Facial Nerve Paralysis

Pages with reference to book, From 102 To 104

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Abstract

Five cases of facial nerve paralysis due to uncommon otological causes are presented. The importance of involvement of otologists and the necessity of surgery in these cases is discussed. Fairly good results are obtained with early surgery which is a highly technical and skilled procedure (JPMA. 34 102, 1984).

Introduction

Facial nerve paralysis is the commonest of all peripheral nerve lesions (Groves, 1971). The most frequently encoUntered cause of this paralysis is Bells Palsy which is mainly treated by General Practitioners and Physicians. The other causes of facial palsy are not so widely known, though these are managable if the otologists are involved. These include infection, cholesteatoma, fractures of the temporal bone and iatrogenic facial nerve paralysis. Five cases of facial palsy and their management is presented.

Case Reports

Case No. 1. A.R. a boy of eight years fell down from the roof of his house on 7th March 1979 and remained unconscious for four hours. Head injury observations were made in a peripheral hospital and he was referred to the outpatients two weeks after the accident. On exanimation, right complete facial palsy was noted. The mastoid was explored on the fourteenth day of injur.y; The facial bridge was taken down, facial canal was found penetrated by a bone chip which had broken off from the posterior meatal wall just anterior to the genu. This was removed and the mastoid cavity was closed facial nerve recovery started one month after surgery with complete recovery after six Months.

Case No. 2. M .A. a six years old boy had history of bilateral otorrhoea. A cholesteatoma was noted in the left ear with conductive deaness. The audiogram showed a hearing loss more on the left side, on exploration of the left mastoid. The antrum was full of granulation tissue, and cholesteatoma and thus had mislead the surgeon resulting in complete division of the facial nerve at genu. The bridge was taken down and the Incus and head of the Maleus were removed. A nerve graft was taken from the left lateral cutaneous nerve of the thigh and placed in the gap in the facial nerve, stabilizing it with sterispon. The mastoid cavity was then packed. Post operatively there was complete left facial nerve paralysis. The first improvement was noted S months later in + the alaenasic muscle. The patient is still under observation. Movements in the orbicular oculi have returned but there is no movement at the angle of the mouth, thus indicating a sixty percent recovery.

Case No. 3. MS a male of 45 years age came with a right sided facial palsy since 23 days after a mastoid surgery. He had a past history of otorrhoea on the right side. An audiogram showed hearing reduced to 70 decibels. The right facial nerve was explored the- next day by a combined post aural and endaural incision. The facial bridge bad already been partly taken down and the head of the maleus was found missing. The entire horizontal tympanic part of the nerve upto the genu was absent. The distal end of the facial nerve in the vertical segment was located and further debridement was done, removing all granulation tissue. The cavity was widened further. A nerve graft was taken from the lateral cutaneous nerve of the thigh and approximated between the two ends of the facial nerve. The junction

were stabilized by sterispan. Facial nerve recovery started in six months time and complete recovery of the nerve took place after eighteen months. This patient developed a dead right ear.
Case No. 4. M.B. an eighteen year old female reported with a right sided facial weakness. Examination showed partial facial paralysis on the right side more prominent in the lower segment. An audiogram showed a hearing of 60 decibels more in the higher frequencies. Examination of the ear showed extensive cholesteatoma in the attic and posterior part of the tympanic membrane. The mastoid was explored and the entire facial nerve from the geniculate ganglion to the stylomastoid foramen was found dehiscenced and oedematous particularly the vertical segment and in around the genu. The vertical segment appeared to lie in the meatus. At the stylomastoid foramen it was covered by a thin plate of bone. All the cholesteatoma was removed and a radical mastoid cavity was created. The facial nerve started recovering after three months and a complete recovery of facial function was attained after one year.
Case No. 5. A.N. a thirty year old male had a history of left sided ear discharge of long standing duration, but with a recent onset of pain and deafness. Examination showed a subtotal perforation on the left tympanic membrane and a slight weakness of the face. An audiogram showed hearing reduced to 50 decibels. An operation was proposed for which the patient was reluctant. Within the next few days facial weakness increased and the patient reappeared with a total left sided facial palsy. The facial nerve was explored through a post aural incision on 6th June 1982. Granulations polypoidal mucosa and cholesteatoma were present and were removed. There was a large sac of cholesteatoma in the perifacial cells of the horizontal portion just distal to the geniculate ganglion forming a large gap in the bone. This was also excised. The rest of the facial nerve was intact. Intensive post operative physiotherapy was carried out and the first improvement appeared after three months. Complete facial functions were achieved in twelve months time.

Discussion

Ibn-e-Seena was the first Physician who suggested the repair of divided nerves by bringing the severed ends together and suturing the epineural tissue (Shambaugh, 1977). The exploration and repair of the facial nerve is still limited to only certain centres of otology even in advanced countries as it is a highly technical procedure. Accurate and meticulous apposition of clearly transected distal and proximal epineurium is one of the important goals (McCafe, 1972). Advancements of this type of surgery has been seen in the last twenty years ; Michike and Fisch (1973) a leading facial nerve surgeon has done about 79 facial nerve explorations. It is a surgery worth attempting, as the lesions of the facial nerve have a poor prognosis if left alone (Michlke, 1979). The ordeal of the palsy and the courage to tolerate it are extremely damaging to the patient.
Trauma, involving the immediate neighbourhood of the geniculate ganglion, which may be crushing, tearing or torsion, may damage the facial nerve (Chiossone, 1977). In our first case it was a bone chip which had broken off and penetrated just anterior to the genu, which is also a well known cause of traumatic facial nerve palsy. Cholesteatoma as in cases 4 and 5 may involve any part of the facial nerve. Iatrogenic facial paralysis is more common in those centres around the world, where assistants receive their specialists training, as depicted in case 2. It is also a surprising fact that those palsies caused by Otosurgeons are not accepted because one does not want to, as is seen in case 3. During surgery it should be kept in view that the facial nerve may have an aberrant course (Greisen, 1975). It is also not usually necessary to decompress the whole facial nerve. Classical mastoidectomy appears essential in our experience with the five cases presented, though Goodhill (1979) suggests that intact canal wall procedure may be sufficient.

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