CLINICAL IMAGE

Isolated mediastinal tuberculous lymphadenitis

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A 74-year-old man was admitted to an internal medicine ward because of fever lasting for the previous 2 to 3 weeks. He had also experienced more episodes of fever in the past 2 months. The fever was characterized by daily spikes in temperature and sweating. The patient denied cough, chest pain, dysphagia, or weight loss and had normal bowel and urinary functions. He also showed a slight loss of appetite. None of his family members or friends reported similar symptoms.

The patient did not report any other medical problems. He had no history of contact with tuberculosis, human immunodeficiency virus (HIV), or hepatitis A virus. He had a history of an *Ixodes ricinus* bite. He denied taking any special drugs. During fever, he would take paracetamol or ibuprofen.

A full physical examination and laboratory tests were performed. The physical examination was unremarkable except for intermittent fever, with no palpable superficial lymph nodes or atrial fibrillation. The patient's temperature measured on 3 consecutive days was 38.4°C, 38.5°C, and 38.9°C. Laboratory tests showed microcytic anemia, leukopenia with neutropenia and lymphopenia, elevated C-reactive protein (CRP) levels, and hypoalbuminemia, hyper-α-1-globulinemia, hyper-α-2-globulinemia, and hyper-γ-globulinemia. The levels of β-1 and β-2 globulins were within the reference range. In addition, the patient showed low iron levels with high ferritin concentrations and low total iron binding capacity. IgG antibodies were positive for Lyme disease, and both *Chlamydia pneumoniae* IgG and IgM antibodies were detected. On the other hand, the patient tested negative for hepatitis B and C as well as for HIV infection.

A chest radiograph (FIGURE 1A) showed heterogeneous shadows in the right lower zone with no lymphadenopathy. The patient received antibiotics for *Chlamydia pneumoniae*. After 1 week, he still presented with intermittent fever and elevated CRP levels, but the chest radiograph did not show any abnormalities (FIGURE 1B).

Intermittent fever is often caused by neoplasms. In the examination of malignancy and its stage, endoscopy reduces the potential risk of a false diagnosis.[1] Therefore, the patient underwent upper gastrointestinal endoscopy, which revealed an esophageal ulceration 29 cm from the incisors. A bronchoesophageal fistula was suspected (FIGURE 1C), and a biopsy revealed nonnecrotic granulomas.

A chest computed tomography with and without intravenous contrast was performed (FIGURE 1DE) and confirmed the presence of a fistula (red square). It also revealed enlarged lymph nodes in the mediastinum.

In adult population, the development of a bronchoesophageal fistula is rare and is mainly a result of malignancy, inflammatory process, trauma, corrosive ingestion, or the presence of a foreign body. Tuberculous mediastinal lymphadenopathy is one of the most common reasons for bronchoesophageal fistulas.[2,3]

In our patient, a bronchofiberoscopy was performed but sputum smears and cultures failed to grow acid-fast bacilli, and genotyping was negative for tuberculosis. In adult population, the sensitivity of tuberculosis tests becomes weaker with an increasing age, and tuberculosis is independently associated with false-negative results.[4]

Our patient also underwent a mediastinoscopy. Lymph node enlargement was finally confirmed to have been caused by tuberculous lymphadenitis. The diagnosis of mediastinal tuberculous lymphadenopathy in the absence of a parenchymal lesion is difficult, and may be established by mediastinoscopy in most cases, although it is an invasive procedure.[5]

In conclusion, tuberculosis is a chronic disease that should not be forgotten by physicians even though its incidence in the developed countries has been declining.

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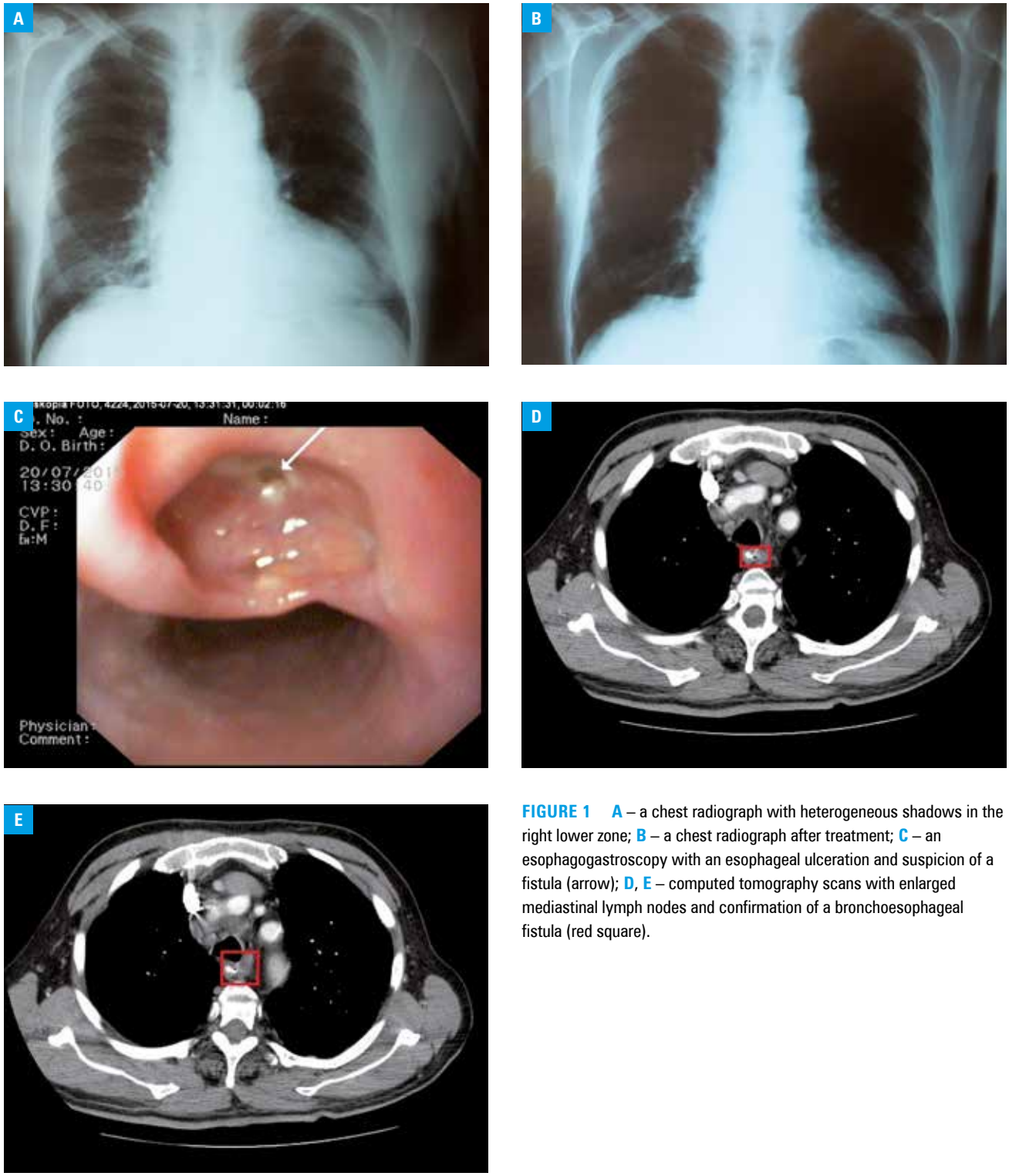

FIGURE 1 **A** – a chest radiograph with heterogeneous shadows in the right lower zone; **B** – a chest radiograph after treatment; **C** – an esophagogastroscopy with an esophageal ulceration and suspicion of a fistula (arrow); **D**, **E** – computed tomography scans with enlarged mediastinal lymph nodes and confirmation of a bronchoesophageal fistula (red square).

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