Demonstration of the disease activity by serial carotid artery ultrasonography, magnetic resonance imaging and 18-fluoro-deoxyglucose positron emission tomography in a Behçet’s disease patient with carotid artery stenosis

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A 24-year-old female with repeated histories for 6 months of genital ulcer, folliculitis, and oral aphthous ulcers discovered a bruit from right side of her neck by herself. Although carotid ultrasonography and three-dimensional computed tomography demonstrated a diffuse thickening of the intima-media complex in the right common carotid artery (CCA) (Panel A1, blue arrows) and a 75% stenosis of right pre-bulbar CCA (Panels A1–A3, white arrows), she had no symptoms associated with brain ischaemia. There were no other stenotic or aneurysmal lesions in her vasculature. The erythrocyte sedimentation rate of 16 mm/h and C-reactive protein of 0.04 mg/dL were not elevated. Because of no clinical evidence suggestive of temporal arteritis, IgG4-related pathology, and infectious vascular disease, she was diagnosed with Behçet’s disease. A non-contrast T1-weighted MRI delineated characteristics such as homogenous wall thickening with stenosis and signal hyperintensity in the vessel wall of the right CCA (Panel B1). 18-Fluoro-deoxyglucose positron emission tomography with co-registered MRI demonstrated an intense accumulation of FDG within the CCA lesion (Panels B2 and B3, red arrows). Systemic corticosteroid-pulse therapy was duplicated for the patient. Thereafter, colchicine of 0.5 mg daily was continued for 1 year. Serial carotid ultrasonography indicated that the increased intima-media complex of right CCA gradually reduced over a 4-year period (Panel C1–C4). Magnetic resonance imaging and FDG-PET with co-registered MRI demonstrated that the wall thickening with stenosis, signal hyperintensity, and intense FDG accumulation in the CCA lesion were resolved in the same patient after treatment with corticosteroid and colchicine (Panel B4–B6). To date, the patient remains well without recurrence.