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Clinical Letter

Sinus Histiocytosis: Diagnosis by Cryo-EBUS

To the Director,

Sinus histiocytosis, also known as Rosai–Dorfman disease, is a rare non-Langerhans cell histiocytosis characterized by the accumulation of activated histiocytes without tissue involvement. It usually affects young adults.[1] Although its etiology is not clearly defined, immunological deficiencies and genetic alterations have been postulated and it has also been associated with viral infections such as herpes virus or Epstein–Barr virus, although this has not been confirmed.[2,3] The disease mainly affects the lymph nodes, although there may be extranodal sites. Thoracic manifestations have been described in up to 2% of patients.[4] Taking sufficient histological samples of the affected sites are important to establish the diagnosis.

Our case involves a 60-year-old patient, a former smoker who quit 10 years ago with an API of 20 packs/year who came to the clinic due to an episode of self-limiting hemoptysis without fever o chest pain. The patient had no history of disease. A blood test was performed with normal results including serologies for EBV, parvovirus and immunological studies and the results were normal. A chest CT showed images compatible with bronchiolitis and multiple mediastinal adenopathies of pathological size (Fig. 1A and B). The hemoptysis was attributed to an episode of pharyngitis but it was decided to take samples from the most accessible lymphadenopathy.

A bronchoscopy was performed without endobronchial lesions, and the analysis of the bronchoaspiration resulted negative for tumor cells and for microbiological cultures. An ultrasound bronchoscopy (EBUS) was then carried out, performing a mediastinal cryobiopsy of lymph node stations 7 and 11L (Fig. 1C and D).

The EBUS-TBNA was performed with a 19G needle and for the transbronchial mediastinal cryobiopsy a 1.1-mm cryoprobe was used. The procedure was done through tunelling in the airway to the chosen lymph node with a 19G needle. Then a cryoprobe was inserted through the working channel of the EBUS bronchoscope and placed in contact with the lymph node where it was frozen for five seconds. The EBUS bronchoscope was then removed together with the probe and the sample on the tip. Good macroscopic samples were obtained[5] (Fig. 1E). The result of the cryobiopsy was a lymph node with focal fibrosis that showed dilated sinusoids with abundant histiocytes containing anthracotic pigment. The findings were compatible with sinus histiocytosis. The histiocytes had

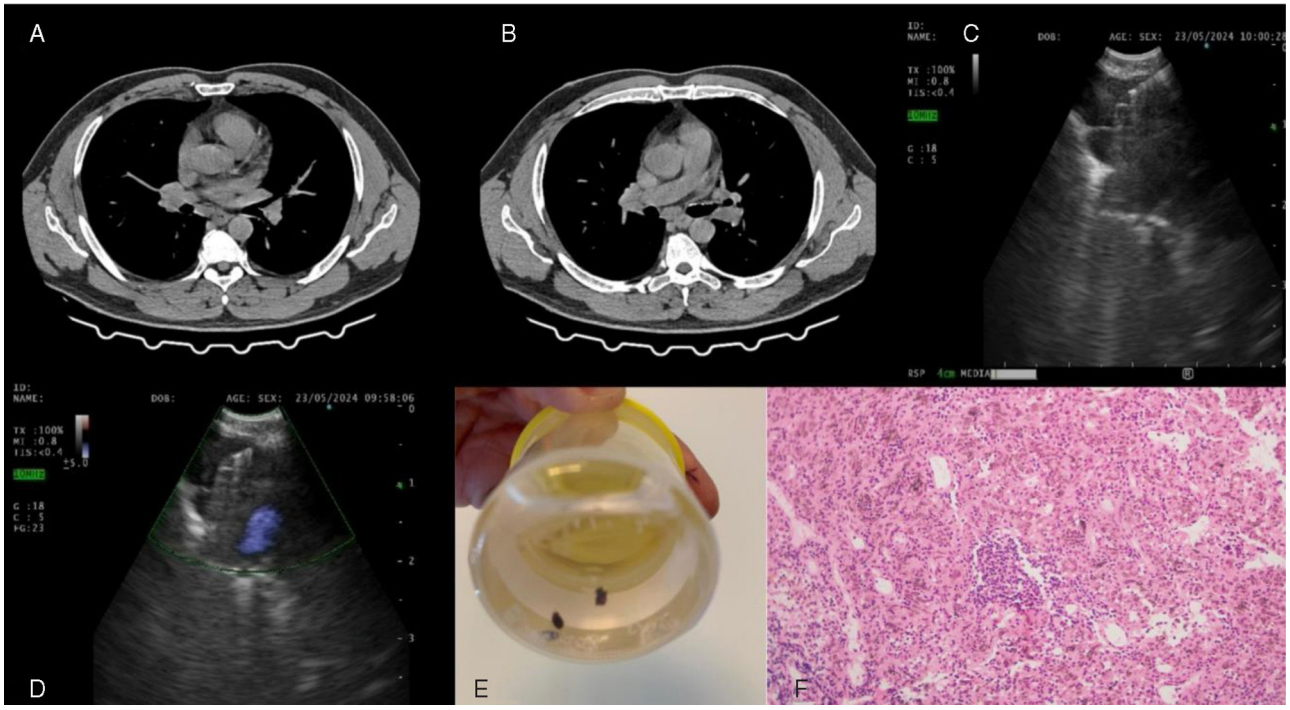

Fig. 1. Chest CT (A and B), cryobiopsy performed with endobronchial ultrasound (EBUS) (C and D), cryobiopsy sample (E) and microscopic image (F).

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large vesicular nuclei and abundant clear cytoplasm (Fig. 1F). On immunocytochemistry, the histiocytes were positive for S100.

In conclusion, sinus histiocytosis is a benign disease, generally with little systemic involvement. This disease is frequently confused with malignant neoplasms, so it should be recognized and suspected. The diagnosis is anatomopathological, so an adequate biopsy is essential. Mediastinal cryobiopsy is a useful technique, with few complications, which allows us to obtain sufficient lymph node samples for a correct diagnosis.

Conflict of interests

The authors state that they have no conflict of interests.

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