Facial Nerve Schwannoma

G.S. Mankekar Junior Medical officer

A. G. Pusalkar Hony Associate Professor

C. A. Bhatt Hony. Associate Professor

AJBM ENT Hospital & T.N. Medical College , Bombay.

Abstract

An uncommon case of bilobed facial nerve schwannoma and its management is presented.

Facial nerve schwannoma is an uncommon condition and accounts for 5% of all cases of facial paralysis^{2,3}. These tumours present variedly with otological symptoms, facial paralysis, a mass in the middle ear or a parotid mass. Symptoms are slowly progressive and diagnosis is often delayed. A high index of suspicion combined with modern imaging techniques is essential to diagnose this condition early so that facial nerve function can be preserved.

Case Report

A fifty-five year old hypertensive and diabetic lady presented to us with a history of giddiness, tinnitus, decreased hearing in left ear, left facial weakness and a swelling in the left retromandibular region. Past history revealed that patient had developed sudden-onset giddiness and tinnitus three years ago. She was treated with labyrinthine sedatives for six months and her symptoms decreased. A year later, left facial weakness was detected and was treated with steroids and infra-red light. However, the facial weakness progressed over a period of twelve to eighteen months to complete facial paralysis. At this time the patient developed a swelling in the left

Fig 1 : Axial CT left infratemporal region : cystic mass compressing parotid tissue.

retromandibular region and was referred to our outpatient department. On examination, she was noted to have left lower motor neuron type complete facial paralysis. On otoscopy, the left external auditory canal was narrowed by the bulging posterior canal wall. A 4 x 4cm, Oval, firm, non-tender swelling was present in the left retromandibular region. Pure tone audiometry revealed a 40-50 decibel mixed hearing loss in the left ear with normal hearing in the right ear. Computed tomography

Fig 2: Coronal CT showing left temporal and infratemporal bilobed mass.

revealed a cyst in the left parapharyngeal region with a mass extending through the greater wing of sphenoid into the left mastoid antrum and posterior cranial fossa.

Under general anaesthesia, mastoidectomy with infratemporal fossa surgery was performed. The superficial parotid tissue was found to be compressed by a bilobed cystic swellings which extended upwards into the mastoid antrum and internal auditory meatus. The extratemporal extracranial facial nerve was completely circumscribed by the tumour and could not be delineated separately from the tumour. The vertical facial nerve was also difficult to delineate separate from the tumour mass, while the horizontal facial was dehiscent but continuous. The tumour was removed extradurally and the external auditory canal was sutured. The wound was closed in layers leaving behind a suction drain. The patient had an uneventful recovery and has had no complications or recurrence for the past one year. Histopathology of the tumour revealed schwannoma.

Discussion

Facial nerve schwannomas account for less than 1% of intrapetrous tumours² and for 5%

Fig 3: Coronal CT showing mass in left middle ear and extending to internal auditory meatus.

of all cases of facial paralysis^{2,3}. They can occur along the entire course of the facial nerve. The common sites of the schwannoma are geniculate ganglion, the horizontal segment of the facial nerve and at the cerebellopontine angle. Schwannomas along the vertical segment of the facial nerve and bilobed schwannomas are rare¹. Although facial nerve dysfunction is the commonest presenting symptom, facial nerve schwannomas may also present with hearing loss, vertigo and rarely otalgia⁵. Depending upon the presenting symptom, they may be mistaken for idiopathic facial palsy (Bell's), acoustic tumour, vertigo or even otitis media or externa. Since the clinical presentation of facial nerve schwannomas is so subtle and insidious, a high index of suspicion is the mainstay of early diagnosis. Any incomplete facial paresis progressing to complete facial paresis progressing to complete facial dysfunction is not idiopathic in origin and any paralysis lasting for more than six months is not Bell's palsy³. Therefore, any progressive or long-standing facial palsy needs to be investigated. Modern techniques of computed tomography and gadolinium enhanced magnetic resonance imaging enable early diagnosis of these tumours.

The mainstay of treatment is surgical removal of the schwannoma followed by repair of the facial nerve with an interposition graft or facial hypoglossal anastomosis⁴. However, in the present case, inability to delineate infratem-

poral and vertical facial nerve made it impossible to accomplish facial nerve reconstruction. An early diagnosis may have enabled either preservation or reconstruction of the facial nerve.

References

1. Altmann F (1973) Seventh facial neurinoma in : Surgery of Facial Nerve. A. Miehlike (E) W. B. Saunders, Philadelphia, pp 98-108.
2. Daniels et al (1987) : facial nerve enhancement in magnetic resonance imaging. AJNR ; 8 : 605-607
3. Fisch U and Ruthner J. 1977 : pathology of intratemporal tumours involving the facial nerve. In Facial nerve surgery ; U. Fisch (Ed) Kugler Publ. B. V. Amselveen, The Netherlands and Aesculapius Publ.Co., Birmingham, AL, pp. 448-456.
4. Horn K.L. et al (1980) : facial neurilemmomas laryngoscope 91 : 1326 - 1331
5. Jackson E.G et al (1980) : facial paralysis of neoplastic origin : diagnosis and management . laryngoscope 90 : 1581-1595.

III International Surgical Workshop on Middle Ear and Parotid and

State of the Art Symposium (1st to 4th November 1998)

Organising Chairman : Professor A. pusalkar

LIVE SURGICAL DEMONSTRATION ON MIDDLE EAR AND PAROTID

Faculty: Professor J. Helms, Germany, Professor E. Steinbach, Germany, Professor H. Hildmann, Germany Professor A. Pusalkar, India

State of the Art Symposium Panel Discussions

Fax No : 91-22-445 3802

Topic

Malignant Neoplasms of Larynx-Management-Voice conservation
Hoarseness-Dilemmas in diagnosis and management
State of Art approach to management of cholesteatoma
Management of Parotid-Facial Nerve Diseases

Moderator

Prof J. Helms, Germany
Dr. Jatin Mody
Professor A. Pusalkar
Prof. E. Stennert, Germany

Other Presentations

Iatrogenic Facial Nerve Injury -management
Strategies in treatment of malignant parotid gland tumors
Reconstructive methods in repair of extratemporal facial nerve
Options and limits in modern imaging of parotid gland tumors
Surgical management of pleomorphic adenomas
Endonasal Sinus Surgery by the Microscope
Problems in Secondary Rhinoplasty
Endoscopic Surgery of the Middle Ear
Surgical anatomy of the larynx, parotid, facial nerve and nose in relation to Rhinoplasty
3 Dimensional radio therapy of head and neck cancer
Voice rehabilitation after laryngectomy
Screening for hearing disorders in small children
Cholesteatoma with central perforation

Prof. J. Helms, Germany
Prof. E. Stennert, Germany
Prof. E. Stennert, Germany
Prof. E. Stennert, Germany
Prof. E. Stennert, Germany
Prof. H. Hilfmann, Germany
Dr. W. Gubisch, Germany
Prof. T. S. Karhuketo, Finland
Prof. Jan Pahnke, Germany

Dr. Leo Pfreundner, Germany
Dr. Florian Hoppe, Germany
Mrs. A. Hildmann, Germany
Dr. Mazin-Al-Khabori, Muscat

Other eminent Otolaryngologists from India and abroad will participate.

For registration Demand draft of rs 3000/- drawn in favour of AJBM HOSPITAL SURGICAL WORKSHOP on any nationalised bank in Mumbai

Mailing address Organizing Secretary, 3rd International Surgical Workshop
AJB Municipal ENT Hospital, 7 Maharshi Dandhichi Marg, Fort, Mumbai 400001