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January 1983 edition

Computed Tomography of the Brain Stem with Intrathecal Metrizamide.

Part I: The Normal Brain Stem

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Detailed anatomy of the brain stem and cervicomedullary junction demonstrated with metrizamide computed tomographic contrast. Surface anatomy is usually well outlined. Nine distinct anatomic levels are described: four levels in the medulla, three in the pons, and two in the midbrain. Surface features of the brain stem, fourth ventricle, cranial nerves, and vascular structures are

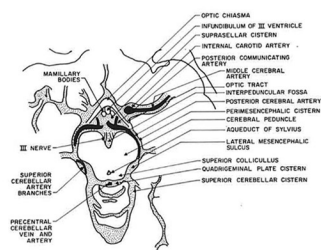
reliably accurate imaging of the brain stem and cervicomedullary junction now become available using high-resolution computed tomography following intrathecal administration of metrizamide contrast. The use of metrizamide contrast in CT of the brain stem has already emphasized the superiority of this technique to both angiography and myelography. These latter procedures rely on subtle displacement of the air-filled fourth ventricle and posterior fossa cisterns. Metrizamide spreads much more readily in the brain stem without the problem of meniscus formation or "air" loculation of the various collections of contrast agent and a variety of features encountered in nontomographic contrast studies.

Improved visualization of the details of the brain stem allowed the detection of subtle morphologic changes, subarachnoid spaces not previously appreciated. Distortions of the various collections of contrast agent and a variety of features encountered in nontomographic contrast studies.

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A



B

Materials and Methods

From those patients who had a CT scan of the brain stem in an 18-month period, the average age was 18 months. The use of metrizamide was introduced more often through a C1-C2 medium. The average amount of contrast agent was 10 ml.

Metrizamide was introduced more often through a C1-C2 medium. The average amount of contrast agent was 10 ml. However, in our experience, risks of the contrast agent in the hour after injection.

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Dyke Postmortem CT and Autopsy in Perinatal Intracranial Hemorrhage

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To improve interpretation of intracranial computed tomographic findings in vivo, postmortem computed tomography was correlated directly with autopsy findings in 105 specimens of human stillborn and live-born infants, ranging in age from gestational week 13 to postnatal month 18. This study identifies the typical computed tomographic appearance of intracranial and other hemorrhages, attempts to correlate the type of hemorrhage with brain maturity, and documents that postmortem computed tomography is useful to the neuropathologist as a supplementary method complementing the traditional postmortem examination.

In recent years, computed tomography (CT) and sonography of newborns have greatly improved our understanding of neonatal intracranial hemorrhage [1-10]. New insights into in vivo morphology of these lesions [11-15] have made it possible to predict the control of a morphologic diagnostic procedure by pathologic confirmation of its accuracy, the correlation of CT and postmortem pathology [16-20].

Postmortem CT provides a unique method for detecting and characterizing intracranial pathology. (1) CT findings and pathology can be directly compared. (2) CT can be used to determine intracranial changes in the highly variable state of the brain at postmortem examination. (3) CT can be used to determine intracranial changes in the highly variable state of the brain at postmortem examination.

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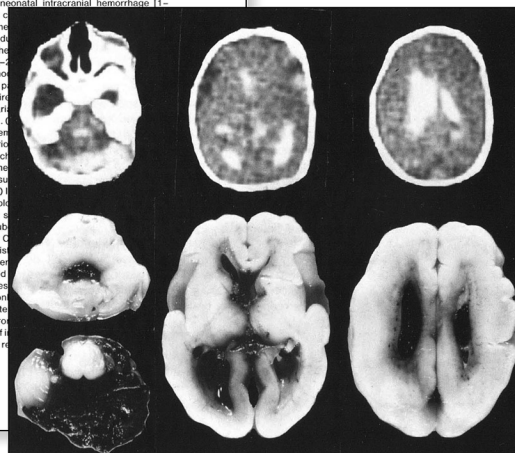
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