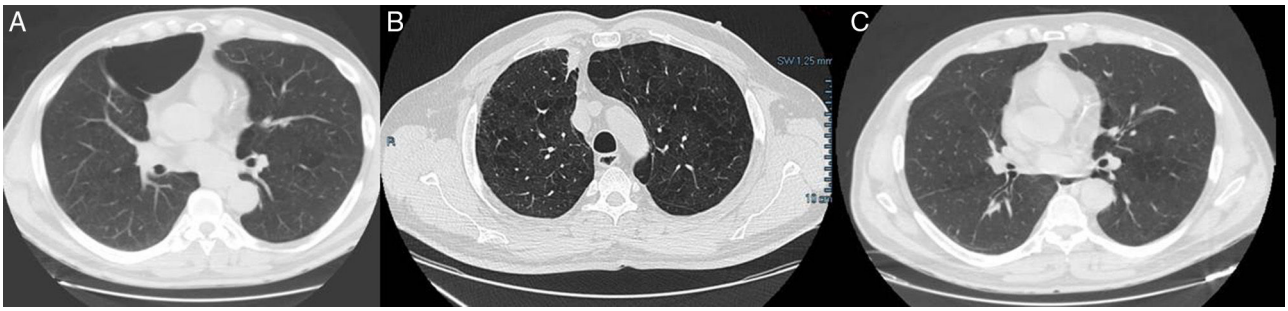

Fig. 1. CT images showing a large bulla in the RUL (A), spiculated pulmonary nodule in the RUL, along with resolution of the large bulla in this region (B), and the image after surgical resection of the pulmonary nodule with continued absence of the large emphysematous pulmonary bulla (C).

and Grant in 1957.[4] The process is usually preceded by clinical symptoms consistent with a respiratory infection, manifesting as cough and expectoration, generally with parenchymal consolidation surrounding the bulla and an air-fluid level within. Radiological resolution of air-fluid levels is usually very slow, generally taking more than 70 days, and the use of antibiotics does not speed up the process, so their systematic use is not recommended in asymptomatic patients.[5–7] The causative mechanism is unknown, although most authors suggest that it is due to bronchial obstruction by exudate and inflammation, with subsequent reabsorption of the air-fluid content,[8] or else it might be an inflammatory process within the bulla which causes it to seal.[2] Although in most cases an improvement in lung function has been reported,[9] this might not occur, as in the case described by Wahbi and Arnold in 1996,[10] and in our patient, possibly due to the size of the bulla.

In our case, the mechanism underlying resolution of the bulla is unclear. At no time was there evidence of inflammatory signs on the CT or previous chest radiographs, making this case unusual, since regression was totally asymptomatic, with no associated infection or tumor. The finding of cavernous hemangioma was incidental, and we do not believe that it is associated with resolution of the bulla.

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Intraventricular Air Embolism Complicating Computed Tomography-Guided Pulmonary Aspiration Biopsy☆

Embolia aérea intraventricular como complicación de una punción biopsia pulmonar guiada por tomografía computarizada

To the Editor,

Computed tomography (CT)-guided lung aspiration biopsy is a widely used tool in the histopathological diagnosis of lung lesions.[1] Although complications from this procedure are rare, they are not unknown, and can include pneumothorax, hemithorax, hemoptysis and/or pulmonary hematoma.

We report the case of a patient who developed pneumothorax and left ventricular air embolism after diagnostic aspiration of a pulmonary nodule.

Our patient was a 67-year-old man with a history of perforated colorectal carcinoma, requiring emergency surgery, followed by treatment with chemotherapy and radiation therapy. During the staging CT, a pulmonary nodule measuring 11 mm contiguous with the inferior pulmonary vein was observed. Fine needle aspiration biopsy was performed under general anesthesia, and during the procedure pneumothorax and left ventricular air embolism were visualized. This was a tomographic finding, and the patient was asymptomatic when the complication was discovered. A pleural drainage tube was placed, and pulmonary expansion was immediately observed (Fig. 1). Transthoracic echocardiogram was performed, ruling out coronary and/or ventricular complications. A waiting approach was taken, with echocardiographic studies and hemodynamic monitoring, which remained within normal values. A follow-up CT was performed after 48 h, showing reabsorption of the intracardiac air. The patient progressed without problems and was discharged on day 4 after the procedure.

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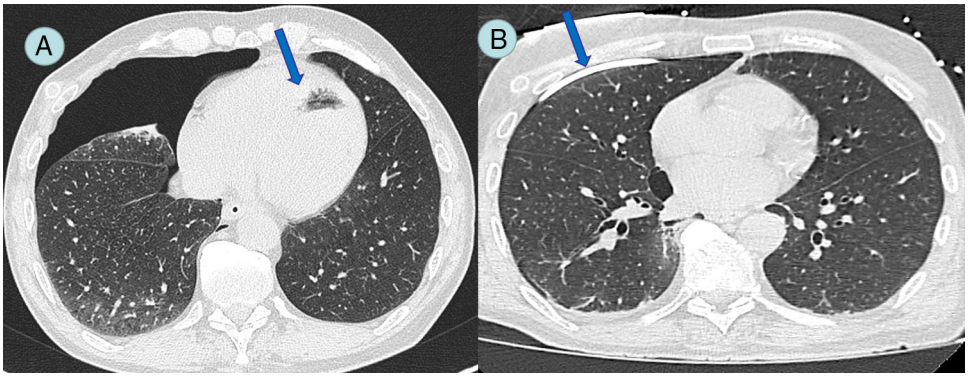

Fig. 1. (A) Right pneumothorax associated with left ventricular air embolism (arrow). (B) Drainage catheter in the pleural space (arrow) with resolution of right pneumothorax and air embolism.

CT-guided aspirations are safe procedures with a complication rate of 10%–25%, depending on the series, the most common being pneumothorax. Intracardiac air embolism is an extremely rare and potentially fatal complication, and reports in the literature are few.[2]

Our patient presented pneumothorax associated with intracardiac air embolism, rarely reported in the literature to date. The proximity of the lesion to the inferior pulmonary vein with the consequent production of intracardiac air embolism is a mechanism known to cause this type of complication.[3] Procedures performed under general anesthesia and positive airway ventilation may increase the chances of it occurring.

The therapeutic alternative of using a hyperbaric chamber is controversial, and moreover, unavailable in many hospitals.

Administration of 100% oxygen while placing the patient in the Trendelenburg position, along with intensive hemodynamic monitoring has been shown to be a safe treatment in the management of complications.[4,5]

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Bronchiolitis Obliterans Following Hematopoietic Stem Cell Transplantation: Importance of Expiratory Computed Tomography☆

Bronquiolitis constrictiva tras trasplante de progenitores hematopoyéticos: importancia de la tomografía computarizada espiratoria

To the Editor,

Bronchiolitis obliterans (BO) after hematopoietic stem cell transplantation (HSCT) is a serious, potentially fatal complication, which generally appears in the context of graft-vs-host disease (GVHD).[1,2] The clinical presentation of BO after HSCT is non-specific, and no universal consensus is available on the diagnostic criteria of this entity, although imaging studies, particularly computed tomography (CT), dynamic inspiratory CT (iCT), and expiratory CT (eCT), are of growing diagnostic value in the detection of this complication.[3,4]

We report the case of a 44-year-old woman with a history of acute myeloid leukemia, treated 6 months previously with unrelated donor HSCT, who consulted due to dyspnea and dry cough. As a complication of the HSCT, the patient had transitory cytomegalovirus viremia and cutaneous GVHD grade III, which responded favorably to treatment with corticosteroids. No parenchymal opacities were observed on chest radiograph, but chest iCT and eCT revealed a marked mosaic pattern in the pulmonary parenchyma in the expiratory phase, and multiple areas of air trapping were identified in both lungs (Fig. 1), while infectious complications were ruled out. Areas of air trapping on CT can be better viewed with the use of the minimum intensity projection (minIP), an algorithm for visualization of images

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