

External Auditory Canal Cholesteatoma with a Rare Extension

Costas Riviezzo Gustavo^{1*} and Gelós Frade Matías²¹*Profesor Director Catedra de Otorrinolaringología, Universidad de la República, Hospital de Clínicas, Dr. Manuel Quintela, Montevideo, Uruguay*²*ENT Consultant, Sanatorio Cantegril, Asistencial Médica de Maldonado, Maldonado, Uruguay****Corresponding Author:** Costas Riviezzo Gustavo, Profesor Director Catedra de Otorrinolaringología, Universidad de la República, Hospital de Clínicas, Dr. Manuel Quintela, Montevideo, Uruguay.**DOI:** 10.31080/ASOL.2022.04.0488**Received:** July 18, 2022**Published:** August 22, 2022© All rights are reserved by **Costas Riviezzo Gustavo and Gelós Frade Matías.****Abstract**

Presenting to you the case of a 68 year old adult male, who 30 years ago had a Tympanoplasty performed on his right ear, with no follow up. He presents pain, otorrhea, facial palsy and TMJ tumefaction as signs and symptoms. External Ear Canal Cholesteatoma has spread forward, passed the ear towards the TMJ and parotid space. Since his audition was severely compromised, a Subtotal Petrossectomy had to be performed.

Keywords: Cholesteatoma; Temporomandibular Joint**Case History**

Male, 68 y/o, personal history of arterial hypertension and right ear Tympanoplasty thirty years ago with no subsequent control appointments, consulted in October 2021 for right ear otorrhea, which improved after antibiotic treatment.

- Physical examination: Very narrow EEC with debris and secretions.

Computed tomography of the middle ear shows occupation by density of soft tissue which erodes his temporomandibular joint.

Three months ago otorrhea became continuous, with intermittent pain and bluish tumor in the zygomatic area. A month later, patient installed IV degree facial paralysis. CT scan shows soft tissue density in the external auditory canal with erosion of the canal wall [2]. During surgery mastoid bone was observed sclerotic with cholesterol granuloma, external ear canal with keratin debris, Tympanic bone lysis, and cholesteatoma over TMJ

and parotid space. Cholesteatoma was removed, tissues were cleansed and complete mastoidectomy and closing of EEC were performed. Refilling of the cavity with temporalis muscle and retroauricular tissues.

Figure 1

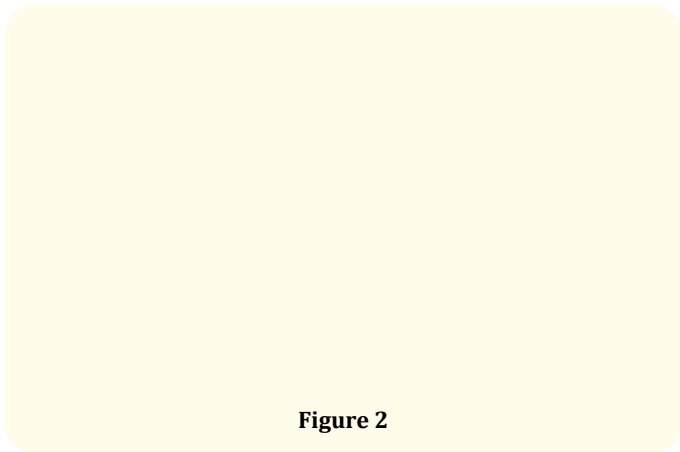


Figure 2

Scan images, right ear, axial and coronal. Sclerotic mastoid, occupation and bony erosion on EAC.

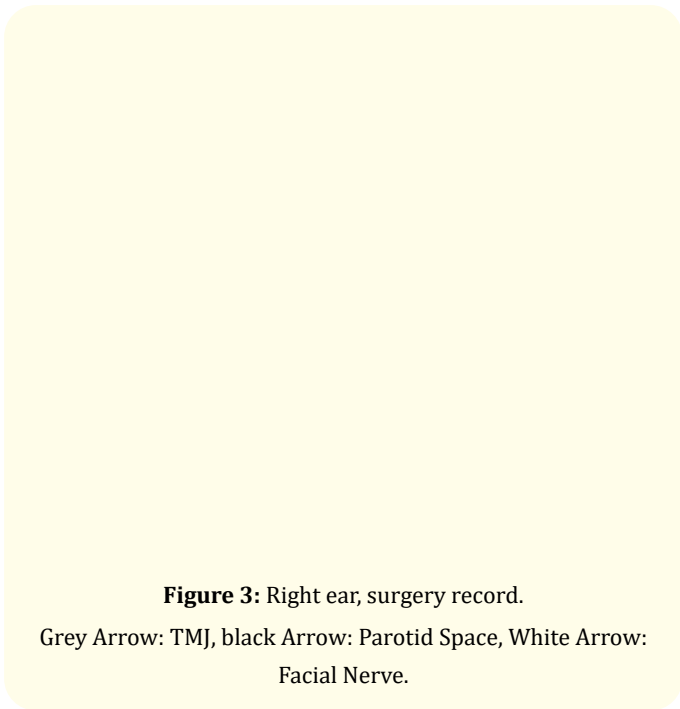


Figure 3: Right ear, surgery record.

Grey Arrow: TMJ, black Arrow: Parotid Space, White Arrow: Facial Nerve.

Discussion

Middle Ear Cholesteatoma usually begins at the attic or retrotymppanic space in a retraction pocket and presents sclerotic reaction on the mastoid bone. Nonetheless, EEC cholesteatoma is a different entity and may occur iatrogenically post ear surgery when epidermal tissue is left under the graft or when epidermal

tissue is put behind bone surface as a result of trauma. It can also be due to different causes, stenosis, osteoma, and several other unknown causes [3-5].

The invasion of the temporomandibular joint in association with facial nerve involvement and extension to parotid region through the anterior wall of the EAC is a rare extension [6,7] although late stage presentations are common [4].

Surgery treatment is the only viable option, and consists of Subtotal petrosectomy with facial nerve decompression, removal of the entire lesion and all epidermal tissue before the EEC is closed. The cavity is filled with temporalis muscle and tissues of the retroauricular area. In Cholesteatoma extended surgeries, the cholesteatoma itself guides the procedure and usually consists in remotion of the mass and expanding or sealing the access depending on the case. In this particular case the origin of cholesteatoma is probably located on the ear canal, iatrogenic or not because Tympanoplasty was performed a long time ago. Lysis of Tympanic bone was another relevant fact.

Conclusions

To sum up, cholesteatoma can be found in such diverse presentations and locations that will take us by surprise while practicing, which confirms there is no just one theory to explain etiology nor pathogeny.

Subtotal Petrosectomy might be a great therapeutical resource to maintain a cavity, even more so with present rehabilitation possibilities.

Bibliography

1. Dubach P and Hausler R. "External auditory canal cholesteatoma: reassessment of and amendments to its categorization, pathogenesis, and treatment in 34 patients". *Otology and Neurotology* 29.7 (2008): 941-948.
2. Dongol K., *et al.* "External Auditory Canal Cholesteatoma: Clinical and Radiologic Features". In *Archives of Otolaryngology* 26.2 (2021): e213-e218.
3. Sayles M., *et al.* "Operative management of external auditory canal cholesteatoma: case series and literature review". *The Journal of Laryngology and Otology* 127.9 (2013): 859-866.

4. Udhayuhanhu Hn., *et al.* "Cholesteatoma of the external auditory canal, review of staging and Surgical strategy". *Otolaryngology and Neurotology* 39.10 (2018): e1026-e1033.
5. Hanne H Owen., *et al.* "Cholesteatoma of the External Ear Canal: etiological factors, symptoms and clinical findings in a series of 48 cases". *BMC Ear, Nose and Throat Disorders* 6 (2016): 16.
6. Salimi F, *et al.* "Temporomandybular joint (TMJ) disorders as first clinical manifestations in external auditory canal cholesteatoma. A case report". *Annals of Medicine and Surgery* (Lond). 74 (2022): 103287.
7. Maharjan L and Rayamajhi P. "A Rare Case Report and Literature Review of External Auditory Canal Cholesteatoma with Circumferencial Destruction of Canal Wall Exposing Facial Nerve". *Case Reports in Otolaryngology* 2017f (2017): 7450482.