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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 surface anatomy is unusually 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. The surface features of the brain stem such as the vermis, sulcus, pyramids, and olivary protuberance has been demonstrated. Details have not been routinely demonstrable in the past.

Many authors [1, 2] have already emphasized the value of computed tomography and its superiority to both angiography and myelography. These latter procedures rely on subtle displacement of the air-filled fourth ventricle and posterior fossa. Metrizamide spreads much more readily in the subarachnoid space without the problem of meniscus formation or "air" loculation of the various collections of contrast agent and a more detailed visualization of the details of the brain stem.

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

Materials and Methods

From those patients who had a computed tomographic scan of the brain stem in an 18-month-old child.

Metrizamide was introduced more often through a C1-C2 level.

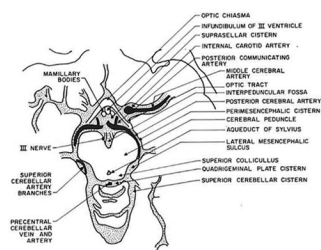
The average amount of metrizamide used was 10 ml. The use of metrizamide, however, in our experience, risks of the contrast agent in the hour after injection.

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A

B

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 neonatal intracranial hemorrhage [11-15] have made it possible to predict the control of a morphologic diagnostic procedure, 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 progression of pathology in the highly variable state of the brain at postmortem examination. (3) CT can be used to determine intracranial changes in the progression of pathology in the highly variable state of the brain at postmortem examination. (4) CT can be used to determine intracranial changes in the progression of pathology in the highly variable state of the brain at postmortem examination.

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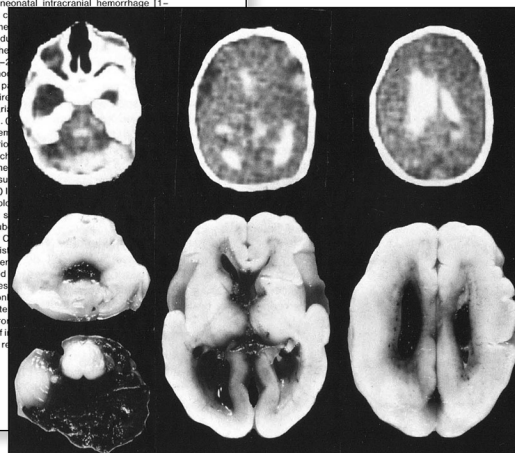
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