Title: Etiology of a Secondary Headache: Ophthalmic Artery Aneurysm

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Case Report:

A 65-year old male with a history of classic migraine headaches presented to the emergency department for evaluation of a gradual onset, constant, headache of three weeks duration. The patient characterized his headache as differing from previous headaches secondary to its prolonged course and association with right eye visual deficit. Physical examination was without focal neurologic findings. Visual fields were intact, and visual acuity was documented as OD 20/200, OS 20/70, OU 20/100.

Discussion:

A head, non-contrasted computed tomography (CT) scan demonstrated no acute abnormality. CT angiogram of the head and neck identified a 2.0 millimeter by 2.7 millimeter aneurysm of the right ophthalmic artery (Figure 1 and 2). The patient was transferred to an outside facility where he underwent aneurysmal clipping, resulting in the resolution of his headache and visual deficit.

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35 The chief complaint of non-traumatic headache represents 0.5-4.5% of annual visits to
36 U.S. emergency departments.¹⁻⁵ While the majority of patients are diagnosed with a primary
37 headache disorder, 19% experience headache due to a secondary, life-threatening condition.^{1,2}
38 Emergent neuroimaging is recommend in patients presenting with headache and abnormal
39 neurologic examination, those with sudden-severe headache, or in HIV-positive patients with
40 new headache per the American College of Emergency Physicians.⁶ Additional laboratory
41 studies, including lumbar puncture, are advised as clinically appropriate to rule out additional
42 etiologies of secondary headache (i.e intracerebral hemorrhage, cerebral venous sinus
43 thrombosis, cervical artery dissection, intracranial mass, or intracranial infection).⁷

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Figure Captions:

- Figure 1. Transverse CT Angiogram of the Head with 2.0 millimeter by 2.7 millimeter aneurysm
of the right ophthalmic artery
- Figure 2. Sagittal CT Angiogram of the Head with 2.0 millimeter by 2.7 millimeter aneurysm of
the right ophthalmic artery

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