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POSTER PRESENTATION

A Case with Giant Cell Arteritis: Disease Exacerbation or Atherosclerosis?

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Giant cell arteritis (GCA) is a vasculitis of large and middle-sized arteries that affects patients aged over 50 years. Patients diagnosed with GCA are usually elderly with age >55 years and thus can have underlying atherosclerosis. Atherosclerosis and GCA are two distinct medical conditions with an overlapping clinical spectrum of vascular symptoms such as limb claudication and cardiovascular events. We present a patient in whom the presence of diffuse atherosclerosis is an important pitfall in distinguishing exacerbation of GCA.

CASE PRESENTATION

In December 2013, a 66-year-old male was admitted to our outpatient clinic with a 2-month history of fever and constitutional symptoms such as weakness, fatigue, and weight loss. In his past medical history, he had diabetes mellitus and peripheral vascular disease for five years. He was an ex-smoker and smoked 43 packages/year. He also had a left-sided headache along with difficulty in chewing food for three months and experienced transient visual loss in his left eye one month ago. He was hospitalized with a preliminary diagnosis of GCA. At hospitalization, acute phase reactants were remarkably high (erythrocyte sedimentation rate:60 mm/h and C-reactive protein:7.5 mg/dL). He underwent a color-duplex ultrasound for the evaluation of his symptoms, but it was not showed significant wall thickening of the temporal artery. Computed tomography (CT) angiography examination revealed that wall thickening and irregularity starting from the aortic arch and extending through the suprarenal abdominal aorta, focal dissection at the exit of the left subclavian artery, total occlusion in the celiac trunk, and superior mesenteric artery, moderate stenosis in the inferior mesenteric artery, and atherosclerotic involvement in the bilateral common iliac artery and its branches. To confirm the diagnosis, a left temporal biopsy was done but it resulted in internal lamina calcification. He was examined by an experienced ophthalmologist for ischemic optic changes of GCA and any findings could not be seen. GCA was diagnosed and he was discharged with 60 mg/day of prednisolone with a dose reduction scheme and methotrexate (MTX) 15 mg/week. For the following 8 years, under MTX and 2.5 mg/day prednisolone, ESR and CRP were completely normal and he had no GCA-related complaints/findings.

In July 2021, he presented to the cardiologist with claudication of his legs, especially on left, and effort-induced chest pain for three months. Coronary angiography was performed on the patient because the ejection fraction was 55% and hypokinesis of the anterior septum in echocardiography. Medical treatment was planned for him due to severe stenosis or occlusion of the coronary arteries was not detected. For lower limb claudication, CT angiography examination reported total occlusion starting from the left superficial femoral artery origin, severe stenosis of the right superficial femoral artery, atherosclerotic wall thickening/irregularities, and fusiform aneurysmatic enlargement in bilateral common iliac arteries was revealed (Figure 1). The cardiologist consulted the patient with us to discuss if this condition was due to GCA. He had no fever, headache, jaw/tongue claudication, and vision loss. ESR and CRP were not high and hemoglobulin level was normal.

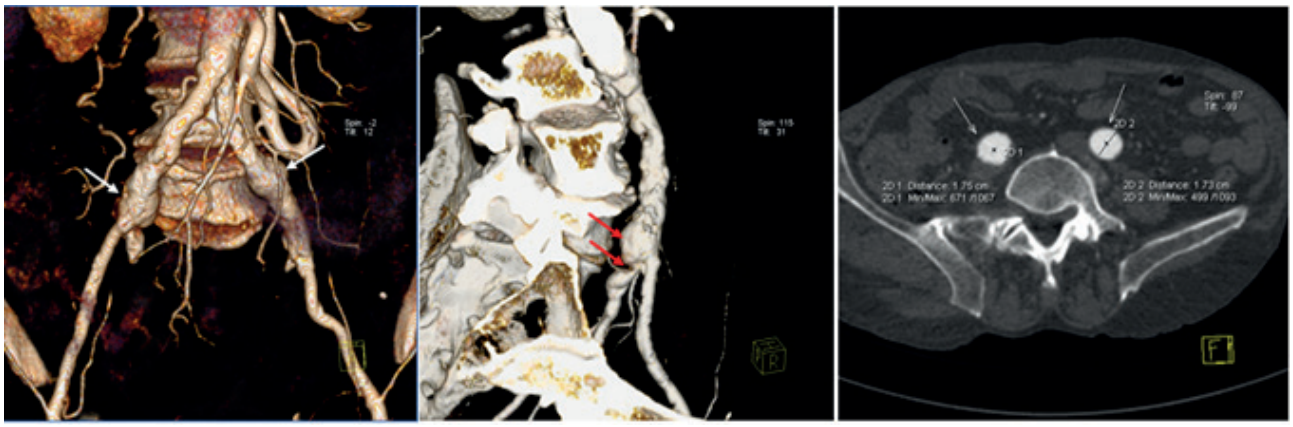

Figure 1. Bilateral common iliac artery aneurysm (anterior view), right common iliac artery aneurysm and subtotal occlusion of the internal iliac artery (lateral view), and vessel wall irregularities and diameter of aneurysms of the common iliac artery (axial view)

After the discussion with the cardiovascular radiologist, MTX and low-dose steroid treatment were continued, considering the lower extremity claudication was due to atherosclerosis. The patient was consulted for vascular surgery and vascular interventional radiology.

DISCUSSION

GCA causes arterial wall inflammation with subsequent arterial stenosis and/or occlusion-induced ischemia leading to similar symptoms as the atherosclerotic vascular disease [1]. A major diagnostic challenge is to differentiate GCA from atherosclerotic disease, which is far more prevalent among patients of a similar age [2]. GCA rarely manifests in the lower limbs and can cause ischemic symptoms [3]. Lower extremity arterial stenosis secondary to atherosclerosis is a common medical condition [4]. In some cases, it may be difficult to distinguish the atherosclerotic disease from vasculitis. Our patient's history of diabetes mellitus and peripheral vascular disease, normal inflammatory marker levels, and CT angiography views led to a diagnosis of lower limb arterial stenosis secondary to diffuse atherosclerosis. In the presence of rapidly deteriorating symptoms, elevated inflammatory markers, paucity of conventional cardiovascular risk factors, or atypical radiological findings for atherosclerosis, the exacerbation of GCA should be carefully considered.

KEY MESSAGES

The patients who are diagnosed with GCA are usually elderly aged>55 years with high-vascular risk and thus can have underlying atherosclerosis.

A careful medical history, measurement of biomarkers of inflammation, and appropriate imaging studies can be helpful in distinguishing atherosclerotic disease from vasculitis.

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