

Treatment of mesenteric angina in patients with Takayasu's arteritis

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ABSTRACT

Takayasu's arteritis (TA) is an idiopathic chronic inflammatory disease of the connective tissue that affects mainly the aorta and its branches. Treatment is mainly based on corticosteroids and immunosuppressants. We report the case of a 33-year-old female complaining of malaise, fever, myalgia, severe pulsing holocranial headache resistant to analgesics, systemic arterial hypertension hard to control, right lower limb claudication, and severe abdominal pain that worsened after the meals. Angiotomography revealed aneurysm of the ascending aorta, and stenosis of the following vessels: right common iliac artery, renal arteries, and superior mesenteric artery. Those findings supported the diagnosis of mesenteric angina and the interventional approach by use of percutaneous transluminal angioplasty with stent placement.

Keywords: Takayasu's arteritis, percutaneous transluminal angioplasty, abdominal pain.

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INTRODUCTION

Takayasu's arteritis (TA) is an idiopathic chronic inflammatory disease of the connective tissue, sometimes focal, affecting mainly the aorta and its branches. It has universal distribution and a greater incidence among Asians and women up to the fourth decade of life.¹ Typical vascular findings include pulse reduction or even absence; difference in blood pressure values between the upper limbs; claudication; systemic arterial hypertension (SAH) hard to control; pain in the area of the affected arteries, in addition to murmurs in the areas of chronic inflammation, or stenosis of large and medium vessels. From the histopathological point of view, TA is characterized by a granulomatous inflammation that leads to atrophy of the tunica media and hypertrophy of the tunica intima. It usually manifests as stenotic lesions of sudden installation. Aneurysms are less often reported. The clinical manifestations are varied and depend on the affected site. The incidence of mesenteric angina is rare.²

Treatment is mainly based on corticosteroids and immunosuppressants, since some observational studies have

reported that patients with TA respond to corticosteroids, methotrexate (MTX), azathioprine (AZA), and cyclophosphamide.¹ The introduction of biological therapy brought a new perspective to TA treatment, despite the reduced number of patients already treated.

Drug therapy prevents disease progression, but the already established vascular lesions do not respond properly, representing, thus, a challenge to treatment. In this scenario, percutaneous transluminal angioplasty with stenting is a useful therapeutic strategy, despite restenoses.³

CASE REPORT

The patient is a 33-year-old female complaining of malaise, fever, myalgia, severe pulsing holocranial headache resistant to analgesics, SAH hard to control, right lower limb claudication, and severe abdominal pain that worsened after meals. Blood pressure in the right upper limb was 180 × 60 mmHg, while, in the left upper limb, it was 100 × 60 mmHg. The physical examination was within the normal range except for a systolic murmur heard on the aortic area and territory of the left brachial artery.

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Figure 1
Multislice computed tomography. (A) Aneurysm of the ascending aorta, stenosis of the right iliac artery and of the renal arteries. (B) Stenosis of the right renal artery.

The following exams showed no significant alterations: amylase; lipase; stool test for parasites; chest radiography; and abdominal ultrasound. Echocardiography evidenced aneurysmal dilation of the ascending aorta. Angiotomography revealed aneurysm of the ascending aorta and stenosis of the following vessels: right common iliac artery, renal arteries, and superior mesenteric artery. Aiming disease control, prednisone at the dose of 1 mg/kg/day was introduced.

Multislice computed tomography showed aneurysm of the ascending aorta, and stenosis of the right common iliac artery and of the renal arteries (Figures 1A and 1B).

Based on the angiotomographic findings and clinical repercussions, percutaneous transluminal angioplasty was performed and stents placed in the following vessels: right common iliac artery, both renal arteries, and superior mesenteric artery. The angiography prior to angioplasty had shown stenosis of the celiac trunk and superior mesenteric artery (Figure 2A), in addition to stenosis of the right common iliac artery. The final angiographic control showed the improvement in vascularization after stent placement (Figure 2B).



Figure 2
Angiography. (A) Angiography prior to transluminal angioplasty. (B) Final control after transluminal angioplasty.

DISCUSSION

The angiotomographic finding of stenosis of the superior mesenteric artery in association with persistent abdominal pain supported the interventional approach by use of percutaneous transluminal angioplasty and stenting. Although restenosis has been reported,³ percutaneous revascularization is a consistent alternative, which has a better prognosis when the disease is clinically controlled. Clinical follow-up should be extended over a prolonged period, mainly because of the small number of cases reported.³

Atherosclerosis is the most common cause of mesenteric ischemia;² thrombophilias and primary vasculitis constitute the less frequent causes.⁴ Impairment of the superior mesenteric artery in patients with TA represents, *per se*, a factor of poor prognosis, because its course can be fulminant and refractory to clinical or surgical treatment.² Dreadful consequences of mesenteric ischemia are mesenteric infarction, sepsis, and death.^{2,4}

Although not frequent, it is worth considering mesenteric angina in all patients with TA complaining of abdominal pain, mainly if that worsens after meals.⁴ Angiography is a direct imaging technique that allows assessing vessel impairment.⁵ However, angiotomography is a non-invasive diagnostic alternative. The ideal treatment is corticotherapy at full doses. In the presence of stenosis with marked flow reduction, stenting should be performed, and preferentially during disease inactivity, when the technique is associated with more favorable results.⁶

Recent studies have highlighted percutaneous angioplasty as an effective and long lasting method to treat stenosis triggered by primary vasculitis.^{7,8} The restenosis index ranges from 20% to 44%.^{3,7} Such complication, however, can be approached with a new endovascular intervention without significant complications.⁷ The open revascularization technique is also a therapeutic possibility with good long-term results.⁸