

[EDITORIAL]

The Diagnosis and Management of Vasculo-Behçet's Disease

Ryusuke Yoshimi

Key words: Behçet's disease, vascular involvement, aneurysm

(Intern Med 58: 3-4, 2019)

(DOI: 10.2169/internalmedicine.1657-18)

Behçet's disease is a chronic, relapsing systemic autoimmune-inflammatory disease characterized by four main symptoms of recurrent oral aphthous ulcer, genital ulcer, cutaneous manifestations, and ocular symptoms. Although the cause of Behçet's disease is still unknown, it is speculated that environmental factors, such as oral bacteria, and a genetic predisposition, including human leukocyte antigen (HLA)-B51, are combinedly involved in the pathogenesis. The Behçet's disease diagnostic criteria established by the Ministry of Health, Labor and Welfare are used for the diagnosis in Japan (1), but several diagnostic and classification criteria, including the International Study Group diagnostic criteria, have been proposed worldwide (2).

Behçet's disease sometimes causes vascular involvement. Lesions occur in both the venous and arterial systems. Deep venous thrombosis is included among the venous lesions of vascular involvement. Superficial thrombophlebitis, which frequently appears in Behçet's disease, is categorized as a cutaneous manifestation (1). Primary varicose veins in the lower limb are not classified as vascular involvement even though they are found in patients with Behçet's disease. Arterial lesions include aneurysmal and occlusive lesions. The aneurysms seen in Behçet's disease often show a saccular shape. Patients are diagnosed with vascular-type Behçet's disease, or vasculo-Behçet's, when they satisfy the complete or incomplete type of the diagnostic criteria of the Ministry of Health, Labor and Welfare and provided the lesion is confirmed in the aorta, small artery, or large or small veins clinically and on imaging studies.

The incidence of vascular involvement ranges from 6.3-15.3% according to epidemiological studies and clinical studies in Japan (3). Severe cases, especially those with pulmonary aneurysms, are most common among younger men. According to a study by the research group of the Ministry of Health, Labor and Welfare, the distribution of vascular lesions is around 70% for venous thrombus, 20% for aneurysm and 19% for pulmonary embolism, followed by arterial obstruction, pulmonary aneurysm and cardiac lesions. Bleed-

ing from the pulmonary aneurysm, rupture of the aneurysm and cardiac lesions are often lethal. The average period from the diagnosis of Behçet's disease to the onset of vascular involvement is about seven years. Vascular lesions exist in around 26% of patients at the time of the diagnosis and precede the diagnosis of Behçet's disease in 2% of patients with vascular-type disease (3).

Surgery should be avoided for arterial lesions in the acute phase of inflammation whenever possible due to frequent postoperative complications, including the formation of new aneurysm and recurrence (4). Immunosuppressive therapy should be prioritized over surgical operations. However, emergency surgery is indicated in cases of impending aneurysm rupture or bleeding from vascular lesions. Of note, even with intravascular treatment, postoperative recurrence of aneurysm at the origin of the stent has been reported. Pre- and post-operative immunosuppressive therapy should be performed with not only surgical operation but also intravascular treatment (5).

High-dose glucocorticoid therapy (prednisolone 1 mg/kg/day) is usually performed in the acute phase of aneurysm and pulmonary aneurysm, and methylprednisolone pulse therapy (1,000 mg intravenous infusions daily for 3 days) should also be considered in severe cases (6). Prednisolone should be tapered on confirmation of the improvement of symptoms (3). Since immunosuppressants have been reported to improve the outcome, cyclophosphamide pulse therapy, methotrexate, azathioprine and cyclosporine are also used in combination with glucocorticoids. Biologics have also been shown to have efficacy against vascular-type disease in case reports. Many reports have described the effectiveness of infliximab (7), and it has been approved for the treatment of vascular-type Behçet's disease under the Japanese public health insurance system.

The abdominal aorta is the most common site of aneurysm in Behçet's disease, while the ulnar, celiac, subclavian, left anterior descending, tibioperoneal, iliac and superior mesenteric arteries have been reported as rare sites of aneu-

rysm (8). Kakehi et al. reported a new-onset case of Behçet's disease with aneurysmal lesions in the superior mesenteric artery (9). The patient was accompanied by upper abdominal pain in addition to oral aphtha, genital ulcers and folliculitis-like rashes. Contrast-enhanced computed tomography was useful for making a diagnosis of lesions in the superior mesenteric artery, and glucocorticoid therapy has been shown to be successful. In this case, the patient was diagnosed with both incomplete-type and vascular-type Behçet's disease simultaneously. If unexplainable abdominal pain occurs in patients with Behçet's disease, as with this case, we must suspect the possibility of vascular lesions as well as intestinal lesions.

Even in cases that do not meet the diagnostic criteria of Behçet's disease, vascular involvement is sometimes already present, and the patients meet the diagnostic criteria at a later date. In such cases, revascularization tends to be performed easily, and aneurysms often occur in the anastomotic sites at a later date. Even when a patient does not satisfy the diagnostic criteria of Behçet's disease, it is necessary to be cautious about surgical and intravascular treatments if findings suggestive of Behçet's disease, such as the coexistence of oral and genital ulcers, are observed.

The author states that he has no Conflict of Interest (COI).

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