Pineal Apoplexy

Pineal apoplexy is a rare condition, with unknown incidence and clinical significance. To elucidate this clinical condition, Majovsky et al. analyzed the own case series and performed a review of the literature.

They enrolled all patients with a hemorrhagic pineal apoplexy who were referred to the department between January 2000 and January 2020. Hemorrhagic pineal apoplexy was defined as the presence of fluid-fluid levels inside the pineal cyst (PC) on an axial or sagittal magnetic resonance scan. In one patient, after PC apoplexy, they performed a circadian melatonin sampling from peripheral blood to determine the function of the pineal gland. The PubMed database was searched for publications using the terms “pineal” and “apoplexy.”

Eight patients were enrolled, of which three patients underwent surgical treatment and five patients were managed conservatively. One patient was tested for circadian melatonin secretion. Results confirmed melatonin secretion with preserved physiologic circadian rhythm.Our search of the literature led us to 31 studies that comprised 30 patients with apoplectic PC, 9 with apoplectic pineal tumor, and 1 with bleeding into the normal pineal gland. Most patients presented with headache, nausea, and vomiting, less frequently with acute hydrocephalus and gaze palsy. Twenty patients with a PC underwent resection or aspiration. Two patients underwent shunt placement as the only procedure and five received both shunt and surgical removal. Six patients with a PC were observed without surgical treatment. All the nine patients with a pineal tumor were operated on. In indicated cases, four patients received radiation therapy and one received chemotherapy.

Clinical significance of hemorrhagic pineal apoplexy ranges from an asymptomatic course to rapid deterioration and death. In patients with mild symptoms, observation is indicated, whereas surgical treatment is reserved for severe cases presenting with obstructive hydrocephalus and includes Cerebrospinal fluid shunt, resection of apoplectic pineal lesions, or both [1)].

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