

## Case Report

# Pericarditis Revealing Large Vessel Vasculitis

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Large vessels vasculitis and more specifically, Giant cell arteritis, is characterized by increased inflammatory markers, headaches and altered clinical status. Diagnosis is confirmed by biopsy of temporal arteries showing the presence of granuloma and vasculitis. We hereby report the case of a patient presenting initially as pericarditis and revealing large vessel vasculitis using FDG-PET.

## 1. Introduction

In April 2009, a 63-year-old woman was admitted to our hospital because of a frontal headache that occurred when she woke up. She did not experience nausea or vomiting and was temporarily relieved by acetaminophen. She also complained of precordial chest pain developing, the same morning. The thoracic pain was described as continuous, nonconstrictive, not related to breathing, with no irradiation, and which decreased when she laid down. Her past medical history was marked by a COPD gold II condition, a chronic left arm oedema of undetermined origin, and an appendectomy. Her current medications included an association of fluticasone and salmeterol as well as tiotropium for the COPD. She had been smoking 100 cigarette pack-years, had occasional alcohol consumption, and did not have any known allergy. She had been working as an employee for an administrative district. The initial physical examination revealed a satisfactory general condition and normal vital signs. The only clinical abnormality was the presence of a murmur on the left supraclavicular area.

The first blood test showed an elevation of C-reactive protein at 9.8 mg/dL and a mild normocytic anemia at 11.1 g/dL. The level of T troponin and CK-MB was normal. The electrocardiogram showed normal sinus rhythm and negative T waves of small amplitude in the second precordial derivation. The arterial blood gases were normal as was

the cerebral computed tomography. A computed tomography of the pulmonary artery did not reveal pulmonary embolism but disclosed a circumferential pericardial effusion. A transthoracic echocardiogram confirmed a 300 mL pericardial effusion without hemodynamic repercussions. The patient was managed as an outpatient and treated with 4 grams of aspirin each day for idiopathic pericarditis. After two weeks of this regimen, the inflammatory syndrome failed to subside, and the controlled transthoracic echocardiogram did not show any improvement of the pericardial effusion. During the course of the following days, the patient developed fatigue and was referred to the consultation of general internal medicine. Suspecting giant cell arteritis, <sup>18</sup>FDG-PET was performed because the patient refused the temporal artery biopsy. It revealed striking hypermetabolism of the thoracic and abdominal aortic wall, highly suggestive of large vessel vasculitis (Figure 1). 1 mg/Kg/d of equivalent prednisone was started. The symptoms were resolved over a few days. The pericardial effusion and the inflammatory syndrome subsided. Six months after the beginning of the treatment, the <sup>18</sup>FDG-PET did not show any hypermetabolism in the aortic walls (Figure 1).

## 2. Discussion

This case highlights the importance of recognising pericarditis as a possible initial manifestation of giant cell

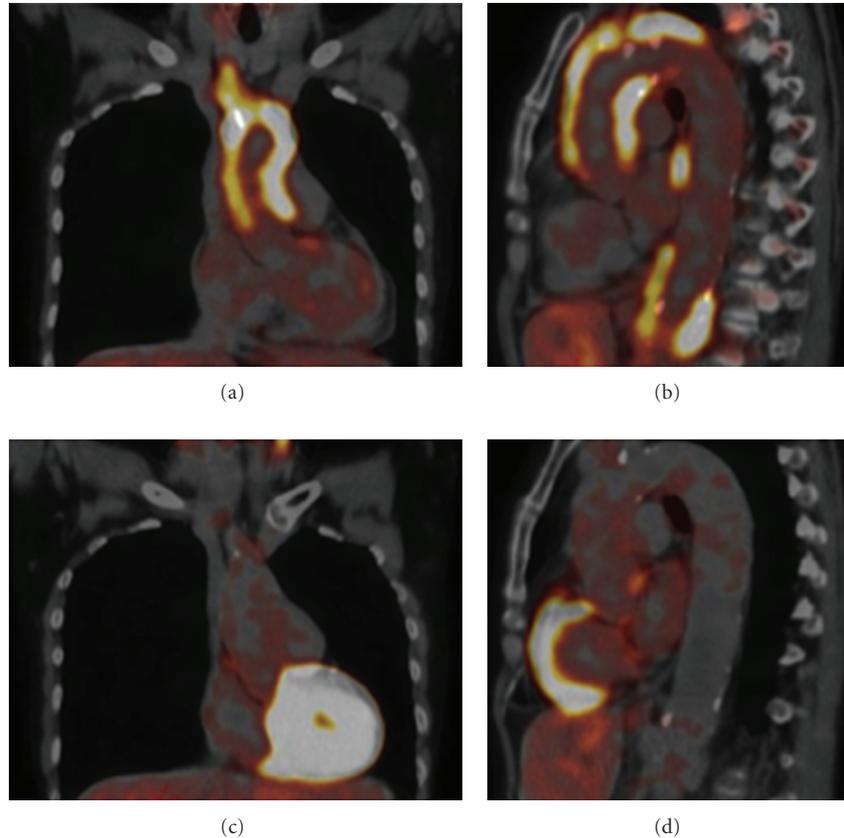


FIGURE 1: (a) and (b): Coronal fused PET/CT (a) and sagittal fused PET/CT (b) through the thorax show increased FDG uptake of the thoracic aortic wall. (c) and (d): Coronal fused PET/CT (c) and sagittal fused PET/CT (d) through the thorax show disappearance of FDG uptake of the aortic wall after six months of treatment.

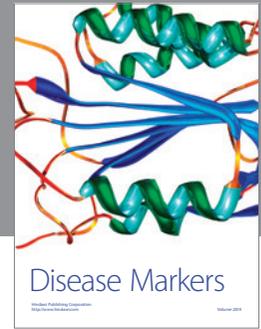
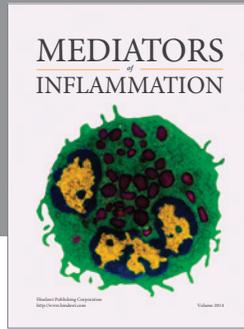
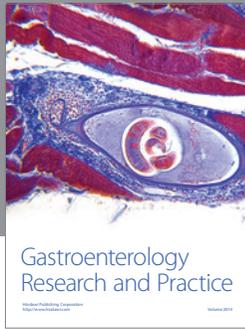
arteritis in patients over 50 years old [1]. It also emphasises the promising role of FDG-PET as a minimally invasive alternative procedure to temporal artery biopsy [2]. FDG-PET can also be used in the followup of patients with giant cell arteritis and seems to identify a subpopulation of patients at risk of developing thoracic aortic dilatation [3]. In the present case, the diagnosis of large vessel vasculitis (and most probably giant cell arteritis) has been made based upon clinical grounds, biological markers, and FDG-PET. In spite of the fact that temporal artery biopsy is mandatory to confirm the diagnosis of giant cell arteritis, FDG-PET can be a very useful tool in delineating the diagnostic process.

## Disclosure

The authors declare that there is no conflict of interests.

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