

Paracentral Acute Middle Maculopathy (PAMM) Following Oral Intake of Caffeine Containing Analgesic in the Treatment of Migraine with Aura

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Case Report Abstract

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Background:

Migraine with aura is a common complaint encountered by eye care providers. The visual symptoms typically precede the accompanying migraine and last 5-60 minutes. Patients with chronic migraines with aura have been shown to have acute retinal vasospasms during migraine attacks and can develop permanent changes to the retinal vasculature. Furthermore, many over the counter (OTC) migraine analgesics contain caffeine, a vasoconstrictor. Migraines, especially in combination with caffeine containing analgesics, increase the risk for retinal ischemic conditions like Paracentral Acute Middle Maculopathy (PAMM).

Case Summary:

A 41-year-old white male presented with a central blind spot in the right eye that preceded a migraine. The patient self-medicated with OTC caffeine containing analgesic for migraine relief. The migraine resolved, but the blind spot remained. Uncorrected visual acuity was 20/25 OD and 20/20 OS. Fundus examination and Optos photographs showed an area of ischemia inferiorly in the macula OD. OCT of the macula and OCT-A demonstrated a hyperreflective band through the INL/OPL. HVF 10-2 showed a mild superior paracentral scotoma OD. The findings were consistent with Paracentral Acute Middle Maculopathy (PAMM). At follow up 1 month later, the scotoma remained unchanged

despite improvement on the OCT. OCT demonstrated a less prominent hyperreflective band through INL/OPL.

Conclusions:

PAMM is more commonly associated with microvascular disease or retinal vascular conditions, but in this case, the patient had no such risk factors. In young, healthy patients with no known systemic or vascular conditions, it is important to consider other potential causes and environmental risk factors of retinal ischemia. Migraines with aura and the treatment with caffeinated analgesics potentiate retinal vasoconstriction, thereby increasing the risk for PAMM. PAMM should be considered for patients complaining of new onset scotoma with a history of migraines and caffeine consumption.

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Ocular Disease

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