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BRIEF COMMUNICATION

Takayasu's Arteritis Presenting as Monocular Visual Loss

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1. Introduction

Takayasu's arteritis (TA), a rare and lethal disease, always involves the aorta and its branches.[1] TA may present with hypertension, pulseless extremities, heart failure, and death.[2] Loss of monocular vision as the first manifestation of TA is uncommon.

We herein report the case of a 13-year-old girl who presented with progressive monocular visual loss, pulseless extremities, and claudication. Systolic blood pressure (SBP) varied by 100 mmHg between her upper and lower limbs. Brain magnetic resonance imaging (MRI) and cardiovascular angiography clearly delineated the extent of the involved vascular territory. A combination of steroid, antiplatelet, and immunosuppressant therapies greatly improved her condition.

2. Case Report

A previously healthy 13-year-old girl had intermittent claudication, dizziness, and blackout of the right eye for 2 months. She was transferred to a medical center for sudden loss of right eye vision (REV) and partially impaired left eye vision (LEV). A fundoscopic examination showed scattered hemorrhages with cotton-wool spots, venous engorgement, and angiogenesis on disks (Figures 1A-a and 1A-b). Fluorescein angiography demonstrated venous dilation and microaneurysms (left > right; Figures 1A-c and 1A-d). A visual field test revealed little preservation of central and peripheral REV (Figures 1A-e and 1A-f), and focal loss of peripheral LEV, which suggested vasculitis. Her blood pressure, temperature, heart rate, and respiratory rate were 50/30 mmHg, 36.5°C, 109 beats/min, and 20 breaths/min, respectively. She was ambulatory without any remarkable skin lesions. Heart sounds were regular and quick. Right carotid bruits

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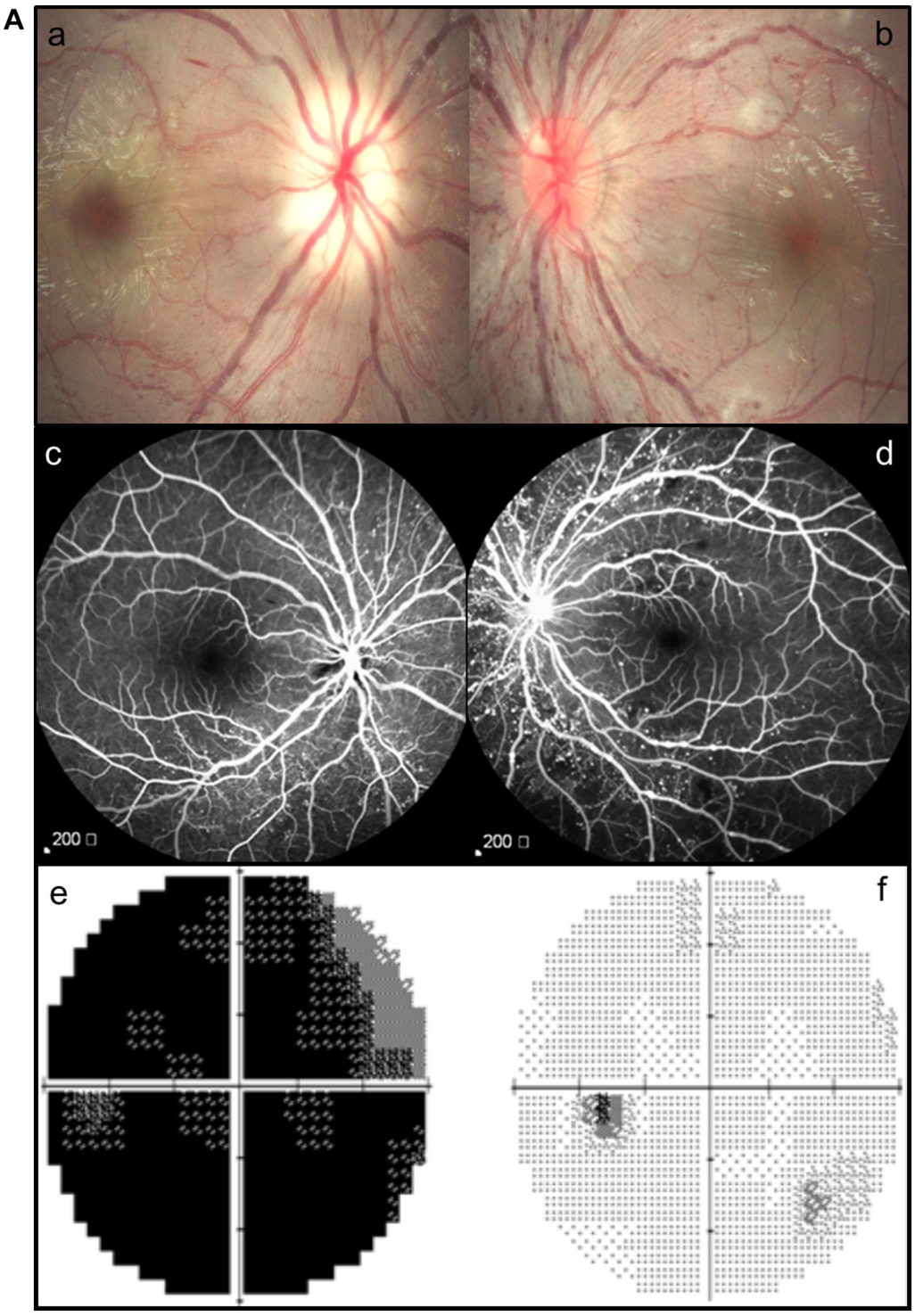

Figure 1 (A) Ophthalmologic investigations suggesting underlying vasculitis. (a, b) Fundoscopic examination of the eyes (a, OS; b, OD) showed scatter hemorrhages with cotton-wool spots, venous engorgements, and angiogenesis on the disk. (c, d) Fluorescein angiography demonstrated venous dilation and microaneurysms (c, OS; d, OD). (e, f): The visual field test revealed significant loss of central vision, and scarcely preserved partial peripheral vision in the right eye (OD). There was only focal loss of peripheral vision in the left eye (e, OS; f, OD). OD = oculus dexter; OS = oculus sinister. (B) Imaging studies of a patient with Takayasu's arteritis. (a) Magnetic resonance imaging of the brain: T2 weighted (marked as 1) and fluid-attenuated inversion recovery (marked as 2) showed several high-density lesions over bilateral subcortical white matter. Diffusion weighted imaging (marked as 3) and apparent diffusion coefficient (marked as 4) suggested small lacunar infarctions. (b) Magnetic resonance angiography (MRA) of the brain shows a disappeared left internal carotid artery and bilateral ophthalmologic arteries. (c, d) MRA of the neck displayed no blood flow in the bilateral common carotid arteries (CCAs). Collateral network vessels were supported between vertebral arteries (VAs) and CCAs. (e, f) Aortic angiography confirmed total occlusion over the left subclavian artery as well as severe stenosis over the distal brachiocephalic trunk and left CCA. Right VA mainly supported circulation in the brain.