attack gradually passed off after 3 hours. At intervals of a few days he had similar attacks requiring morphia for their relief. These were succeeded by a constant pain at the back and on the left side of his head. He had no other symptoms.

On examination there was a very early papilloedema of the left fundus. His central nervous system was normal. X-rays of the skull were normal.

In view of the severity and persistence of his symptoms, ventriculography was performed through bilateral occipital burr-holes. The bodies and anterior horns of the lateral ventricles were seen to be separated (Fig. 1).

At a subsequent session, and with radiographic checks during the procedure, a brain cannula was introduced through a right parietal burr-hole, until it was judged to be in the position of the interventricular space. A clear colourless fluid was withdrawn and air injected. The air passed into the left lateral ventricle and filled a cyst of the fifth ventricle. The cannula was withdrawn into the right lateral ventricle which was then filled with air (Figs. 2 and 3).

The following day a radiograph showed air equally distributed in the three cavities. The ventricles showed a general increase in size, characteristic of "second-day encephalograms" (Fig. 4).

It is now over a year since this investigation and the patient has been entirely symptom free.

**COMMENT**

Cysts of the fifth ventricle are not common. Various rather extensive surgical procedures have been advocated for their treatment. The above case shows that the simple process of establishing an interventricular communication, with a brain cannula, may be effective.

The above procedure could be so readily repeated if symptoms were to recur.

**REFERENCES**


**INTRACRANIAL NEURINOMA OF THE HYPOGLOSSAL NERVE**

**SUCCESSFUL REMOVAL, CASE REPORT**

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Neurinoma of the 12th cranial nerve is rare.6,6 Haase6 reviewed the literature in 1946 and found only 4 cases; 2 of extracranial6,6 and 2 of intracranial location.1,3 He added 2 cases of intracranial involvement.
We report the following case:

A white female, aged 50, was referred on July 29, 1945 to the neurosurgical service of one of us (M. S.) by Dr. J. V. Smith of Perth Amboy, N. J.

For 2 years she had had temporal and frontal headaches, which had become severe previous to admission. Numbness and weakness of the right hand had been present for 3 months. Vomiting had occurred almost constantly for 1 month. Prior to admission she began to stagger, hiccup and "to lose her voice." The patient observed that when she ate hard candy (but not other sweetened foods such as coffee, cereal and fruit) she would choke. She insisted that this occurred only when the sweet sensation would reach the back of her throat. She did not have this experience with sour or salty foods and did not remember her reaction to bitter foods. Past medical history was negative except for uncomplicated diphtheria at 36 years of age.

Neurological Examination. There was fullness of the retinal veins and blurring of the disc margins. There was a decrease in corneal reflex and sensation to pain, temperature, and light touch over the right 1st trigeminal division. The motor portion of the 5th cranial nerve and the 7th and 8th were not impaired. The right soft palate was weak, with absent gag reflex. The right vocal cord was paralyzed. The right trapezius muscle showed slight atrophy and decrease in power. The tongue was completely paralyzed on the right and marked atrophy and fibrillations were present (Fig. 1). The deep tendon reflexes were all active but increased on the left. A bilateral Hoffmann and Oppenheim sign were present. There was no Babinski or Chaddock sign. Except for a weakness in the right hand, motor power was not impaired. No other sensory abnormalities could be detected. Finger-to-nose test revealed marked dysmetria in the right upper limb and bilateral intention tremor, more marked on the right.

Provisional diagnosis: Extramedullary tumor compressing the right ventrolateral surface of the medulla.

Laboratory Findings. Blood count, urinalysis, and serology were negative. Routine stereoscopic X-rays of the skull were negative.

Operation. On July 31, 1945, under endotracheal anesthesia, a high cervical laminectomy and suboccipital craniectomy were done. The posterior rim of the foramen magnum and the first 3 cervical laminae were removed, and the dura was opened by a midline incision. On the right side a large tumor was found in the space between the lateral surface of the medulla and the rim of the foramen magnum. It was encapsulated and firmly wedged in this space (Fig. 2). The tumor had multiple nubbins: one extended mesialward against the medulla; one extended caudal, partly compressing the vertebral artery; another projected cephalad, compressing the inferior surface of the cerebellum. The 9th, 10th, 11th, and 12th cranial nerves were enmeshed in the tumor. The tumor was carefully mobilized from its caudal and mesial aspects. The posterior inferior cerebellar artery was adherent to the upper nubbin and was freed by dissection. It was then seen that the tumor was