TREATMENT OF SUBDURAL ABSCESS

There were a few foci in which the cells had lost their papillary arrangement and single layering to grow in rather dense masses. Here, the cells showed more rounded and vesicular nuclei, with considerable variation in nuclear size and shape. Mitoses were rare and could be found only after prolonged search. While the stroma in general was very scanty, there were frequently regions where it appeared to be infiltrated by the more dense cell masses. No cells other than blood cells were present in either blood vessels or lymphatics.

SUMMARY

Papillomas of the choroid plexus showing malignant (adenocarcinomatous) characteristics are rare intracranial. Relatively few of these growths have been removed surgically, and fewer patients still have had a long, useful survival period. The present report is that of an adult male who had a tumor of this type. He has remained in relatively good general condition for over ten years since the initial removal of his malignant papilloma.

We wish to acknowledge our appreciation to Dr. Shields Warren, in whose laboratory the pathologic studies were carried out, and to Dr. William A. Meissner who supplied the photomicrograph and the pathologic description after reviewing the material from the three operations.

REFERENCES


OSTEOPLASTIC FLAP METHOD IN THE TREATMENT OF SUBDURAL ABSCESS

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The chief points in the treatment of subdural abscess are: (1) removal of pus, and (2) sterilization of the subdural space.

The first objective—removal of pus—cannot usually be achieved by attempted drainage through one or more perforator openings in the skull or through a cranietomy. This is because the pus becomes walled off in separate compartments and free flow to the drainage tube is impossible. Insertion of drainage tubes far into the subdural space through perforator openings in the skull is dangerous because of the possibility of injury to the cerebral cortex with production of intracerebral abscess. Removal of pus through a cranietomy has two disadvantages: (1) exposure is insufficient if the abscess is large, and (2) an undesirable cranial defect is left if the patient survives.

Sterilization of the subdural space can be attained only by removal of infectious material and direct instillation of antibiotics. It is doubtful that sulfonamides, orally or intravenously, or penicillin, intramuscularly or intrathecally, reach the space in adequate concentration through the membrane that forms about the abscess. Penicillin instilled through a drainage
tube or tubes will not be diffused throughout the entire area of infection unless the pus has been previously removed, all adhesions forming compartments broken up, and the tubes properly placed.

Failures in three successive cases of subdural abscess brought the foregoing facts sharply to mind. It was determined to treat any additional cases radically: (1) to expose the abscess widely by reflecting a large osteoplastic flap; (2) to remove as much pus as possible—much as a subdural hematoma is removed; (3) to break up all adhesions that might interfere with drainage and with instillation of penicillin; (4) to place drainage tubes most advantageously under full vision and without cortical injury, bringing them out through the perforator openings of the flap; and (5) to follow with full doses of penicillin locally and intramuscularly.

An opportunity to try this new method of treatment soon presented itself, and is reported in the following case.

CASE REPORT

R.R.K., a boy aged 12 years, was admitted to the James Whitcomb Riley Hospital on Feb. 2, 1946 (XR 964421). He had been ill 2 weeks with severe headache, vomiting, and pain in the back and limbs. He had had some swelling of the neck, possibly lymphadenitis. The day of admission he had six generalized convulsions. No localizing features were observed in any of these. The family physician had diagnosed a "sinus infection" and prescribed sulfonamides. But, because of the swelling of the neck, the patient’s mother believed that he had had mumps, then prevalent in the home neighborhood.

Examination. On admission he was in a post-convulsive stupor. Temperature was 99.2°, pulse 104, respirations 16. Urine showed a trace of albumin, but was otherwise negative. White blood cell count was 28,300. A spinal puncture was performed. Examination of the spinal fluid showed: 270 WBC (94% lymphocytes, 6% polys), quantitative sugar 66 mgm. per 100 cc., quantitative protein 131 mgm. per 100 cc., culture negative, Wassermann negative, gold curve 2;2;2;1;1;3;3;3;3;1;0. X-ray films of the skull and chest were negative. A diagnosis of possible mumps encephalopathy was entertained.

On February 5 slight weakness of the left limbs was noted. On February 9 a left-sided convulsion occurred with twitching of the lower face, arm and leg. The twitching was relatively greatest in the arm. Mild papilledema was observed for the first time on this day. Left hemiparesis was more severe on February 10; papilledema more marked on February 14. Neurosurgical consultation was requested on February 15. Examination on that day disclosed left hemiparesis, questionable partial astereognosis in the left hand and bilateral papilledema of about 3 D. There was no hemianopsia, no hemianesthesia. A diagnosis of probable cerebral abscess was made.

Operation 1. On Feb. 21, 1946, an exploratory perforator opening was made over the midpoint of the right frontal lobe. Pus poured out freely when the dura was opened, indicating the presence of a subdural abscess. A second perforator opening was then made over the right parietal lobe to determine the posterior extent of the abscess, pus being found in the subdural space over this lobe. Both incisions were then closed without drainage.

Operation 2. On Feb. 22, 1946 a large right osteoplastic flap was reflected, extending from the hair-line anteriorly to the parietal eminence posteriorly and superiorly almost to the midline. Dural flap was turned superiorly. A large subdural abscess was found overlying the frontal, parietal and temporal lobes. All visible pus was removed by gentle sponging, irrigation and aspiration. This was accomplished without cortical injury. Eight drains fashioned from #14 soft rubber French catheters were placed in the subdural space, the dural flap was replaced but not sutured, the bone flap was replaced, the drains being brought out through the perforator openings of the flap, and the scalp incision closed with a single layer of interrupted silk worm gut sutures. Penicillin (100,000 units) was injected into the subdural space through the drains, and a dressing applied.

Course. The patient was given a transfusion of 500 cc. of whole blood immediately after operation, and was placed upon 30,000 units of penicillin intramuscularly every 2 hours and sulfadiazine, one gm. every 4 hours. On February 23 he was given a second transfusion of