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Symptomatic Neuroepithelial (Colloid) Cysts of the Third Ventricle

A Unique Case Report in Nontwin Brothers

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Colloid cysts are relatively rare benign tumors comprising less than 2% of all intracranial mass lesions. However, since the advent of computed tomography of the head, these tumors are being recognized more frequently, occasionally before their symptomatic presentation. Much controversy remains as to the true cells of origin and pathogenesis of these cysts. Although a neuroepithelial origin has become increasingly accepted, Rathke cleft cysts, ectopic respiratory tissue, and other endodermal sources have been postulated. The first familial occurrence in middle-aged identical twin brothers was cited recently in the literature. Described here are the first reports of symptomatic colloid cysts in two nontwin brothers, lending further support to the potential for genetic expression of neuroepithelial cysts. Also included are preoperative computed axial tomographic images, histopathologic photomicrographs with case descriptions and comparisons, and suggestions to elucidate further the development and presentation of colloid cysts.
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COLLOID CYSTS comprise 0.5% to 2.0% of all intracranial masses and are described by Kahn[1] as "the only primary tumor of anterior third ventricle which is not a rarity." The multiple terms used to describe these curious cysts—colloid, paraphyseal, and neuroepithelial—illustrate the ongoing debate as to their pathogenesis and true cells of origin.[2–12] Colloid cysts, although generally presenting in the third to fifth decade of life with signs of acute or chronic hydrocephalus, have a wide variety of clinical presentations. They are easily diagnosed by computed tomography (CT) or magnetic resonance imaging (MRI), and may be more prevalent than previously reported.[13] We describe the first set of two nontwin brothers who presented 6 months apart with neuroepithelial cysts and include a discussion and histopathologic and radiographic comparisons.

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Case Reports

Case 1

A 73-year-old white man presented with a one-year history of intermittent "blackout spells" and atypical headaches occurring without warning. He had been falling asleep at inappropriate times throughout the day and occasionally while driving. The patient and his family described memory loss, especially for past events, with the patient not remembering his first wife, three children, or second wedding. Recent and current event memory was good. He denied gait disturbances, nausea or vomiting, visual changes, incontinence, dizziness, tinnitus, or convulsions. The patient also described an episode of slurred speech and general decrease in mental function 2 years before this presentation. Carotid studies at that time were unrevealing. Medical history was otherwise unremarkable with no known familial history of primary central nervous system tumors or disturbances.

On examination, the patient was alert and oriented, with signs of mild dementia and a general decrease in intellectual function. Vital signs were normal. Head and neck examination revealed mild bilateral papilledema with suggestions of early venous choking. Pupils were equal, round, and reactive to light and accommodation. Extraocular movements were full without nystagmus. Cerebellar function was intact except for a mild upper extremity intention tremor. The remaining neurologic exami-