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Neonatal herpes encephalitis.

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Correspondence

Neonatal Herpes Encephalitis

An article on neonatal herpes encephalitis in the September/October 1985 issue of the *AJNR* [1] could have benefited from a greater awareness of the literature. The authors speculated about the increased density of the cortical gyri, but neglected to mention one proven cause of this, for example, retained contrast medium [2]. This lack of awareness also resulted in a significant omission in the Materials and Methods section. The timing of serial CT scans and whether contrast material were administered were not well documented. This article could have been improved if such pertinent data had been included and if the pertinent literature had been cited.

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Reply

We thank Dr. Enzmann for his interest in our article. We are aware of the case reported by Junck et al. in 1981. Because of the infrequency of brain biopsy or fatal outcome in our series, we could not verify their interesting finding of increased cortical iodine after intravenous contrast enhancement. Moreover, increased gyral density in two of our cases was noted *before* any contrast material whatsoever had been administered. A similar finding was noted by Sage et al. [1], who observed cortical dense lesions before administration of contrast material. This led us to believe that cortical iodine could not be the sole cause of the relative gyral increased density. Other than obvious contrast enhancement, the cause still seems speculative, but it may be related to a decrease in the absorption coefficient of adjacent white matter. We trust that further work on the pathophysiology of this devastating disease will explain this finding.

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False-Negative MR Imaging of an Acoustic Neurinoma

We are reporting a patient with an intracanalicular acoustic neurinoma that was diagnosed by CT pneumocisternography after a normal magnetic resonance (MR) study. Neurinomas of the eighth cranial nerve are the most common tumors of the cerebellopontine angle, constituting about 85% of the primary tumors in that region. Until very recently, CT air cisternography was accepted as the definitive procedure for their diagnosis [1]. In the past year, however, several authors have advocated MR as the diagnostic procedure of choice because it is noninvasive and highly sensitive [2–8]; some believed that a normal MR study excluded the diagnosis of acoustic neurinoma [5].

A 42-year-old Hispanic man with a progressive sensorineural hearing loss had an abnormal Rinne test and an abnormal brainstem auditory evoked response on the right. MR (Picker International, 0.5 T, 128 × 256 matrix, two averages, 5 mm axial slices, 2½ mm interslice interval) was normal (figs. 1A and 1B). A CT air cisternogram within a week of MR demonstrated the tumor (fig. 1C). MR was repeated using a larger matrix (256 × 256) and coronal-plane imaging; the lesion was demonstrated (fig. 1D). Axial scanning was not performed with the larger matrix. Surgical resection confirmed the intracanalicular acoustic neurinoma.

One explanation for the failure of the initial MR study to demonstrate this lesion is the large (5 mm) slice thickness, allowing for volume averaging with bone and thereby diminishing signal intensity. Unfortunately, most commercial scanners currently will not make thinner slices. The cerebellopontine angle cisterns have a higher-intensity signal in figures 1A and 1B than is normally seen with the stated imaging parameters, indicating some T2-weighting of uncertain etiology. This probably contributed to masking the lesion as well. The apparently normal internal auditory canals on the T2-weighted spin-echo sequence may also have resulted from volume averaging, although the more likely explanation is inappropriate selection of TR and TE values that caused cerebrospinal fluid and tumor to become isointense. In addition, the gap between slices that occurs using the multisection imaging technique can cause significant error when looking for small lesions.

Two possible explanations exist for the normal axial scan in view of a definitely abnormal coronal scan. One is that the internal auditory