

Aortitis: A new feature of Schnitzler syndrome



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INTRODUCTION

Schnitzler syndrome is an adult-onset acquired autoinflammatory syndrome characterized by recurrent fevers, urticarial eruptions, bone pain, enlarged lymph nodes, leucocytosis, or elevated C-reactive protein (CRP) in a patient with a monoclonal immunoglobulin M (IgM) (or rarely IgG) gammopathy.¹ Diagnosis relies on the validated criteria established by Lipsker et al¹ or the newer Strasbourg criteria.^{2,3} We report a typical case of Schnitzler syndrome with a so-far not-described feature: diffuse aortitis.

CASE REPORT

A 59-year-old woman was hospitalized in April 2015 for abdominal pain in the context of asthenia, anorexia, and loss of body weight for 2 months. She had a 22-year history of typical Schnitzler syndrome that presented initially with fever, night sweats, and chills; a daily urticarial rash; arthralgias; and monoclonal IgM- κ spike estimated at 6 g/L with negative bone marrow aspiration. A skin biopsy found a neutrophilic urticarial dermatosis. In the late 1990s she was treated with steroids and chlorambucil for anemia of chronic disease, but during the last 11 years, she had only rare urticarial eruptions and arthralgias and was not treated. In February 2015, she complained of intense fatigue, anorexia, and night sweats but no fever. She lost 4 kg in 1 month. One month later, she also complained about a diffuse urticarial eruption, epigastralgias, and left side abdominal pain. No digestive bleeding was detected. There were no enlarged lymph nodes, liver, or spleen. Blood count results showed leucocytosis (11430/mm³) and anemia (hemoglobin, 7.5 g/dL). Erythrocyte sedimentation rate was at 148 mm/h, CRP

Abbreviations used:

CRP:	C-reactive protein
CT:	Computed tomography
¹⁸ F-FDG:	¹⁸ F-fluorodeoxyglucose
PET:	Positron emission tomography

at 164 mg/L, and monoclonal IgM- κ spike estimated at 21 g/L. Serum creatinine, serum calcium, and serum quantitative immunoglobulin A and G levels were within normal range. Gastroscopy did not find a digestive ulcer. Abdominal echography found micro-lithiases on the left kidney and atherosclerotic plaques of the aorta. Noninjected abdominal computed tomography scan (CT) confirmed calcified atherosclerotic plaques of the aorta with no other abnormalities. Pancreatic magnetic resonance imagery was normal. Cardiac echography results excluded pericarditis. Whole-body ¹⁸F-fluorodeoxyglucose (¹⁸F-FDG) positron emission tomography (PET)/CT showed an intense and diffuse radiotracer uptake in the thoracic and abdominal aorta and in both sub-clavian arteries with no abnormal osseous radiotracer uptake (Fig 1, A). Hence, the diagnosis of large-vessel arteritis was made, and the patient started treatment with anakinra, 100 mg/d. Ten days later, clinical manifestations had resolved and anemia and inflammatory syndrome markers were notably improved (haemoglobin, 10.9; erythrocyte sedimentation rate, 40; CRP, 8). One month later, inflammatory syndrome had resolved (CRP, 4), and PET/CT found a partial reduction of metabolic abnormalities and the persistence of intense ¹⁸F-FDG uptake with segmental pattern (Fig 1, B). After 2 months of treatment, the patient stopped

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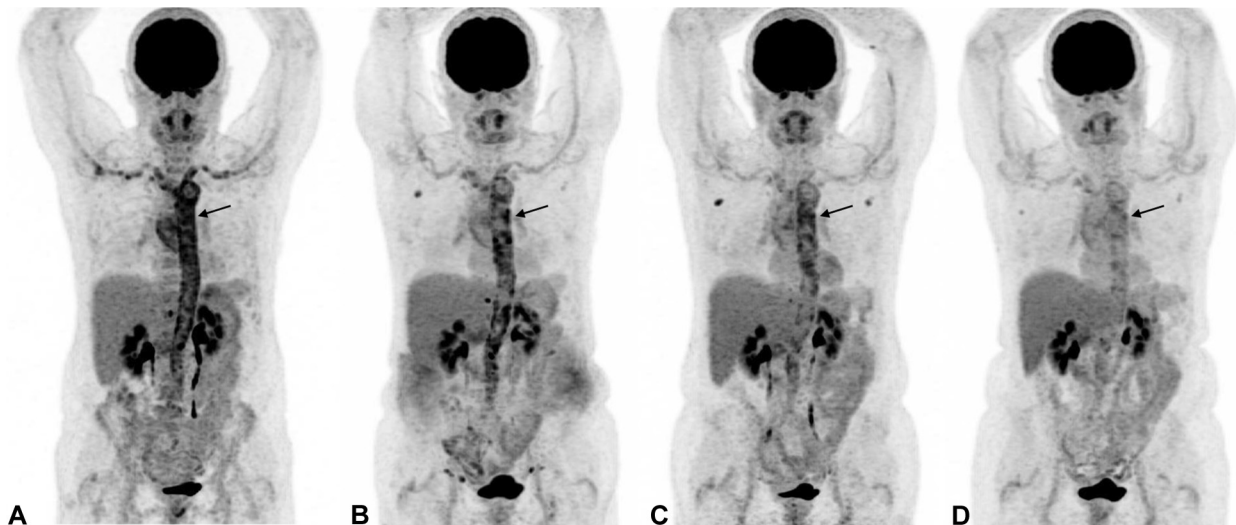


Fig 1. Anterior whole-body maximum intensity projection ^{18}F -FDG PET. **A**, intense and diffuse radiotracer uptake in the thoracic and abdominal aorta and in both subclavian arteries before treatment. **B**, Intense but segmental ^{18}F -FDG uptake in the thoracic and abdominal aorta and in both subclavian arteries after 1 month of treatment. **C**, Distinct decrease of ^{18}F -FDG uptake in the thoracic and abdominal aorta and almost complete regression of ^{18}F -FDG uptake in both subclavian arteries after 5 months of treatment. **D**, Almost complete regression of ^{18}F -FDG uptake in the thoracic and abdominal aorta after 10 months of treatment.

injections of anakinra. The inflammatory syndrome rapidly recurred (CRP, 120) and resolved on retreatment with anakinra (CRP, 2). The ^{18}F -FDG PET/CT performed 5 months after the beginning of anakinra showed a favorable evolution of metabolic vascular inflammation (Fig 1, C). Finally, after 10 months of treatment, the patient is still free of symptoms, and the CRP remains normal. At that time, PET/CT confirmed the clinical and biological positive response to treatment showing almost complete regression of ^{18}F -FDG vascular uptake (Fig 1, D).

DISCUSSION

The simultaneous occurrence of typical signs of Schnitzler syndrome with aortitis on one hand and its response to treatment with anakinra on the other suggest that aortitis was directly related to Schnitzler syndrome in this patient.

Fifteen percent to 20% of the patients suffering from Schnitzler syndrome will go on to have lymphoproliferative disorder.^{2,4} Here the relapse of Schnitzler features associated with abdominal pain with neither digestive- nor cardiac-demonstrated origin led us to perform ^{18}F -FDG PET/CT. No lymphoproliferative or deep infection was discovered, but large and diffuse aortitis was found. The patient had no other evidence of Horton disease or Takayasu disease. The patient didn't have headaches or arthralgias or visual disturbance; pulses were normal. The clinical

features of aortitis are mostly nonspecific: abdominal pain or general impairment associated with biological inflammatory syndrome.⁵ Whatever the underlying cause, ^{18}F -FDG PET/CT scan is an effective imaging tool for diagnosis and therapeutic management of patients with large-vessel vasculitis.⁶ Aortitis is a severe often life-threatening disease that can lead to severe aneurysm or arterial thrombosis depending on the underlying cause.⁵ Noninfectious aortitis is prevalent and mostly caused by large-vessel vasculitis such as giant cell arteritis or Takayasu disease but also other entities such as Behçet disease or IgG4-related disease.⁵ Behçet disease and Takayasu disease share with Schnitzler syndrome a strong autoinflammatory background.

This observation highlights that performing ^{18}F -FDG PET/CT scan in case of atypical features during relapse or flair of Schnitzler syndrome could be helpful. Like for all other manifestations of Schnitzler syndrome, interleukin-1 inhibition is the treatment of choice.

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