


Images in Rheumatology

Multiple Aneurysms in Granulomatosis With Polyangiitis

Eisuke Takamasu , MD, Department of Rheumatic Diseases, Tokyo Metropolitan Tama Medical Center, Fuchu; So Hattori, MD, Department of General Medicine, Mito Kyodo General Hospital, Mito; Naoto Yokogawa, MD, Department of Rheumatic Diseases, Tokyo Metropolitan Tama Medical Center, Fuchu; Kota Shimada, PhD, Department of Rheumatic Diseases, Tokyo Metropolitan Tama Medical Center, Fuchu, Japan. Address correspondence to Dr. E. Takamasu, Department of Rheumatic Diseases, Tokyo Metropolitan Tama Medical Center 2-8-29, Musashidai, Fuchu 183-8524, Japan. Email: e.t.masuo.369@gmail.com. The authors declare no conflicts of interest relevant to this article. The Tokyo Metropolitan Tama Medical Center ethics committee approved the protocol and informed consent was obtained using an opt-out approach.

Systemic multiple aneurysms are rare findings in granulomatosis with polyangiitis (GPA).¹

A 66-year-old woman presented with generalized, subcutaneous nodules and a right leg ulcer of 1-month duration. She had a history of multiple pulmonary nodules, initially diagnosed as lymphomatoid granulomatosis, for which she had received prednisolone therapy until 8 years ago. Her serum creatinine and urinalysis findings were normal. Proteinase 3–antineutrophilic cytoplasmic antibody level was 5.7 U/mL (reference range: 0–3.5 U/mL). Computed tomography (CT) of the chest demonstrated pulmonary nodules and 3-D CT angiography (CTA) showed aneurysms in the branches of the celiac and superior mesenteric arteries. 3-D CTA of the head demonstrated anterior and middle cerebral artery aneurysms (Figure 1A). A skin biopsy of the lesions and a review of a previously performed lung biopsy found fibrinoid necrosis with vasculitis and granuloma (Figure 2). Based on these findings, GPA was diagnosed. Treatment with systemic glucocorticoids and rituximab was begun. At a 1-year follow-up visit, the patient's symptoms had improved, and the brain artery aneurysms had almost disappeared in 3-D CTA (Figure 1B). Although aneurysms of medium-sized vessels have been reported in GPA, these rarely occur in the cerebral arteries, and treatment is essential to prevent their rupture.²

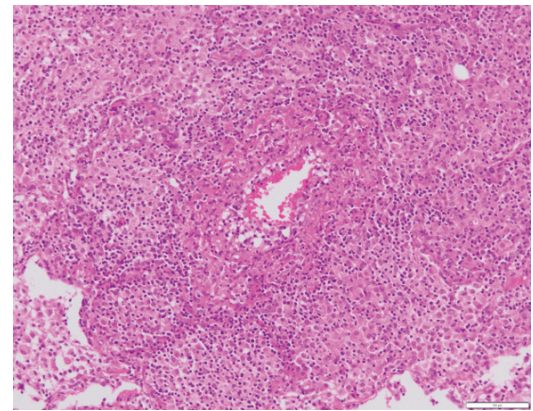


Figure 2. Left lung lower lobe biopsy demonstrating necrotizing vasculitis with fibrinoid necrosis and adjacent granuloma formation.

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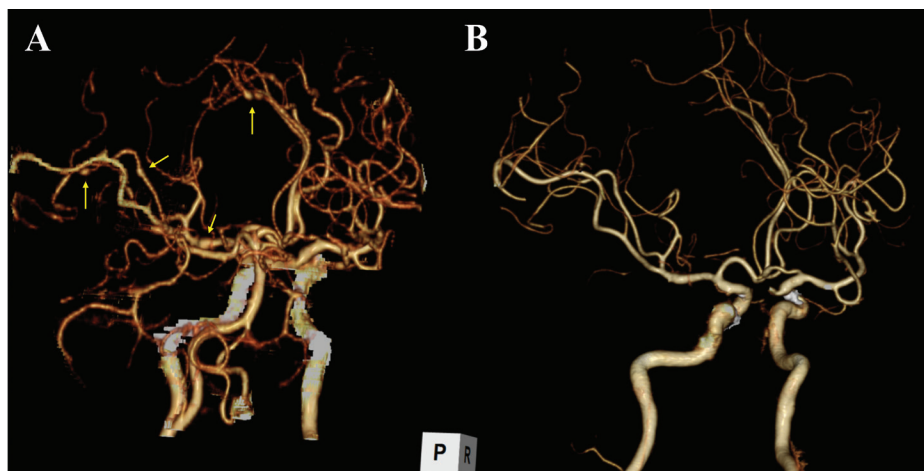


Figure 1. 3-D CTA of cerebral arteries. (A) 3-D CTA shows multiple aneurysms (arrows) in cerebral arteries before treatment. (B) The aneurysms disappeared after 1-year treatment. CTA: computed tomographic angiography; P: posterior; R: right.