Schwannoma of the torcula presenting as an occipital mass

Case illustration

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Intracranial schwannomas that are distinct from those associated with cranial nerves are rare. In recent reviews, 58 cases of intracranial schwannoma were reported, 47 of which were supratentorial. The tumor location was extraaxial in 21 of these, of which 16 were located in the subfrontal region. We report on a case in which an extraaxial dural-based schwannoma presented as a soft-tissue mass just below the inion.

This 27-year-old man presented with a soft mass of the occiput. On examination a firm, tender mass was found just below the inion. Plain skull x-ray films and head computerized tomography scans were obtained (Fig. 1). At operation, a well-encapsulated gray mass was found in the subgaleal space. This mass was followed in continuity to its wide dural-based attachment along the torcula. Excision required removal of the superficial dural layer followed by bipolar coagulation. On gross examination, cystic changes and necrosis were seen within the tumor. Based on the results of light microscopy (Fig. 2) and S-100 immunostaining, a diagnosis of schwannoma was made (Fig. 3).

Our differential diagnosis was essentially that of meningioma and epidermoid. Intracranial schwannomas unassociated with cranial nerves are quite rare. Extraaxial lesions are rarer still. Some physicians believe that the intraparenchymal form arises from aberrant Schwann cells dispersed in variable intraparenchymal locations, whereas others think that they arise from normal Schwann cells located along adjacent structures such as blood vessels. Small peripheral lightly myelinated sympathetic nerves have been noted in the central nervous system in association with these tumors. Although the patterns of supratentorial innervation have been clearly defined and involve various branches of the trigeminal nerve, the innervation of the posterior fossa dura remains uncertain. Kimmel described branches of cervical nerves accompanied by sympathetic fibers, which provided sensory input to posterior fossa dura. Keller, et al., further implicated variable contributions from trigeminal and vagus nerves in the cat. We presume that this tumor originated from these small exteroceptive nerves. We emphasize the rarity of a dural-based intracranial schwannoma as well as its inclusion in the preceding differential diagnosis.

References


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