

COLLAURAL FISTULA- A CASE REPORT

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ABSTRACT

Objective: We present the case of an adult male who presented with collaural fistula at 27 years of age with an opening in the external auditory canal.

Case Report: A 27-years-old male presented to us with a discharging wound on the left angle of the mandible for eight years. He had already undergone surgical intervention thrice at another health care facility with no relief of symptoms. Diagnosis of collaural fistula was made and excision of the tract with resolution of symptoms and healthy healing followed.

Conclusion: Collaural fistula can present in adults with no symptoms associated with external auditory canal. Index of suspicion needs to be high and otomicroscopy should be employed in cases of suspicion for early diagnosis.

INTRODUCTION

First branchial cleft anomalies are a rarity and their presentation in adults can become a diagnostic dilemma which can delay the eventual surgical intervention. These patients can present to Otolaryngology practice as well and index of suspicion needs to be high. Any suspicion should prompt early diagnostic measures including microscopic otoscopy which can reveal collaural fistulas earlier on. This paper presents a case of an adult patient with collaural fistula.

CASE REPORT

A 27 years old male presented to Outpatient department of the hospital with a discharging wound on left angle of mandible for 8 years. He was operated upon thrice before with no available records.

On local examination there was a 2x2 cm wound on left angle of mandible.

On otoscopic examination no lesion was noted initially in left external auditory canal and tympanic membrane was normal and mobile. His facial nerve was intact on presentation.

Sinogram was done showing a single sinus tract extending upwards communicating with external auditory canal, resulting in spill of contrast from external ear. (Figure 1)

It was decided to remove the fistulous tract under general anesthesia. A lazy S incision was given. Flap was raised which was more adherent and fibrosed around the tract and required meticulous dissection around the tract. Tract was then kept in view and gentian blue dye was injected with a butterfly which confirmed the spillage in external ear. The cervico facial trunk was displaced to a more superficial plane

because of this tract. Earlier in dissection facial nerve cord was identified anterior to the tragus, which was then confirmed with the deeper dissection to be originating from the main facial nerve trunk. It was further followed along its path, was seen branching and was found to be traversing just above the tract diagonally. Cervico facial trunk was dealt and preserved, and the complete tract of 2.5cm was excised with adequate margins at both ends (Figure 2). All layers and wound was closed.



Figure 1:

Facial nerve was tested with clenching of teeth and closure of eyes, it was found to be intact. Excised tract was sent for histopathology, which showed a cyst lined by stratified squamous epithelium with associated hair follicles, sebaceous glands and hyaline cartilage with no evidence of malignancy; findings were suggestive of type II branchial cleft anomaly. Patient was followed

up, his facial nerve function was intact and wound showed healthy healing.

Figure 2: Surgical Specimen (Fistulous Tract)



DISCUSSION

Brachial anomalies are the result of impaired maturation of brachial apparatus during the fourth and eighth week of development of fetus, normal development of first brachial cleft forms external auditory canal and lateral aspect of tympanic membrane. These anomalies have a close association with parotid gland and facial nerve. The migration path of the mesenchyme developing the muscles of facial expression, followed by the development of the branches of facial nerve, determines their proximity to the congenital tract. First brachial cleft abnormalities comprise only 1 to 8% of all the brachial cleft abnormalities.^[3]

Work classified the duplication anomalies into type I and type II. Type I are ectodermal in origin while type II are both ectodermal and mesodermal in origin having a cartilaginous content as well.^[3]

Collaural fistula is the least common of the first brachial cleft anomalies. It runs from the external auditory meatus down into the neck where it opens at a point between the angle of mandible and the sternocleidomastoid muscle. Otoscopic examination performed in this patient was inconclusive and should be followed with a microscopic otoscopic examination in the patients with a suspicion of collaural fistula, as it can prevent the delay in the management. This was missed in this patient and invariably delayed the diagnosis for 8 years since the beginning of symptoms. Site of presenting wound with otalgia, discharge or incidental finding on otoscopic examination are the

common presenting symptoms. Discharge is the most common and consistent finding in such fistulous tracts and sinuses.^[2]

Magnetic resonance imaging is the investigation of choice for accurate assessment of the tract before operating upon it. Nature of the fistula can be confirmed with radio-opaque sinogram with a water soluble contrast.^[1,2] nothing however, can show the relationship of tract with the facial nerve pre-operatively and intra-operative neurophysiologic neuroimaging can be employed for the identification of the nerve.^[3]

According to a study conducted upon 126 patients the median age of presentation of branchial cleft anomalies as fistula or sinus is 8.2 years^[4], while the adults generally present with branchial cysts. This is in wide contrast with our patient who was 27 years old with a history of discharge for 8 years which alludes upon the necessity to maintain a high index of suspicion for fistula in adults as well. Time of presentation and surgery can be an important consideration as the infection and scarring can alter the planes of dissection and make the identification of the facial nerve progressively more difficult.^[2] Facial nerve, in this patient was displayed with superficial parotidectomy, as is the standard procedure, and tract was dissected and excised.

Facial nerve cord was identified earlier on during dissection anterior to the tragus, which emphasizes the importance to be acquainted with techniques for identifying and locating the facial nerve at unusual locations.

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