Case report

Celiac disease in 3 patients with Takayasu's arteritis

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ABSTRACT

Takayasu's arteritis (TA) is a chronic vasculitis of unknown etiology. Celiac disease (CD) is an autoimmune disease caused by the ingestion of gluten. TA and CD have been associated with many other autoimmune conditions. However, only five cases with this association have been reported. In this series, three patients with TA and CD were included; all were female, 21, 30 and 54 years old. TA clinical manifestations preceded CD diagnosis in all patients. Aortic arch branches were affected in all of them. Serologic markers were positive and a small intestine biopsy showed typical findings of CD in the three patients. Special attention should be given to this possible association because these entities may be asymptomatic; the recognition of new disease variants modifies treatment, and sometimes CD constitutes a differential diagnosis of mesenteric ischemia.

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Introduction

Takayasu’s Arteritis (TA) is a vasculitis of unknown etiology which affects the aorta and its branches. Celiac disease (CD) is an autoimmune disease caused by exposure to gluten. There are only 5 cases currently described with the association of these diseases.

The objective of these report is to describe the characteristics of three patients with both diagnoses.

Clinical observation

Case 1

A 21-year-old female patient was diagnosed with TA in 1995. She came to the clinic with joint pain and claudication of the upper left extremity, which had lasted for 4 months. Upon examination she had
no left radial pulse and aortic insufficiency. A Digital Angiography (DA) showed findings typical of TA (Table). After no improvement with treatment based on prednisone, a left primitive carotid artery angioplasty was performed and was treated with aspirin and methotrexate, showing clinical improvement. In 2009 she presented diarrhea lasting 4 weeks and accompanied by abdominal pain. An abdominal magnetic resonance angiography showed no alterations; immunoglobulin A anti-endomyosium antibodies were positive and a duodenal biopsy showed diffuse atrophy of the villi and a dense inflammatory infiltrate of the lamina propria. A gluten-free diet was indicated and clinical improvement ensued.

Case 2

A 30-year-old female patient was diagnosed with TA in 1998 after presenting an ischemic stroke at age 19. In 2005 she presented weight loss, headache and claudication of the left upper extremity. Upon examination, no radial pulses were found. A DA was performed which showed supra-aortic vessel stenosis (Table). Treatment with prednisone and aspirin was started. 6 months after the initial visit she presented diarrhea which had lasted for 5 months. An abdominal magnetic resonance angiography was performed and no vascular alterations were seen; anti-endomyosial IgA was positive and duodenal biopsy revealed an inflammatory lesion with complete villous atrophy. She underwent treatment with gluten free diet and showed clinical improvement.

Case 3

A 54-year-old female patient, who had an ischemic stroke at age 26, was diagnosed with CD at age 46. She presented fatigue and headache in 2009. Upon examination she presented a diastolic murmur with maximum intensity in 2nd intercostal space, right parasternal line. Absence of left radial pulse and BP 130/0 mmHg. A DA showed changes typical of TA (Table). A biopsy of both temporal arteries was performed to rule out temporal artery inflammation; this situation favors the interaction between TL and antigens. Due to this, recognition of an exogenous antigen similar to a vascular tissue component in predisposed patients (due to a lack in immune tolerance mechanisms) could unleash an inappropriate immune response against blood vessels. However, with the data presented a casual relationship between these entities may not be established and even less if such physiopathological speculation is real.

Conclusions

The presentation of this series may result useful because, if this association were real, recognizing the presence of one or the other in patients with TA or CD would allow the reduction in diagnostic and modify the therapeutic approach.

References


