

Microtia of Right Ear with Post Auricular Mastoid Fistula and Grade-4 Facial Nerve Palsy: A Case Report

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Abstract:

Introduction: Microtia is a congenital ear aberration that can range in severity from minor structural abnormalities to complete ear absence. It can appear as a single congenital disability or part of a spectrum of defects or a syndrome. Microtia is frequently connected with hearing loss, and patients commonly require hearing aids and surgical ear reconstruction.

Chronic ear disease or ear surgery can cause a complication Postauricular mastoid cutaneous fistula. Because of the necrotic skin borders, simple closure is frequently complex, and it may result in a bigger fistula. Postauricular cutaneous mastoid fistula is a rare disorder. Chronic suppurative otitis media cause is an infrequent complication of chronic otitis media. Because of the surrounding necrotic skin edges, the fistula tracts are typically difficult to manage.

Children with peripheral facial palsy provide a diagnostic challenge since proper diagnosis and the identification of the etiologic nature of the palsy are required for optimum treatment at the point of care.

Presenting Complaint and investigations: The child had complaints of discharge from opening behind the Right ear since birth and deviation of angle of mouth since birth. He has a Complaint of incomplete closure of the right eye.

Primary diagnosis, therapeutic interventions, and outcomes. Microtia with right post auricular mastoid fistula with right facial palsy. The patient had undergone various investigations like Physical examination, blood tests, USG abdomen and pelvis, CT Sinogram, and MRI Brain.

Nursing Perspectives: Vital signs were checked and recorded, a child has monitored the child for bleeding and pain, and maintained fluid and electrolyte balance. Observed the outcomes of treatment.

Conclusion: In children, facial palsy can be a warning indication of a significant underlying disease, such as a tumor, systemic disease, or congenital defects, with a terrible prognosis. As a result, with children, thorough inquiry and differential diagnosis are essential. Bell's palsy has an excellent prognosis in children; patients usually recover within three months.

Keywords: Cutaneous fistula, Otitis media, mastoid, surgical flaps.

Introduction:

The outer, middle, and inner ear are the three parts of the vertebrate ear. This article focuses on external ear abnormalities, especially auricle malformations, referred to as microtia. Other parts of the external (acoustic meatus and tympanic membrane), middle, and inner ear are also frequently impacted because of other craniofacial and extracranial anomalies. Microtia is a condition in which the external ear is tiny and poorly developed. The condition of the postauricular cutaneous mastoid fistula is not common. Chronic suppurative otitis media can lead to a cutaneous mastoid fistula, which is a very rare condition. Because of the surrounding necrotic skin borders, fistula tracts are often challenging to control.¹

The most frequent cranial nerve paralysis is facial paralysis and is mostly idiopathic. Idiopathic facial nerve paralysis or Bell palsy is acute. It affects the entire face, which is usually associated with hyperacusis, a decrease in lacrimation, salivation, or dysgeusia, and resolves on its own. By doing a thorough history and physical examination, the diagnosis of idiopathic facial paralysis is made to eliminate alternative etiologies and follow-up to ensure recovery of facial function. Alternative reasons for facial paralysis that require workup include atypical presentation, recurrent paralysis, additional neurologic impairments, lack of facial recovery in 2-3

months, or a history of head and neck or cutaneous cancer. The incorrect usage of the eponymous Bell palsy to refer to any cause of facial paralysis, regardless of past or presentation, can lead to cognitive errors such as premature closure, anchoring bias, and diagnostic momentum. So we suggest replacing the eponym Bell palsy with idiopathic facial nerve paralysis.²

Patient Information:

The patient was four years old and admitted to ENT Ward. He is a child from an orphanage admitted by the caretaker.

Past medical and surgical history:

The patient is a known case of right pinna deformity with facial nerve palsy since birth, complaint of opening behind the right ear since birth, and deviation of angle of mouth since birth. Complaint of incomplete closure of right eye since childhood. Sinogram of right preauricular region done on suggestive of sinus fistula communication noted up to mastoid air sac.

Other histories: Not available.

Clinical Findings:

On Physical examination, right auricular microtia with postauricular sinus was found. Bilateral intact facial nerve deviation of angle of mouth to the left. Inability to close eye with was noted. Protrusion of tongue present. Examination of neck and palpation revealed left cervical lymphadenopathy at Level II.

Timeline:

The patient was admitted to Tertiary Care Rural Hospital, with chief complaints of discharge behind the right ear since childhood. Complaint of deviation of angle of the mouth towards right since childhood. The patient has had a complaint of incomplete closure of the right eye since childhood.

Diagnostic Assessments:

History collected, physical examination done, MRI Brain and Ultrasonography done. Sinogram (right preauricular region) – sinus fistula communication noted up to mastoid air sacs. No apparent connection with the middle ear cavity suggestive of first brachial cleft cyst was noted.

Diagnostic challenges: No diagnostic challenges reported.

Prognostic characteristics: The patient's prognosis is good, but there can be the possibility of fistula recurrence in rare cases. Post auricular mastoid fistulectomy is a simple and effective procedure.

Therapeutic Interventions

The patient was operated on for post auricular mastoid fistulectomy with tongue-tie release under general anaesthesia.

Postoperative Medications:

Intravenous RL 500ml, DNS 500ml, Inj. Augmentin 610 mg. IV Bid, Inj. Dexta 2 mg IV Bid, Inj. Pan 15 mg IV Bid. Inj. Neomol 30 ml .TDS

Tab. Zerodol P ½ Bid, Tab Chymoral Forte ½ TDS, Tab. Etriz ½ Hs., Normal saline (Cold) gargles.

Changes: No changes made in therapeutic intervention.

Nursing Perspectives:

He maintained personal hygiene to prevent further complications. Vitals checked and recorded, IV fluid is maintained, Provided adequate rest and sleep, calm and quiet environment. Observed the patient for bleeding, fever, nausea, vomiting, pain, discharge, and swelling over the suture site. Maintained intake output chart correctly.

Follow-up and Outcomes

After two days, the patient was advised to follow up in ENT OPD for suture removal.

Outcomes:

Tongue-tie released and speech therapy was advised. Post-operatively BERA test was done for hearing assessment. Post auricular mastoid fistulectomy was effective. Complications and adverse events: No complications and adverse events.

Discussion:

The patient was operated for post auricular mastoid fistulectomy with tongue-tie release under GA. There can be the possibility of recurrence of fistula in rare cases. Tongue-tie released along with which speech therapy the child be able to talk. Post auricular mastoid fistulectomy is simple and effective. According to Bruce S. Bauer, MD, of Children's Memorial Hospital in Chicago, in his review article Reconstruction of Microtia, microtia reconstruction remains one of the most challenging plastics surgery techniques. The reconstruction's limits are due to a combination of soft-tissue inadequacies ranging from big conchal residual microtia to lobular microtia to the displaced remnant in auricular dystopia, as well as the high level of technical expertise required.

Following a brief overview of the history of ear reconstruction in general and microtia in particular, difficulties relating to the shift in popularity from three-stage operations (Tanzer and Brent) to two-stage treatments (Nagata, Firmin, and Park) are examined in depth. Each of the prominent techniques is examined in terms of reconstructive timing, process planning, and how soft tissue and framework construction are managed at each stage.⁴

Postauricular advancement fascia-cutaneous-periosteal flap for closure of cutaneous mastoid fistula was reported by Olusesi AD et al.⁵ This approach was used to successfully managing two women with cholesteatoma, aged 33 and 41. The first case had right ear cholesteatoma, automastoidectomy, and a persistent discharging cutaneous mastoid fistula and was treated with canal wall-down mastoidectomy and postoperative mastoid cavity cleaning. Despite conservative care, the cutaneous mastoid fistula persisted after surgery and was successfully repaired with this approach 14 months later. The second instance received canal wall-up mastoidectomy with limited atriotomy for left attic cholesteatoma extending to the mastoid antrum. Still, four months later developed persistent mastoid cutaneous fistula, which was treated with this approach. Even though she had delayed wound healing, the fistula eventually closed. There has been no recurrence in each case after 24 and 18 months of follow-up. A number of related cases were reviewed⁶⁻¹⁰.

Conclusion:

Facial palsy in children might be an alarming sign of serious underlying diseases such as a tumor, systemic disease, or congenital anomalies, and the recovery is poor in those cases. Therefore, careful investigation and differential diagnosis are essential in children. Prednisolone does not make a significant difference in the outcome of the treatment of children with Bell's palsy. The prognosis of Bell's palsy in the pediatric group is good; patients usually recover within three months. For Post auricular mastoid fistula Post auricular mastoid fistulectomy is simple and effective. Closure of a chronic cutaneous mastoid fistula with a postauricular advancement flap is effective.

Present case was four years old male child with Right Microtia with right post auricular mastoid fistula, with complaints of discharge from opening behind Right ear since birth, deviation of angle of mouth since birth and incomplete closure of the right eye. Symptoms are reduced with proper treatment, and now the patient's condition is good.

Conflict of Interest: No conflict of Interest

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