CLINICAL SNAPSHOT

Painful Oculomotor Nerve Palsy

A 52-year-old woman complained of right retro- and periorbital pain that had arisen suddenly three days before and of right ptosis in the past 24 hours. Neurological examination revealed an isolated, severe, but incomplete internal and external right oculomotor nerve palsy. The laboratory findings were unremarkable; in particular, there was no evidence of diabetes mellitus. Imaging studies revealed a distal aneurysm of the internal carotid artery (ICA) (*Figure*) displacing and compressing the right oculomotor nerve. After surgical exclusion of the aneurysm from the arterial circulation, the abnormal findings regressed markedly. Diabetogenic oculomotor palsy is generally painless and of the external type, with sparing of the parasympathetic fibers and thus without mydriasis. Its pathophysiology is thought to involve microcirculatory disturbances or circumscribed midbrain infarcts sparing the Edinger-Westphal nucleus. In contrast, compression of the oculomotor nerve by an aneurysm is a painful condition and a neurological emergency. Thus, any oculomotor nerve palsy of sudden onset calls for immediate evaluation. The clinical presentation of a distal ICA aneurysm in this case was unusual; the apoplectic variant, with acute subarachnoid hemorrhage, is much more common.

Prof. Dr. med. Dr. med. habil Stefan Weidauer, Neurologische Klinik, Sankt Katharinen Krankenhaus, Akademisches Lehrkrankenhaus der Goethe-Universität Frankfurt, stefan.weidauer@sankt-katharinen-ffm.de

Sascha Moreitz, Radiologische Abteilung, Sankt Katharinen Krankenhaus, Akademisches Lehrkrankenhaus der Goethe-Universität Frankfurt

Dr. med. Michael Nichtweiß, Hanse Klinikum Wismar

Conflict of interest statement: The authors state that they have no conflict of interest.

Cite this as: Weidauer S, Moreitz S, Nichtweiß M: Painful oculomotor nerve palsy. Dtsch Arztebl Int 2018; 115: 298. DOI: 10.3238/arztebl.2018.0298b

Translated from the original German by Ethan Taub, M.D.

Magnetic resonance imaging of the head:

a) axial and
b) sagittal sections
(T1-weighted, after the administration of intravenous contrast medium) showing displacement of the right oculomotor nerve (arrowheads) by an aneurysm of the internal carotid artery (arrow).