Clinical picture

Utility of 18F-FDG PET/CT in relapsing polychondritis

A 37-year-old woman was admitted after 3 days of fever, cough and diffuse pain. She had a 6-month history of relapsing polychondritis treated with steroids and, initially, cyclophosphamide. Cyclophosphamide was stopped after the third infusion due to anaphylactic shock and replaced by mycophenolate mofetil.

On physical examination, she had dyspnea with serious wheeze, dry cough and diffuse pain. She also had alopecia, eczematiform dermatitis and the characteristic nose deformation of polychondritis-affected patients. Routine laboratory tests showed an inflammatory syndrome (CRP = 247 mg/l). Thoracic radiography was normal.

An antibiotic treatment (levofloxacin) was given during 5 days, but fever and pain did not decrease. To ensure that there was no infectious disease in this context of fever and immunodeficiency, a PET/CT was carried out and revealed no evidence of infection. However, it did reveal 18F-FDG uptake (SUV max = 4.1) on the chondro-costal junctions, tracheal rings and vocal cords (Figure 1). A relapse of polychondritis was diagnosed.

After 3 days of steroid infusions (methylprednisolone 750 mg/day), fever, dyspnea, pain and dermatitis disappeared and the inflammatory syndrome decreased significantly. This patient is currently being treated by methotrexate and low-dose steroids.

Relapsing polychondritis is a rare disease in which recurrent bouts of inflammation affect the cartilage of the larynx, nose, ears and tracheobronchial tree. The pathogenesis involves an autoimmune response followed by cartilage destruction. Recent studies have shown that PET/CT can be helpful for positive and differential diagnosis. Glucocorticoid therapy is the cornerstone of the treatment and is used chronically in most patients. Cyclophosphamide, azathioprine or methotrexate are used in severe forms.

Photographs and text from: G. Bayer and E. Diot, Service de Médecine Interne, CHRU Bretonneau, Tours, France; B. Erra, Service de Médecine Nucléaire, CHRU Bretonneau, Tours, France. email: guillaume.bayer@hotmail.fr

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References


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