Rhinology, 18, 209-211, 1980

Neurilemmoma of the maxillary sinus

J. Elidan and I. Gay, Jerusalem, Israel

SUMMARY

A case of a neurilemmoma of the maxillary sinus simulating antral malignancy is presented. The tumor was removed through a Caldwell-Luc operation, and during the follow-up period there was no evidence of recurrence. Neurilemmoma of the maxillary antrum is a rare tumor with excellent prognosis and low rate of recurrence.

Neurilemmoma (neurinoma) is relatively an uncommon tumor which was first established as a pathological entity in 1908 by Verocay.

Approximately 25-35% of all reported cases, not including acoustic neurinomas, occurred in the head and neck (Putney et al., 1964). Neurilemmomas of the nasal fossa and antral region are rare, and only few cases have been described in the literature. Kragh et al. (1960) found only 5 such cases out of the 148 histologically proven neurilemmomas of the head and neck which were seen during 47 years at the Mayo Clinic.

In another study (Weber et al., 1978) 176 neurinomas were found over a ten years period, of which 148 were acoustic neurinomas, and 28 arose from other nerves. Only a few originated from the nasal fossa and antral region.

A case report of a neurilemmoma of the maxillary antrum, which closely simulated antral malignancy is presented.

CASE REPORT

59 year-old male, was admitted to the Hadassah University Hospital for evaluation of pain and hypoesthesia in the right cheek, which had started six weeks previously. The patient was known to suffer from chronic sinusitis since his childhood, and at the age of 15 years, he had had an operation on his right maxillary sinus. Three weeks before admission excessive lacrimation from his right eye became an annoying problem.

On examination - marked sensitivity, slight swelling and hypoesthesia corresponding to the distribution of the right infra-orbital nerve were noted over the right cheek. The mucosa in the right side of the nose was swollen, with obstruction of the airway, but no tumor was seen. The rest of the physical examination was normal.

X-ray study of the nasal sinuses, revealed complete opacification of the right maxillary sinus, and thickened mucosa in the left one. Tomography (Figure 1) demonstrated a mass, filling the right maxillary antrum, with destruction of the

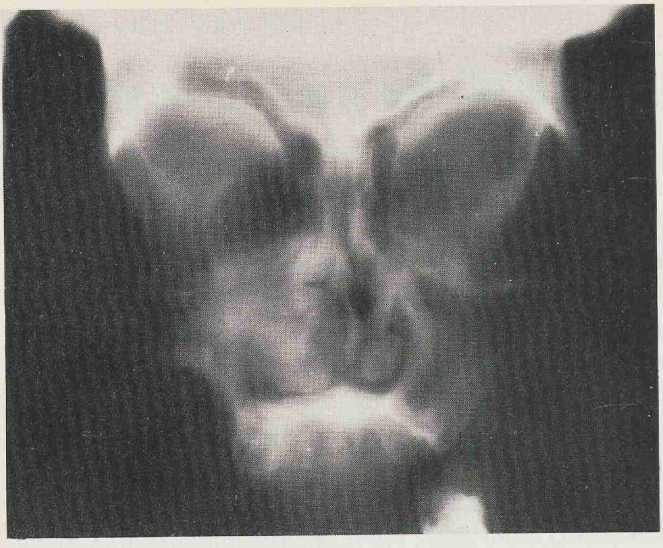

Figure 1.
A–P tomography of the paranasal sinuses.
A tumor-mass is demonstrated in the right maxillary sinus with destruction of the upper and medial walls of the sinus. The mucosa in the left maxillary sinus is thickened. The inferior concha in the right side of the nose is markedly swollen.

medial and upper walls of the sinus. The mucosa of the nose, particularly over the inferior concha on the right side, was markedly swollen.

The preoperative diagnosis, based on the history, physical examination and the x-ray study was of malignant tumor of the right maxillary sinus, possibly secondary to chronic sinusitis.

On exploration of the sinus through a right Caldwell-Luc operation, destruction of the anterior, medial and superior walls of the antrum was found. The sinus was filled with soft gelatinous tissue, which was removed and sent for pathological examination.

The histological diagnosis was of neurilemmoma. The patients's hospital course was uneventful, and he was discharged on the 6th post-operative day; subsequent examinations have disclosed no evidence of recurrence. The hypoesthesia over the right cheek remained unchanged but the epiphora disappeared after e few weeks.

COMMENT

Neurilemmomas are benign tumors which originate from the cells of the sheath of Schwann (Putney et al., 1964; Kragh et al., 1960). Characteristically a neurilemmoma is a solitary encapsulated tumor which occur along the course of a peripheral cranial or sympathetic nerve. When the nerve of origin is small, its association with a given tumor may be difficult to demonstrate (Kragh et al., 1964). The larger tumors often show spontaneous degeneration and hemorrhage.

Because of their slow growth, neurilemmomas tend to expand and thin the bony confines of cavities in the facial or paranasal sinus regions.

Most neurilemmomas are readily accessible, and simple surgical enucleation is usually sufficient. The recurrence rate is low even if a portion of the capsule is left. In the present case, pain, nasal obstruction, epiphora, hypoesthesia corresponding to the distribution of the infraorbital nerve, destruction of the bony walls of the antrum on x-ray study, all these – on the background of chronic sinusitis strongly raised the suspicion of antral malignancy. The histological diagnosis of neurinoma was a pleasant surprise, because of its rarity and excellent prognosis.

ZUSAMMENFASSUNG

Ein Fall eines Neurinoms in der rechten Kieferhöhle wird beschrieben. Der Tumor konnte nach der Caldwell-Luc Technik entfernt werden. Histologisch fand sich kein Hinweis für eine Malignität. Bei den postoperativen Kontrollen fand sich kein Anhalt für ein Rezidiv. Das Neurinom in der Kieferhöhle ist ein seltener Tumor mit guter Prognose und sehr geringer Rezidivquote.

REFERENCE

1. Verocay, J., 1908: Multiple Geschwülste als Systemerkrankung am nervösen Apparate Festschrift für Chiari, Wien und Leipzig, p. 378.
2. Putney, F. H., Moran, J. J. and Thomas, G. K., 1964: Neurogenic tumors of the head and neck. Laryngoscope 74, 1037.
3. Kragh, L. V., Soule, E. H. and Masson, J. K., 1960: Benign and malignant neurilemmomas of the head and neck. Surg. Gynec. and Obstet, 111, 211.
4. Weber, A. L. and Montgomery, W. W., 1978: Neurilemmoma of the maxillary antrum, Ann. Otol. Rhin. Laryng. 87, 436.

J. Elidan, M.D.
Dept. of Otolaryngology
Hadassah University Hospital,
Jerusalem, Israel