

Alternating Amaurosis Fugax in Trousseau Syndrome: A Case Report

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Amaurosis fugax (AmF) is defined as transient monocular visual loss secondary to retinal ischemia. In most patients presenting with AmF, the attack of visual loss occurs in the same eye. A 64-year-old woman experienced transient visual loss in her right eye. Three days after that, an attack happened on the left side. In total, she had 5 episodes of AmF in 2 months. AmF occurred on both sides at different times, and so may be referred to as "Alternating AmF". Diffusion-weighted magnetic resonance imaging showed high-intensity lesions in various parts of brain, and laboratory examination revealed elevated D-dimer and ovarian tumor marker. We suspected Trousseau syndrome and found a giant ovary tumor. After removal of the tumor, no recurrence was observed. When a patient with alternating AmF is encountered, screening for malignancy is essential.

Key Words: Alternating Amaurosis Fugax—Trousseau syndrome—hypercoagulability—elevated D-dimer

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Case Report

A 64-year-old woman with a history of hypertension experienced alternating transient visual loss. About 2 months earlier, she had a blackout of the right eye for the first time. Three days later, the left side was affected. This time, the visual loss was partial, as if enveloped in mist. These attacks lasted a few minutes and during the attacks she lost whole or partial vision. Finally, she had 5 "alternate" AmF episodes. She had already consulted an ophthalmologist, who found no abnormalities.

On presentation, no abnormal findings were seen in physical or neurological examination. Diffusion-weighted magnetic

resonance imaging (MRI) showed multiple high-intensity microlesions in the bilateral cerebrum and cerebellum (Fig 1A). Magnetic resonance angiography revealed no abnormalities (Fig 1B). There were no remarkable findings in carotid ultrasonography. Moreover, we did not detect any embolic sources or right-to-left shunt by transthoracic and transesophageal echocardiography. Laboratory examination indicated markedly elevated D-dimer (24.2 $\mu\text{g}/\text{mL}$) and serum CA125 (94 units/mL; normal range, 0-35 units/mL). Pelvis MRI revealed a right giant ovarian tumor (Fig 1C). Finally, we diagnosed Trousseau syndrome due to ovarian tumor. Unfractionated heparin was started and hysterectomy including the right ovary was performed. The pathologic diagnosis was clear cell adenocarcinoma (Fig 1D). After the operation, chemotherapy was started to prevent metastasis and recurrence of the tumor. The level of both D-dimer and serum CA125 returned to normal. The chemotherapy was finished in 6 months. She had no recurrence for more than 4 years.

Discussion

Amaurosis fugax (AmF) is defined as transient monocular visual loss secondary to retinal ischemia,¹ which is believed to be due to macrothrombi originating from an

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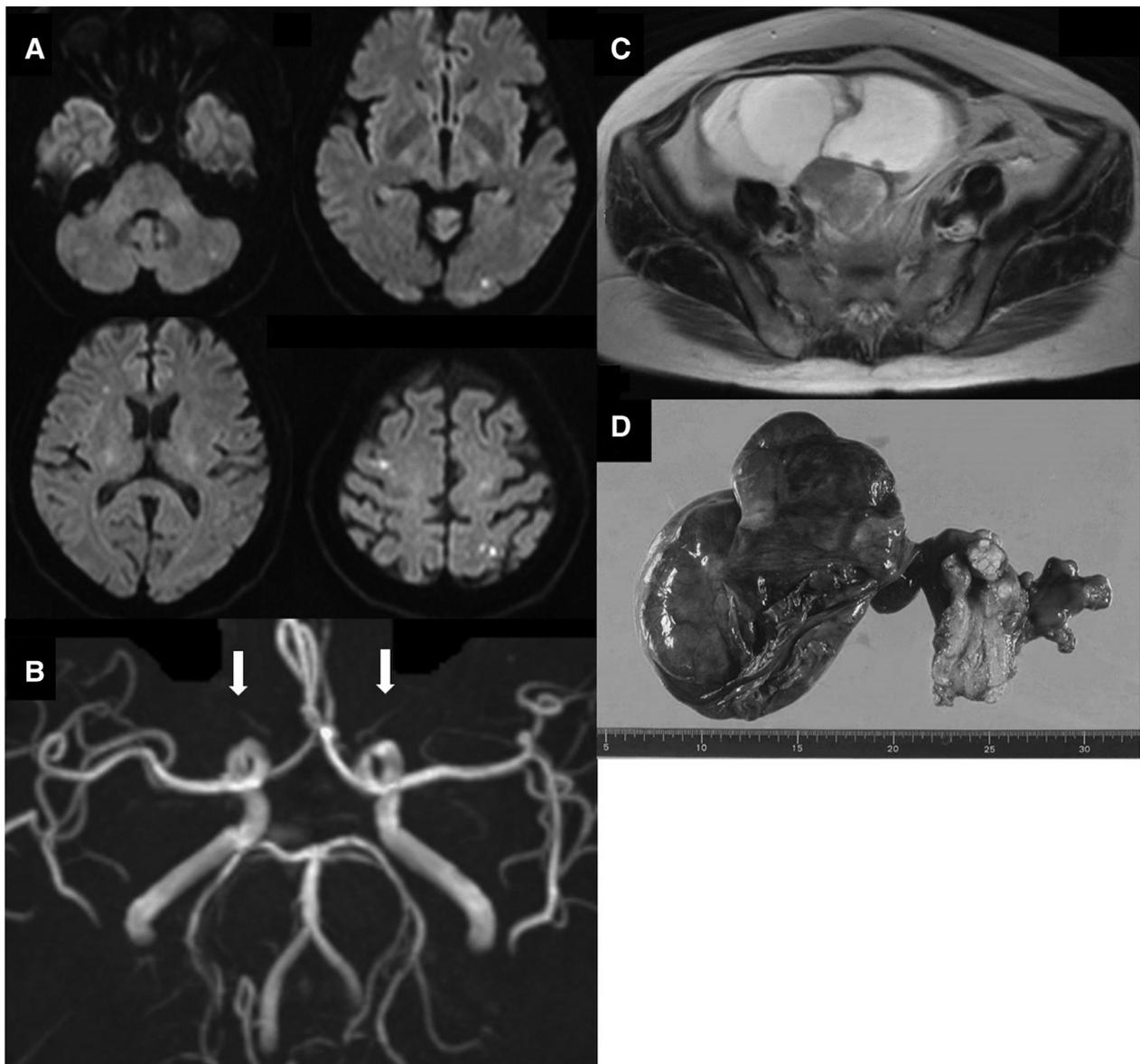


Figure 1. (A) Head MRI DWI: Multiple small infarctions are identified in the bilateral cerebral and cerebellar territories. (B) Head MRA: No abnormality is observed. Both ophthalmic arteries (arrows) are also visualized. (C) Pelvis MRI T2-weighted image: A solid right ovarian tumor is identified. (D) Macroscopic finding: Resected ovarian cancer (600 g). The microscopic diagnosis was clear cell adenocarcinoma.

atheromatous lesion of the ipsilateral carotid artery.² In cases of AmF, the visual attack normally occurs from the same vascular lesion.³

Trousseau syndrome is defined as a variant of intravascular thromboembolism due to malignancy.⁴ Currently, it is known that Trousseau syndrome is caused by tumor-induced hypercoagulability.⁵ Histologically, mucin secreted into the blood is associated with hypercoagulability so that any mucin-secreting tumor, especially adenocarcinoma, can be the cause of Trousseau syndrome.⁶ From the perspective of MRI, thromboembolic lesions are commonly involved in 3 or more vessel territories, as in our case.⁷ However in this patient, all of them were asymptomatic; the sole symptom was

alternating AmF. There is only 1 previously reported case referred to as alternating AmF, in a patient diagnosed with giant-cell arteritis.⁸ Thus, the mechanism was different from that in the present case. We should engrave in our minds that Trousseau syndrome may induce alternating AmF and screening for malignancy is essential.

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