MASSIVE SUBDURAL HYDROMA COMPLICATING TORKILDSEN PROCEDURE
FOR POSTERIOR THIRD VENTRICLE OR PINEAL TUMOR*

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A 41-year-old white male with a high degree of choked disc bilaterally was found by ventriculography to have a tumor of the posterior part of the 3rd ventricle or the pineal body. A Torkildsen procedure was carried out and postoperative roentgen-ray therapy was given. The patient did well for 6 weeks thereafter, when headache, vomiting and marked irrationality developed. Approximately 7 weeks after the Torkildsen procedure, an enormous right-sided subdural hydroma was found and drained with a subdural catheter in the right frontal region. There was immediate relief of the disabling clinical syndrome including the subsidence of 2–3 diopters of choked disc bilaterally. He has remained well to date, 15 months after the last operation.†

This serious postoperative complication of the Torkildsen procedure, namely a massive surgically important subdural hydroma on the same side as the shunt operation, is new in our experience and is discussed with particular reference to the mechanism of its formation and its surgical relief.

CASE REPORT

E.L.W., white male, aged 41, was admitted to the Medical College of Virginia Hospital on Dec. 8, 1955. He complained of severe headache and was found to have bilateral choked disc of 4–5 D. He was of Polish extraction and his history was rather vague and inaccurate because of difficulty in language. Headache had largely subsided on Dec. 9, 1955, and the patient was anxious to return home. It was with difficulty that a ventriculogram was agreed upon. The neurological findings were normal except for the definite degree of choked discs. Examination by an ophthalmologist, Dr. E. W. Perkins, revealed no hemianopsia and normal acuity with bilateral enlarged blind spot. In July, 1955 the patient had had measles, at which time his headaches began, and it was thought temporarily that possibly he had an optic neuritis incident to the measles.

1st Operation. Ventriculography on Dec. 13, 1955, showed enormous lateral ventricles (124 cc. of fluid under pressure were removed from one lateral ventricle and a slightly less amount of air was introduced). The films revealed a mass either of the posterior part of the 3rd ventricle or of the pineal body. The posterior fossa was immediately entered through a vertical midline incision and a standard Torkildsen shunt was carried out on the right side.

Course. The patient did very well thereafter, the choked disc subsided promptly, and he was given roentgen-ray therapy. [In the following months the patient received three series of roentgen-ray treatments and by October, 1956, 10 months after the Torkildsen procedure, a total of 9,000 roentgen units (tumor dosage) had been delivered to the tumor.] The ventricular fluid Wassermann was negative, the protein being only 5 mg. per cent, with 1 cell. Floculation test of the blood for syphilis was also negative.

The patient was discharged from the hospital on Jan. 3, 1956, his discharge having been

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† This sentence was added (May, 1957) subsequent to the reading of the paper, thus allowing a considerably longer follow-up period.

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FIG. 1. Artist’s conception of the two operations in this patient. The right-sided subdural hydroma is being drained by the anteriorly placed catheter left in situ for 4 days. The arrows show the presumed method of formation of the subdural hydroma. The posteriorly placed Torkildsen tube is functioning normally.

delayed somewhat by the roentgen-ray therapy. He was in good condition, with marked recession of the choked discs. He then did well for several weeks but because of a markedly irrational behavior, severe headaches, during which he held his head and moaned, and restlessness, he was admitted to Johnston-Willis Hospital, Richmond, Virginia, on Feb. 9, 1956. He had, at that time, 2–3 D. of choked disc bilaterally and because of the rather disturbing clinical syndrome, which seemed to be acute and urgent, it was determined to make frontal burr openings primarily to tap the lateral ventricles as a therapeutic measure when further roentgen-ray treatment was to be given, as it was thought that he probably had again a high degree of increased intracranial pressure with internal hydrocephalus.

2nd Operation, Feb. 11, 1956. Much to our surprise, when an anterior frontal burr opening was made on the right side, an enormous subdural hydroma was immediately encountered, the cerebral cortex and the overlying arachnoid being several centimeters from the under surface of the dura mater, so that the cortex could scarcely be visualized even when the dura mater was opened somewhat to aid removal of the fluid and the insertion of the subdural catheter (Fig. 1). The lateral ventricle on the left side also was tapped through a left frontal burr opening, the brain there being merely slack in appearance under the dura mater and the left lateral ventricle was found to be also very large. The subdural hydroma overlying the right cerebral hemisphere easily measured 80 cc. in volume.

Postoperative Course. The patient improved rapidly. A progress note on Feb. 12, 1956,