

PROTOCOL

1

Present Illness: This 16-year-old [redacted] male was admitted to hospital with a history of severe occipital headaches during the preceding two weeks. The headaches initially occurred in the afternoon, but soon became constant, more generalized, and were exacerbated by the erect position. During the two days prior to admission he had also experienced some nausea and vomiting.

Physical Examination: A well developed, well nourished white male of the stated age, with slightly feminine escutcheon.

B. P. 104/62 RAR pulse 72, respirations 20, temperature 100° F. Positive physical findings included bilateral papilloedema of 2-3 diopters, slight ataxia, increased deep muscle reflexes in both lower extremities and a questionable extensor plantar response on the right. In the erect position the patient became nauseated and pain was noted with passive flexion of the neck.

Laboratory and X-ray: Routine blood and urine examinations were normal. X-rays of the skull showed an apparent increase in convolutional markings. Lumbar puncture, at the hospital from which he was referred, showed a pressure of 540 mm of water.

Course in the Hospital: It was felt that the patient presented a picture of a midline obstructive lesion of the 3d or 4th ventricle. On the night of admission, he showed a

change of vital signs, and bilateral burr holes were placed. A ventricular tap revealed 25 mm of water pressure, and the patient improved after this procedure. Twenty-four hours later, there was marked worsening of vital signs and a ventricular tap showed 200 mm of water pressure. A suboccipital craniectomy was performed. Rapid inspection revealed no apparent gross lesion. Before further exploration could be made, the cerebellum began to herniate through the skull opening, and a rapid closure was performed. The patient survived for 20 hours, but did not regain consciousness.

Gross Description of Brain: The brain was markedly swollen, with flattened gyri, and there was a moderate amount of subarachnoid hemorrhage over the cortex and in the basilar region. The cerebellar hemispheres were softened, but multiple sections showed no apparent tumor tissue. On separating the cerebellum and brain stem from the cerebrum, the prosector cut through a small tumor, which completely filled the anterior portion of the aqueduct. The tumor measured $1\frac{1}{2}$ cm in length and 1 cm in diameter, and appeared to be well circumscribed. Coronal sections through the cerebral hemispheres revealed dilated ventricles completely filled with blood. The left ventricle appeared somewhat larger than the right and the 3d ventricle was dilated up to the point of obstruction by the tumor. Cortex, white matter and basal ganglia were grossly normal.