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159 CORRELATION BETWEEN PATHOLOGICALLY CONFIRMED SITES OF NEUROLOGICAL LESIONS AND ABNORMALITIES OF FAR-FIELD AUDITORY BRAINSTEM RESPONSES.

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Far-field auditory brainstem responses were recorded in nine patients in whom the distribution of the pathology was defined at autopsy in order to correlate the loss of the electrical components of the auditory response to the anatomic components of the auditory tract. The normal response consists of seven wave components in the initial ten milliseconds following click signals. A schwannoma of the eighth nerve resulted in the loss of the components after Wave I. Two patients with midbrain tumors had intact Waves I, II, and III, abnormal Waves IV and V, and absent Waves V and VI. A patient with a brainstem glioma which completely obliterated the midbrain and pons, a patient whose pons and medulla were completely infarcted, and a drug overdose patient with patchy brainstem encephalomalacia and three patients with diffuse severe anoxic brainstem changes had clearly detectable Wave I's. The subsequent components were either absent or significantly altered in latency or amplitude. We conclude that Wave I reflects the activity, Waves II and III reflect activity of the cochlear nucleus, trapezoid body and superior olive and Waves IV and V reflect the activity of the lateral lemniscus and inferior colliculus. The anatomic sources of Waves VI and VII were not elucidated.

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