INTRODUCTION

Takayasu arteritis is a rare chronic inflammatory arteritis of large and medium-sized arteries, a panarteritis with intimal proliferation. This granulomatous panarteritis predominates in women, typically before the age of 40s, with an up to 10:1 ratio for female-to-male. The aorta may be involved throughout its entire length and, even though any of its branches can be diseased, the most commonly affected are the subclavian and the common carotid arteries. The pulmonary arteries are involved for up to 50% of patients, much less being described the critical coronary lesions and the major aortic regurgitation.

Coronary disease is often asymptomatic, as illustrated by the identification of silent myocardial injury for 27% of patients. Myocardial perfusion defects were present in 53% of the cases, while intra-arterial angiography has shown that the coronary artery lesions typically affected the ostia and proximal segments for up to 30% of the cases.

There are important limitations in Takayasu arteritis, sometimes the endovascular or surgery treatment involving a higher risk, due to diffuse calcifications. The care of patients with TA requires a team approach that includes clinicians familiar with the proper use of immunosuppressive therapies, vascular imaging and intervention specialists and, in the setting of critical stenosis or aneurysms, cardiovascular surgeons. For most patients, medical and surgical therapies provide important palliation.

CASE REPORT

We present the case of a 49 years old woman diagnosed with Takayasu arteritis (type VC) who was referred to our service for the first time five years ago, for stable angina and effort dyspnea. At that time, the echocardiography showed normal left ventricular function and minimal aortic regurgitation, with no critical coronary lesions detected at invasive coronary angiography examination, but with multiple and diffuse arterial calcifications specific for Takayasu arteritis. According to the American College of Rheumatology classification criteria, at 34 years old the patient was diagnosed with Takayasu arteritis based on: the age younger than 40 years old, the chronic nature of the illness, the bilateral) arterial involvement, and the symmetrical arterial involvement. The patient was treated with corticosteroids and immunosuppressive therapies, with partial improvement of the symptoms and stabilization of the disease.

Keywords: Takayasu arteritis, prognostic, coronary lesions, case report.
years at disease onset, claudication of the extremities, decreased pulsation of both brachial arteries, difference more than 10 mmHg in systolic blood pressure between arms and arteriographic narrowing of the primary branches of the aorta and large arteries in the upper extremities that is not due to arteriosclerosis, fibromuscular dysplasia, or other causes. The presence of these criteria yields a sensitivity of 90.5% and a specificity of 97.8%.

At this visit, the patient had 15 years since she was diagnosed with Takayasu arteritis. When she was initially diagnosed with this large-vessel vasculitis, she complained of other constitutional symptoms such as fatigue, malaise and giddiness without other clinical complications. Because she had only a mild form of Takayasu arteritis, she didn’t require a long term corticosteroid treatment. She had a good response to initial corticosteroid therapy, without relapses and prednisone was administered only for 2 months, until the constitutional symptoms disappeared.

Under medical treatment (rilmenidinum 1 mg/day, amlodipinum 20 mg/day, atorvastatinum 40 mg/day, clopidogrel 75 mg/day), the patient’s evolution was uneventful for 4 years and 9 months, then she presented unstable angina and heart failure symptoms. At this time, the electrocardiogram showed normal sinus rhythm and her blood results showed no significant changes. A transthoracic echocardiogram demonstrated a normal left ventricular ejection fraction of 50%, mild aortic insufficiency, without dissection of the ascending aorta and aortic arch. This time, the coronary artery CT examination revealed an important evolution.

Figure 1. Left main (LM) and right coronary artery (RCA) pre and post PTCA with stent. A – subocclusion of LM. B – ostial subocclusion of RCA. C – PTCA with stent on LM. D – PTCA with stent on RCA.
on of coronary lesions (diffuse non-obstructive coronary lesions), especially on the right coronary artery and on the left anterior descending coronary artery. The endovascular or surgery treatment for coronary disease and aortic regurgitation were discussed, with the consensus for medical treatment, considering the presence of a very high operatory risk.

After only 3 months, the patient has presented for acute coronary syndrome with increased level of troponin. The coronaryographic control revealed a subtotal occlusion of the left main coronary artery (LM) and right coronary artery (RCA) (Figure 1). Even though, for other cases the solution has been the CABG, the surgery was not indicated in this case, considering the impossibility of the aorto-coronary anastomoses due to the calcified arterial lesions. Thus, in this situation, we limited to an interventional treatment, considering the fact that the patient was also in an inactive stage of Takayasu arteritis. After selective intubation of the left main trunk ostium with a JL 4 SH guide catheter, we cross the stenosis area and successfully predilatation with a 3.0/15 mm balloon at 20-22 atm, with difficult dilatation of the ostia due to severe calcifications. We implant a pharmacologically active 4.0/13 mm stent at 18 atm, post dilated with the same balloon at 22 atm, yielding the regression of the lesion from 95% to 0%. In the same procedure, we implant a pharmacologically active 40/22 mm stent in the right coronary artery, reducing the degree of stenosis from 95% to 0% (Figure 1).

After the myocardial revascularization, the patient was hemodynamically stable, without angina or arrhythmic events and was discharged home after five days. We began the chronic treatment with high dose of atorvastatin 80 mg/day, beta blocker, angiotensin converting enzyme inhibitor and double antiplatelet agents. The one year follow-up of the patient showed a good evolution, without angina or dyspnoea.

**DISCUSSION**

This case report represents an important diagnosis and treatment challenge for clinical practitioners, because of the severity and complex coronary lesions and important treatment limitations. The endovascular or surgical treatment for coronary disease and aortic regurgitation involved a very high risk, determined by important and diffuse fibrotic or calcification lesions of the aortic or coronary arteries. Another particularity of this case is the rapid evolution of the coronary artery lesions, involving the left coronary main.

Afterwards, it is important to underline the limits of surgical treatment in this situation, the “in extremis” choice being the percutaneous transluminal coronary angioplasty of the left main coronary artery and right coronary artery, with all the major risk induced by this procedure.

**Conflict of interests:** none declared.

**References:**