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Original Research Paper

Otorhinolaryngology

BILATERAL LOWER MOTOR NEURON FACIAL PALSY IN A PATIENT OF BILATERAL MIDDLE EAR DISEASE

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ABSTRACT Facial paralysis is an uncommon complication of otitis media which requires early detection and appropriate care. Patient of bilateral middle ear disease with bilateral facial paralysis is taken and treated and followed for 1 month. Patient with bilateral middle ear disease with bilateral facial paralysis when treated conservatively and surgically by bilateral cortical mastoidectomy with exploratory tympanotomy gave successful recovery of facial paralysis

KEYWORDS :

INTRODUCTION

Facial paralysis is an uncommon complication of otitis media which requires early detection and appropriate care.

Bilateral involvement of facial nerve, defined as appearance of paresis or paralysis of the contralateral facial nerve within 30 days of the onset of the first side, is a very rare entity, occuring in only 0.3% to 2% of patients with facial paralysis.

Case Report

A 62 yr old male patient came to our OPD with complaints of Right ear pain since 6 months.

10 days after the onset of Right ear pain, patient noticed facial weakness of the same side.

15 days after the onset of Right ear pain, patient developed Left ear pain, which was followed by facial weakness of the left side; 15 days after the onset of left ear pain.

Associated with mild hearing loss in both ears.

On Presentation

Eyes open

Attempts eye closure

Patient received medical line of treatment in othercentres for the past 6 months.

(patient had poor response to medical therapy).Patient is a known case of Type 2 Diabetes, Hypertension (on medication). Patient had no history of ear discharge, fever, ear/head trauma, or previous ear surgeries.

On examination, Patient was found to have Bilateral LMN facial palsy, Grade V (House-Brackmann).

On Otoscopy, posterio-superior meatal wall sagging was seen. TM was intact, dull in appearance with restricted mobility.

Bilateral mastoid tenderness was elicited.

Nose, Throat examination – Normal

Investigations

Pure Tone Audiometry(PTA) – Mild to Moderate high frequency mixed hearing loss in bilateral ears. (Right Ear – 37dB, Left Ear – 33dB)

HRCT scan of Temporal Bones – Soft tissue attenuation material noted in bilateral middle ears and mastoid antrum – likely CSOM.

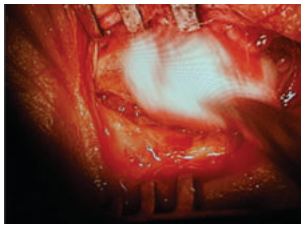
NCCT scan of Brain – Normal Study

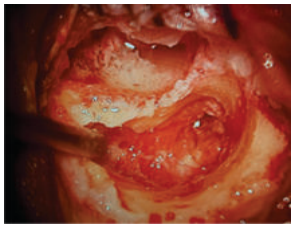
Management

Patient was planned for Bilateral Cortical Mastoidectomy with exploratory tympanotomy. Intra-operatively, sub-periosteal abscess with multiple infected air cells and erosion of outer cortex along with granulations were seen in mastoid antrum.

The tympanic or horizontal segment of facial nerve was found to be dehiscent along with presence of glue and granulations in the mesotympanum.Pus sent for Culture & Sensitivity revealed No bacterial groth after 48hrs of incubation.

Granulation tissue sent for HPE revealed fibrocollagenous tissue with foci of lymphocytes, plasma cells and occasional eosinophils with lobules of chondroid tissue containing mature chondrocytes. Impression – Granulation tissue with chondroid metaplasia.





1 week post surgery

Eyes open

Attempts eye closure

1 month post surgery (partial recovery)

Eyes open **Attempts eye closure**

DISCUSSION

Facial nerve paralysis may be a complication of either AOM or COM.

Facial nerve palsy has become an uncommon complication of acute otitis media in the recent era, with an estimated incidence of about 0.005%. It was a common complication in the pre-antibiotic era, with an estimated incidence of around 0.5–0.7%.

When facial nerve paralysis is noted in a patient with COM, cholesteatoma should be suspected.

Unlike unilateral facial paralysis, where the cause is mostly idiopathic (over 50%), bilateral facial palsy is less often idiopathic (under 20%).Bilateral concurrent facial nerve paralysis is most probably associated with a systemic condition, the most common being Guillain–Barré syndrome, but is also seen in patients with cerebral lymphoma, leukemia, sarcoidosis, Lyme disease, rabies, infectious mononucleosis and Moebius syndrome.

Mastoiditis has been demonstrated as a more rare cause of facial nerve palsy; however, majority of cases in the literature are in the pediatric population and are unilateral.

Surgical intervention should be employed in case of acute or coalescent mastoiditis, suppurative complications and lack of clinical regression.

CONCLUSION

Work up of a patient with bilateral facial palsy should include detailed history, clinical examination and relevant investigations to rule out the underlying etiology.

Facial nerve palsy that is secondary to acute otitis media should be treated promptly with conservative measures that include appropriate Intravenous antibiotics and corticosteroids for complete recovery.

Surgery is indicated when there is suspected silent or masked mastoiditis, a complication of acute middle ear infection which is due to inadequate antibiotic therapy and/or aggressiveness of infectious agents.

The aim of surgery is to arrest the coalescent process and to protect the nerve from further damage.

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