GIANT CELL TUMOR OF THE SPHENOID BONE
REPORT OF A CASE

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Giant cell tumors of bone are most commonly found in the long bones but occasionally they occur in the skull and elsewhere. According to Wattles the bones affected are, in order of frequency, long bones, small bones, maxilla, mandible, vertebrae, ribs, scapula, clavicle and the ethmoid, sphenoid, temporal and frontal bones. From a search of the records in the surgical pathologic laboratory of the Johns Hopkins Hospital for a period of thirty-five years, Geschickter and Copeland found only 22 cases of giant cell tumor occurring in the skull. Two of these were found in the sphenoid bone and the remainder in the jaws. Details of the two tumors in the sphenoid bone were not given. Analysis of the available medical literature has failed to reveal any other cases of giant cell tumor of the sphenoid bone. This is one of the reasons that the following case is reported.

REPORT OF A CASE

G. G. a 12-year-old girl was seen by me on June 16, 1943 at the Baptist Hospital in New Orleans at the request of Dr. William H. Gillentine. About two weeks before, the child had completed the seventh grade at school at the head of her class. Shortly thereafter she began to vomit and complained of headache and double vision. The child's mother stated that the patient had been irritable for several months and that occasionally there was a one-degree rise in temperature. She had grown three inches in height in the past year and had not begun to menstruate.

Examination. A complete sixth nerve paralysis on the right was noted, the pupils were unusually large and the eyegrounds and visual fields were normal. The remainder of the physical and neurologic findings were negative.

Hematologic examination revealed a red blood cell count of 5,120,000, hemoglobin 97 per cent and white blood cell count of 7,350. Spinal fluid pressure was 140 mm. of spinal fluid. The total protein content was 32.4 mg. per cent. The gold-sol test was 2111100000. The Wassermann reaction was negative.

FIG. 1. Note destruction of sella turcica. This appearance is identical with that produced by cerebellar tumors of long standing.
Roentgenograms of the skull (Fig. 1) revealed complete destruction of the sella turcica suggesting either a cerebellar tumor or a large adenoma of the pituitary gland.

Course. A tentative diagnosis of tumor destroying the sella turcica was made and the patient was discharged from the hospital June 17, 1943 for a period of observation at her home. She began to sleep much of the time during the day, vomited occasionally but experienced no further headaches. The visual fields, which were examined on June 24, 1943, showed central scotoma on the right. Visual acuity on the right was 20/50 and on the left 20/15.

Admission. On June 30, 1943 the patient was admitted to the Touro Infirmary. Two days before numbness of the left cheek had developed and vision in the right eye had begun to fail. An encephalogram made under intravenous anesthesia revealed a normal ventricular system, but a rounded mass was seen in the region of the sella turcica which had elevated the cisternae chiasmatica and interpeduncularis (Fig. 2). The impression was that the patient had an atypical pituitary adenoma, an uncalcified craniopharyngioma or a teratoma of the pituitary region.

Operation I. On July 3, 1943, under local anesthesia, exposure of the optic chiasm revealed that the diaphragma sellae was in contact with the optic nerves and chiasm but it was not sufficiently elevated to flatten the optic nerves or to separate them. The diaphragma was coagulated and the sucker was pushed through it. A large cavity occupied the region of the sella turcica. The fluid contents of the cavity were aspirated by the sucker. A portion of tissue from the tumor adhered to the sucker and this was sent to the pathologist for histologic diagnosis. From the hole in the diaphragma there was brisk, persistent bleeding which was controlled by plugging the hole with a piece of temporal muscle. The dura was closed with cotton and then sutured to the periosteum. The bone flap was laid in place; the scalp was closed in two layers with cotton.

Pathological Report. Dr. J. R. Schenken made a diagnosis of giant cell tumor of bone (Fig. 3). This diagnosis was also made by Dr. Granville Bennett of the Tulane Medical School.

Fig. 2. Air in the displaced cisternae chiasmatis and interpeduncularis outlines the superior surface of the tumor.