Parajugular Foramen Chondroma
Case Report

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Chondromas, and the related osteochondromas, are among the most unusual intracranial neoplasms. There have been 102 such tumors reported,1,10,12,17,19,20 43 of which have been intracranial, usually arising from the sphenoid bone and extending into the parasellar region. The second largest group originate from the parietal or frontoparietal region. Isolated cases of parasagittal or intraventricular tumors have also been reported.1

An uncommon site of origin is the posterior wall of the petrous bone with extension into the posterior fossa. Seven posterior fossa chondromas have been reported,2,6,13,14,18,19,21 two of these were characteristic of the syndrome of the jugular foramen.2,21 The symptoms, signs, and radiological picture are such that a correct preoperative diagnosis may be made.

Case Report

This 22-year-old woman was admitted on September 26, 1966, complaining of hoarseness. Two years previously she had noted difficulty in swimming, specifically a weakness in elevating the left arm above the horizontal. Occasionally when talking, she had a feeling of spasm of her tongue. Her voice grew progressively hoarser, and 6 months later regurgitation of liquids occurred when swallowing. Her symptoms progressed gradually. A diagnosis of syringobulbia was made elsewhere 1 year before her admission, and x-ray therapy given. However, her symptoms continued to increase. She noted a widening of the left supraclavicular fossa with a more prominent left clavicle. She never complained of headaches, except for a mild discomfort in the left occipital region during maximum flexion of the head.

Examination. The patient was well oriented and cooperative. Her voice was hoarse and had a nasal quality. The left side of the soft palate was paralyzed. The left trapezius and sternocleidomastoid muscles were paralyzed and atrophic (Fig. 1). Taste was lost on the left half of the tongue posteriorly. The optic discs were blurred but not elevated. There were no motor or sensory changes elsewhere. Cerebellar functions were normal. The ear, nose, and general physical examinations were normal.

Skull x-rays revealed in the axial projection an erosion of the left jugular foramen as well as erosion of the petrous bone in its foraminal margins (Fig. 2). Tomographs taken in the same position (Fig. 3), and special jugular foramen views using the Chausé II projection (Fig. 4), showed a diffused destruction and irregular erosion of the anterior part, the pars nervosa, of the left jugular foramen with sparing of the pars vascularis. There was a striking destruction of the posteromedial wall of the left petrous pyramid extending anteriorly almost to the apex. The affected jugular foramen was about twice the size of the right one. No abnormal calcifications were observed. A left carotid angiographic study was normal, and a preoperative diagnosis of an extrinsic tumor at the jugular foramen was made.

Operation. On September 29, a left suboccipital craniectomy was performed. On elevating the left cerebellar hemisphere a large extradural mass was found occupying the floor and lateral part of the posterior fossa. This mass extended medially and posteriorly almost to the lateral ridge of the foramen magnum. The outer third of the cerebellar hemisphere was excised. The dura covering the posterior part of the tumor was opened, and a granular, tough grayish-white, and poorly vascularized tissue was removed. The ninth, tenth, and eleventh cranial nerves had been stretched by the tumor but were easily separated from it. A small fragment of tumor was seen entering the jugular foramen and compressing these nerves at this point. This intraforaminal part of the tumor was completely

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removed, but it was necessary to sacrifice some nerve fibers. The twelfth cranial nerve had been stretched by the tumor and the seventh and eighth cranial nerves compressed. The brainstem had been pushed to the opposite side. The posteromedial wall of the left petrous pyramid was eroded and had small digital cavitations filled with tumor. All of the tumor was extradural and was completely removed. It appeared to originate from the posteromedial wall of the petrous ridge and extend into the cerebellopontine angle and jugular foramen, which was eroded.

*Microscopic Examination.* Sections taken from various portions of the tumor consisted of a mesenchymal proliferation with zones of well-differentiated cartilaginous tissue. The chondrocytes had an irregular distribution, with irregular and somewhat pyknotic nuclei. In some areas the chondrocytes formed compact groups of cells within a hyaline matrix. Other areas were more fibrotic and vascular. Isolated areas of calcifications were also seen. The diagnosis was chondroma.

*Postoperative Course.* The patient had an uncomplicated postoperative course. At first a moderate facial weakness and a hypoacusia were evident. There was a mild intentional tremor of her left upper extremity which subsided in a few days. The patient was discharged on the 18th postoperative day. One year after surgery she was leading a normal life. Swallowing was near normal, but the hoarseness was still noticeable.