EXPERIENCE WITH SURGICAL TREATMENT IN TWENTY CASES OF PITUITARY ADENOMAS

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Recently, occasion arose to review the cases of hypophysial adenoma treated surgically at the Ochsner Clinic during the 12-year period from its founding on Jan. 1, 1942 through Dec. 31, 1953. All operations were performed by me in accordance with an arrangement whereby pituitary operations done elsewhere at the teaching hospitals affiliated with the Tulane Medical School were performed by my associates. Although this 12-year experience with private patients having pituitary tumors might lead the reader to expect an analysis of 50 or more cases, there were only 20 patients, and one of these had been operated on previously by another surgeon. In addition to this group of patients treated surgically, 10 patients with pituitary adenomas received deep roentgen-ray therapy only.

There are two chief reasons for this relatively small experience with pituitary adenomas. First, patients with the classical pituitary adenoma syndrome of bitemporal hemianopsia and an enlarged sella turcica are being referred directly to specialists in roentgenotherapy, who are now available in all but the smaller communities. Secondly, there are now approximately 850 practicing neurosurgeons in the United States, among whom the limited number of patients with pituitary adenomas is being distributed. No longer can an American neurosurgeon expect to accumulate a large series of cases of pituitary adenomas or any type of neurosurgical case other than ruptured intervertebral disk and head injury. This means that in the coming decades most neurosurgeons will have relatively limited experience with brain tumors, spinal cord tumors, trigeminal neuralgia, and the other diseases that once monopolized the neurosurgeon’s time. As a consequence, most neurosurgeons will devote an ever increasing portion of their time to complex neurological problems, such as intractable pain, headache, epilepsy and abnormal involuntary movements, which may or may not require surgical treatment.

TWO SURGICAL DIVISIONS OF PITUITARY TUMORS

Most writers have divided pituitary adenomas into two groups: those confined to the immediate region of the sella turcica and those with extension of a large portion into the brain or nasopharynx. There is good reason
for this division because the surgical problems presented by the two types are unrelated and the mortality rate is much higher in the latter group. The mortality rates for the large tumors were 35 per cent in Olivercrona’s series,\(^1\) 33 per cent in Jefferson’s series,\(^6\) and 34 per cent in Horrax’s series.\(^5\)

**ADENOMAS WITH CEREBRAL EXTENSIONS**

Only 2 of my 20 patients had pituitary adenomas with large portions extending into the brain. The great size and formidable location of the lesions were demonstrated pneumoencephalographically and confirmed surgically as well as at necropsy. Both of these patients (Mrs. M.A.S., aged 27 years and Mr. C.C., aged 59 years) were stuporous prior to operation. In retrospect, these operations, performed in 1943 and 1946, were not well planned. The goal was to remove at one operation as much tumor as possible and to preserve the small amount of remaining vision. Probably it would have been better to plan a two-stage operation with removal of part of one frontal lobe and part of the tumor first. If this had resulted in restoration of consciousness and normal intracranial pressure, another operation could have been performed to remove still more of the tumor and decompress the optic apparatus.

Jefferson,\(^6\) White and Warren\(^9\) and others have written in an illuminating manner on the surgical management of these large tumors. Jefferson pointed out that operation on these patients is a course of doubtful wisdom and not often beneficial to the patient.

An example of nonintervention is the case of R.S., whom I examined in 1955. She had been successfully treated for a pituitary adenoma elsewhere many years before. The original operation had corrected the bitemporal hemianopsia and had enabled her to continue as manager of a large business office. Shortly after her retirement at the age of 65 years her sight began to fail, and when she consulted me, she was nearly blind. In spite of absence of manifestations of increased intracranial pressure, pneumoencephalograms showed extension of a large portion of the tumor into the right frontal lobe. Her insistent request for surgical treatment was not granted because she was healthy and happy and she had no living relatives to care for her if invalidism developed. This decision has thus far proved to be wise. When last seen on Oct. 20, 1956, she was still well and completely adjusted to total blindness.

**ADENOMA CONFINED TO REGION OF SELLA TURCICA**

The remaining 18 patients of the 20 in this series had relatively small adenomas confined to the immediate region of the sella turcica.

One of them (W.P.K.), a man aged 41 years, was operated on in 1941 by the late Walter Dandy, a left-sided approach having been used because vision was poorer on that side. Transient aphasia had followed operation but vision had promptly returned to normal.

When the patient consulted me 8 years later, he was again unable to read with the left eye and there was no vision in the temporal field of the other eye. At operation in 1949 via the old left-sided flap, an “empty” sella turcica was found. How-