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Concomitant ectatic posterior communicating artery and tentorial meningioma as a source of oculomotor palsy: case report.

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OBJECTIVE AND IMPORTANCE: Although non-aneurysmal vascular compression of the oculomotor nerve is rare, it should be considered in the evaluation of unilateral oculomotor palsy.

CLINICAL PRESENTATION: A 36-year-old non-diabetic man presented with two months of intermittent retro-orbital headache and third nerve paresis caused by compression of the oculomotor nerve between an ectatic, atherosclerotic posterior communicating artery (PCoA) and a small tentorial meningioma. At operation, the subarachnoid portion of the nerve, prevented from migrating posteriorly and laterally by the meningioma, was grooved by the apex of the artery's loop.

INTERVENTION: Microvascular decompression (MVD) of the artery loop from the nerve and resection of the meningioma were performed. Postoperatively, the patient's retro-orbital headache and oculomotor paresis, with the exception of mild anisocoria, resolved. Tumor infiltrating the posterior tentorium and lateral cavernous sinus was treated by Cyberknife radiosurgery five months later. One year after surgery, the patient had improvement in his headaches, full extra-ocular movements, and minimal residual anisocoria.

CONCLUSION: Only one other report describes MVD of the third nerve from PCoA compression. A review is presented of MVD carried out for similar cases of non-aneurysmal vascular compression of the oculomotor nerve. By analogy from cases in which an aneurysm is the compressing vascular structure, prompt surgical treatment is advocated. Complete evaluation of an isolated third nerve palsy should include MRI sequences designed to detect vascular compression of cranial nerves.

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