NEURILEMMOMA OF THE FACIAL NERVE PRESENTING AS A PAROTID MASS

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ABSTRACT: A facial nerve neurilemmoma manifesting as a parotid mass is a rare occurrence. Symptoms are slowly progressive and diagnosis is often delayed. We present a case report of a facial neurilemmoma, which presented as a parotid mass.

KeyWord: Facial neurilemmoma

INTRODUCTION
A neurilemmoma or neuromma is an ectodermal benign tumor arising from Schwann cells. They commonly present in the head and neck region and most of them arise from the vestibulocochlear nerve. Intraparotid neurilemmoma of the facial nerve is a rare tumor and may simulate the presentation of the more common parotid tumors. The surgeon should be aware of the possibility of a neurilemmoma presenting as a parotid mass and keep it in mind for the differential diagnosis.

CASE REPORT
We report the case of a 55-year-old female, who presented with complaints of gradually increasing swelling below the right ear, along with inability to close the right eye and deviation of angle of mouth for two months. There were no complaints of sudden increase in the size of the swelling, no history of ear discharge or decreased hearing. There was no preceding history of fever or trauma and no history of similar swelling elsewhere in the body. There was no history suggestive of any other cranial nerve involvement.

On examination, there was an ill-defined swelling in front and below the right ear approximately 3x2 cm in size. (Fig. I). It was mobile from side to side, non-tender and firm in consistency. Facial nerve examination showed complete infranuclear right-sided facial nerve palsy. (Fig. II). Rest of systemic and ear, nose, throat examination was within normal limits. Provisionally keeping in mind, the diagnosis of a parotid mass, we further investigated the patient. Fine needle aspiration cytology of the mass revealed it to be a nerve sheath tumor. Computed tomography scan showed a homogenous opacity in the right parotid region approximately 3x3 cm in size, with a dilated stylomastoid foramen and the overlying parotid tissue. (Fig. III) Audiometry revealed hearing to be within normal limits. Tympanometry showed stapedial reflex to be present.

The patient was taken up for tumor excision under general anesthesia. The superficial parotid tissue was splayed by a well-encapsulated spherical tumor which was adherent to the surrounding structures (Fig. IV). The extra-temporal

Fig. I: Side view of patient showing fullness in the parotid region.

Fig. II: Photograph showing infranuclear right-sided facial nerve palsy.

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Fig. III: CT Scan showing the parotid mass.

Fig. IV: Well encapsulated excised tumor mass.

facial nerve could not be delineated separately from the tumor. Proximally the lesion extended into the temporal bone and the stylomastoid foramen was found to be dilated and filled with a cheesy material. The vertical facial nerve could not be traced separately from the tumor mass. The extratemporal tumor was removed and wound closed in layers. The patient had an uneventful postoperative period and is free of recurrence over the last six months. Histopathology of the tumor confirmed it to be a neurilemmoma. The patient has undergone tarsorrhaphy, as a part of rehabilitation.

DISCUSSION
Benign neurilemmoma is a slow growing, encapsulated neoplasm, that originates from the neuroectodermal sheath of Schwann (Aston and Sparks, 1975). Approximately one-third of all reported neurilemmomas occur in the head and neck and most of these in the eighth nerve (Balle and Greisen, 1984). Neurilemmoma of the facial nerve is relatively rare and usually arises in the facial canal of the temporal bone.

Only nine cases of neurilemmoma arising from the trunk of facial nerve within the parotid gland were reported by Gibson and Hora (1969) and (Buddharaja and Perianayagam, 1973). Ibarz is credited with the first report of an intraparotid neurilemmoma in 1927. Since then, reports of this benign neoplasm have been infrequent (Prasad et al 1993). Age at presentation ranged from 5yrs. to 60yrs. and male: female ratio was 1:1. Cases manifested with a mass in the parotid region and facial nerve paresis/paralysis was apparent preoperatively in nine cases (25%); according to a series studied by Prasad et al. The most frequently affected portion was the main trunk of the facial nerve, as seen in our case. Multicentric lesions are rare, but certain authors recommend thorough inspection of all peripheral branches when dealing with extratemporal neurilemmomas of the facial nerve. In the majority of cases, sacrifice of the segment of involved facial nerve was necessary to allow total tumor removal; as was seen in our case.

Presenting signs and symptoms vary depending upon the segment of nerve involved. Early facial nerve dysfunction in intratemporal lesions can be attributed to pressure on the facial nerve, as a result of bony constraints of the fallopian canal as the tumor enlarges. Extratemporal intraparotid neurilemmomas may just present as an asymptomatic mass with no signs of nerve dysfunction. But a primary parotid malignancy is a more common finding when a parotid mass is associated with facial paralysis which can be easily diagnosed by fine needle aspiration cytology or if deep lobe is involved CT is advocated. A combined intra and extratemporal location may be found as seen in a case by (Balle and Greisen, 1984). They found that fine needle aspiration cytology, may not always be conclusive and definitive in establishing a preoperative diagnosis.

Since facial nerve schwannomas have been found to account for less than 1% of intrapetrous tumors and for 5% of all cases of facial paralysis and have an insidious and varied presentation, a high index of suspicion is very important for early diagnosis. Radiographic techniques of computed tomography and gadolinium enhanced magnetic resonance imaging are helpful in early diagnosis of these tumors.