Spontaneous Remission of an Intraventricular Hemorrhage

Case Report

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The natural history of intracerebral and associated intraventricular hemorrhage has not been fully delineated, and the value of surgical therapy is unproven. Review of the related reports indicates that intraventricular extension of an intracerebral clot or primary intraventricular hemorrhage is an ominous development associated with inexorable neurological deterioration. Grinker stated: "Intraventricular hemorrhage causes death in a few hours." Similar quotations can be found in the majority of articles that consider this problem. We have recently seen a patient whose neurological status improved spontaneously while serial pneumoencephalographic studies revealed lysis of an intraventricular clot.

Case Report

A 55-year-old Negro male with known hypertension (188/130), had been well until 6 hours before admission when he developed a right-sided headache after returning home from work. During the night the patient was restless in bed and developed urinary incontinence. He fell to the floor while attempting to walk to the bathroom, and at the same time the headache became much more severe. The patient vomited, became less responsive, and was then sent to the hospital.

Examination. The patient was lethargic but became combative when stimulated. The blood pressure was 220/108 and the pulse rate 80. Respirations were normal, and the temperature was 37.8° C. There was tenderness to percussion over the right temporal region, and the neck was moderately rigid. Funduscopic examination showed arteriolar narrowing and slight arteriovenous nicking but no hemorrhages or papilledema. The patient had intermittent disconjugate random eye movements. The pupils were small, equal, and reacted to light. There was a left homonymous hemianopsia when tested by threat. The left corneal reflex was decreased, and a left supra-nuclear facial paresis was present. The patient would verbalize incoherently when stimulated. He had a flaccid left arm with marked paresis of the left leg. Deep tendon reflexes were slightly increased on the left and bilateral plantar extensor reflexes were elicited. There was forced grasping on the right and a snout reflex was present.

Laboratory Findings. The admission hematoctrit was 38% and the white count, 8,000. Serial urinalyses showed from 2 to 4 plus sugar with a small amount of acetone on one occasion. Fasting blood sugars varied from 199 to 310 mg%. The skull and chest films were normal; the pineal was not calcified.

Course. Upon admission a lumbar puncture was performed. The opening pressure was 310 mm of water and the CSF contained 8,000 red blood cells per mm² and 410 mg% of protein. The patient's hypertension was controlled with hydralazine and chlorpromazine. The diabetes mellitus was treated with regular insulin; later he was placed on tolbutamide. Five days after admission a right carotid angiogram was performed and interpreted as normal.

On October 20, 1966, 2 weeks later, a pneumoencephalogram was done which revealed a right posterior frontal intracerebral mass with intraventricular extension but without obstruction of the foramina of Monro or of the right lateral ventricle. There was slight but symmetrical enlargement of the lateral ventricles. The third ventricle was displaced a few millimeters from right to left as was the septum pellucidum. The right temporal tip was flattened from above downward and displaced laterally (Fig. 1 A). The entire right temporal horn was slightly straightened, as seen in the axial projection. There was a large filling defect in the right lateral ventricle extending throughout the body of the ventricle and down into the temporal horn (Fig. 1 B). The spinal fluid at this time was xanthochromic with a total protein of 173 mg%. There were 60 white blood cells, 55% of

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which were polymorphonuclear, and 45% lymphocytes. There were no red blood cells.

During his hospital course the patient's hypertension and diabetes were well controlled. He received extensive physical therapy and showed gradual improvement in the left hemiparesis. The sensory changes on the left side resolved. Serial lumbar punctures revealed normal pressures and gradual clearing of the spinal fluid xanthochromia.

Two months after admission a repeat pneumoencephalogram was performed (December 23, 1966). The large intraventricular mass on the right side and the distortion of the ventricular system had almost entirely disappeared (Figs. 2 A and 2 B). A thin double contour seen in the right temporal horn was thought to represent a small residue of the intraventricular mass. The spinal fluid on this occasion contained 23 mg% of protein and 88 mg% of sugar. There were no cells or xanthochromia.