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Case Report

A Very Extensive Cholesteatoma Complicated by Facial Paralysis and Bezold Abscess

Bouzoubaa Y, Labib O, Saoutterih B, Bijou W, Oukessou Y, Rouadi S, Abada R, Roubal M and Mahtar M

ENT Departement 20 Aout Hospital Casablanca Morocco

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***Corresponding author:** Oussama Labib, ENT Departement 20 Aout Hospital Casablanca Morocco, Email: oussama1labib@gmail.com

A B S T R A C T

Introduction: Bezold's abscess is a rare complication of chronic otitis media, and it can be life-threatening with its insidious onset. Treatment consists of urgent surgical debridement and a long course of antibiotics.

Case presentation: We present a case of a 45-year female admitted to our department for a long-neglected otorrhea of the right ear complicated with facial palsy, mastoiditis, and two cervical fistulas; the patient presented a cophosis on the right side with grade VI facial palsy. Temporal bone CT scan showed a right filling of the middle ear with complete erosion of the mastoid cells, ossicular chain, and facial canal and extended erosion of the inner ear. The patient underwent a right canal-wall-down mastoidectomy, which showed destruction of the ossicular chain, the VII nerve canal, the LSCC, the vestibule, and the cochlea with an excision of the fistulous tract of the ancient bezold's abscess.

Discussion: It is rare to find BA (bezold's abscess) as the first otologic manifestation of chronic otitis media. Otalgia, otorrhea, and painful lateral neck swelling with postauricular fluctuance are the main clinical findings. Temporal CT scan and MRI normally show an abscess of the upper neck, which communicates with the destructed mastoid cavity via the eroded mastoid tip. Treatment consists of using intra-venous broad-spectrum antibiotics and surgical mastoidectomy with possible drainage of the abscess by trans mastoid approach.

Conclusion: Bezold abscess is a complication of mastoiditis that is rarely seen in daily practice since the regular use of antibiotics. The collection can fistulize to the skin if non-treated, which was seen in our patient. Treatment consists of surgical debridement and a long course of antibiotics

Keywords: Bezold abscess; Cutaneous fistula; Mastoiditis

1. Introduction

Chronic otitis media is commonly viewed in our day-to-day ENT consultations, but it is rare to see many complications in one patient. Bezold's abscess is an infrequent complication of mastoiditis[1]. The diagnosis's delay due to the initial unharming presentation can lead to life-threatening situations[2]. The surgical treatment consists of debridement of infected tissues and a long course of antibiotics.

Case Presentation

It is a case of a 45-year-old female admitted to our department for right chronic otorrhea with no significant surgical or medical history. The onset of the symptomatology goes back to childhood, with the patient having a right persistent purulent otorrhea complicated with facial palsy, mastoiditis, hypoacusis, and recurrent spells of vertigo. The medical examination found a healthy woman in a good general state;

the temperature was at 37,4 Celsius, and there were no anterior spells of headaches, vomiting, blurry vision, or any signs of intracranial hypertension. An otoscopy of the right ear exhibited stenosis of the right external auditory canal with an associated polyp blocking the exploration of the tympanic membrane. The left ear showed a non-marginal anterior perforation. An active retro auricular fistula orifice issuing pus on the right side was noted, and a second sequalae fistula orifice was also noted inferior to the precedent in the right spinal region. A complete right-sided peripheral facial palsy was also noted. The vestibular examination showed a grade 3 spontaneous left nystagmus and right swaying on the Romberg and the Fukuda examination. The neurological examination showed no other cranial palsies and no motor or sensory deficit. A pure tone audiogram showed right-side cophosis and left-side sensory-neural Hearing loss with an average threshold of 55 dB and an A-B gap of 15 dB. A temporal bone CT scan showed a right filling of the middle ear with complete erosion of the mastoid cells, ossicular chain, and facial canal, and extended erosion of the inner ear. A VHIT was demanded, exhibiting a unilateral right vestibular loss with many covert saccades in the middle eye traces. The bezold's abscess diagnosis was retained, and the patient was hospitalized and put on a long course of intravenous antibiotics and local treatment and toilet of both ears for 15 days. In the third week, the patient underwent a right canal-wall-down mastoidectomy, which showed destruction of the ossicular chain, the VII nerve canal, the LSCC, the vestibule, and the cochlea with an excision of the fistulous tract of the ancient bezold's abscess. The patient continued another five days' courses of intravenous antibiotics and dressing replacement every day, and the patient was released on the eighth day.

Discussion

Bezold's abscess (BA) is an intratemporal complication of mastoiditis that occurs when the infection surpasses the mastoid cortex laterally and goes medially to the attachment of the sternocleidomastoid muscle[3]. The regular use of antibiotics had a considerable impact on the number of cases of BA, with a significant decrease[3]. It is rare to find BA as the first otologic manifestation of chronic otitis media. Otalgia, otorrhea, and painful lateral neck swelling with postauricular fluctuance are the main clinical findings[4] our patient did not have neck swelling at presentation due to the fistulization of the abscess to the skin. Many studies concluded that cholesteatoma was the main otitic condition underlying in patients with extracranial and intracranial complications with a percentage of 53-78,5%[5-9]. Temporal CT scan and MRI normally show an abscess of the upper neck, which communicates with the destructed mastoid cavity via the eroded mastoid tip[5].

Treatment consists of using intra-venous broad-spectrum antibiotics, surgical mastoidectomy with possible drainage of the abscess by trans mastoid approach[10], and debridement of the granulation tissue[6]. In our case, the abscess fistulized to the skin; that's why we did not drain it surgically (**Figure 1,2,3,4,5 and 6**).

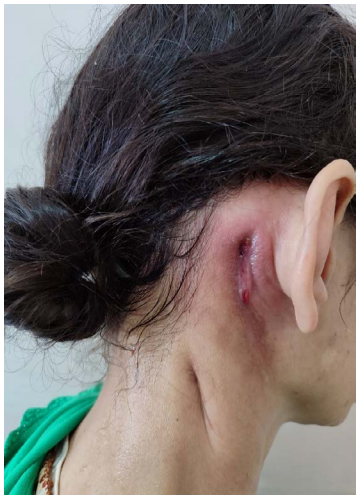

Figure 1: image showing a right retro auricular and spinal region cutaneous fistula confirming the outcome of the bezold's abscess.

Figure 2: Image showing a right peripheral facial palsy stage V on the HOUSE-BRACKMANN classification.

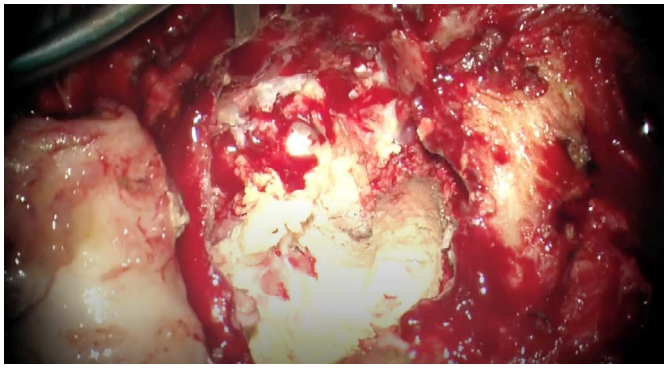

Figure 3: operative image showing the extension of the cholesteatoma and erosion of the mastoid and middle ear structures.

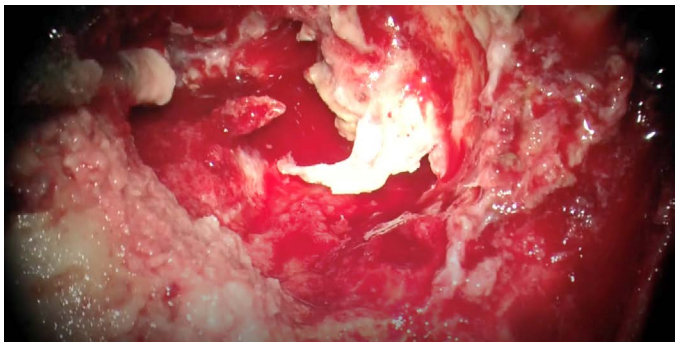

Figure 4: operative image showing the erosion of the fallopian canal and the facial nerve.

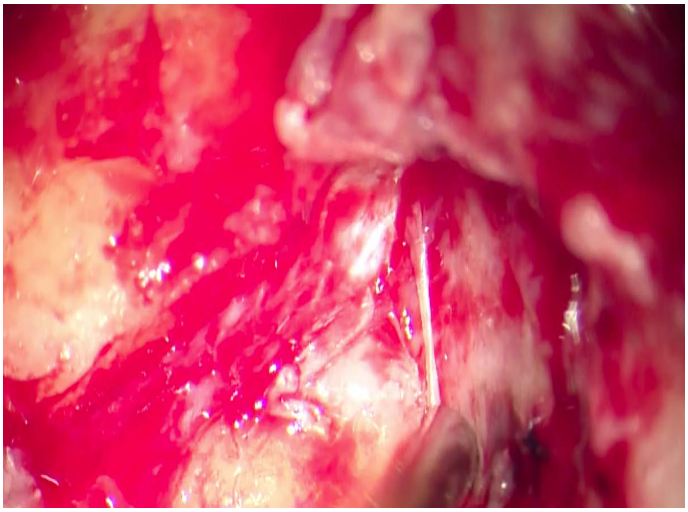

Figure 5: operative image showing invading the carotid canal and jugular gulf.

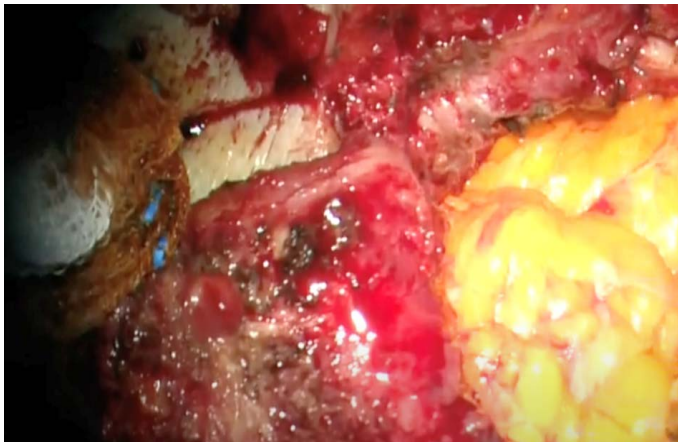

Figure 6: filling of the remnant cavity with abdominal fat.

Conclusion

Bezold abscess is a complication of mastoiditis that is rarely seen in daily practice since the regular use of antibiotics. The collection can fistulize to the skin if non-treated, which was seen in our patient. Treatment consists of surgical debridement and a long course of antibiotics

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