International Journal of Otorhinolaryngology and Head and Neck Surgery
Chouhan M et al. Int J Otorhinolaryngol Head Neck Surg. 2024 Oct;10(5):575-577
http://www.ijorl.com
pISSN 2454-5929 | eISSN 2454-5937

DOI: https://dx.doi.org/10.18203/issn.2454-5929.ijohns20242716

Case Report

A neglected case of chronic suppurative otitis media presented with a chest wall abscess

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Received: 16 April 2024
Accepted: 02 August 2024

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ABSTRACT

The objective of the study was to present a neglected case of chronic suppurative otitis media presented to us with a chest wall abscess. We encountered a case of complicated chronic suppurative otitis media in a 16-year-old male, who presented with abscess extending from the mastoid region up to the ipsilateral chest. Incision and drainage of the chest wall and mastoid abscess was under local anesthesia and approximately 250 ml pus was collected. The patient was given intravenous injections of meropenem and regular dressings. Right modified radical mastoidectomy with type 3 tympanoplasty was performed under general anesthesia after four weeks. The patient was discharged on postoperative day 6. The case is an eye-opener as having several complications at the time of presentation that reflects inattention at the community level health provider and patient. Through this article, we emphasis on early diagnosis and proper management of disease so as to avoid life-threatening complications. High index of suspicion and timely intervention is needed for any patient presenting with neck or chest swelling as it may be a complication of COM.

Keywords: Chronic suppurative otitis media, Cholesteatoma, Bezold's abscess, Chest wall abscess

INTRODUCTION

In this modern era of antibiotics, complications due to chronic suppurative otitis media are rare. Bezold's abscess which was the most common cause of neck abscess during the pre-antibiotic era, is nowadays, a rare entity.[1] Otitis media is a disease of childhood but 1.5% of all adults suffered from active chronic otitis media.[2] The incidence and prevalence of complications related to otitis media are now diminished due to the widespread use of antibiotics. The frequency of CSOM complications was 20% in 1938, because of antibiotic usage in the modern era; it is estimated to be about 0.7 to 3.2% worldwide.[3] Complications of otitis media can be summarized into two groups: extracranial and intracranial. 0.45% of the patients have extracranial complications which include Bezold's abscess.[4] Bezold's abscess, is sequelae of coalescent mastoiditis, where abscess erodes through lateral mastoid cortex near attachment SCM (sternocleidomastoid). Fever, otorrhoea, pain, tenderness over the mastoid region, restricted neck mobility, and edema/ collection in the mastoid and neck are the main presenting features. HRCT imaging provides the best visualization of the temporal bone along with contrast-enhanced CT of the Head and neck when complications are suspected. Complete surgical removal of the mastoid pathology, drainage of the abscess and management of associated complications are recommended along reconstruction of tympano-osscular system if not contraindicated.

CASE REPORT

Written informed consent was taken from the patient's father. A 16 years old male patient, presented with history of foul smelling mucopurulent right ear discharge

for 10 years. He was under irregular management of a nearby health care provider and quack. Painful swelling in the right postauricular, cervical, and right anterolateral part of the upper chest area with restricted neck movements and fever for 15 days.

On examination, the patient was febrile and with diffuse, warm, tender, fluctuant, 23×10 cm swelling on the right side of the neck extending from the right mastoid tip to the lower border of the right 3rd rib with erythema of overlying skin (Figure 1). Otoscopy/EUM (Examination under microscope) revealed the right external auditory canal filled with foul-smelling mucopurulent discharge, which was sent for bacterial culture and sensitivity. After clearing the discharge attic and central perforation through which, cholesteatoma flakes and the remnant of the malleus were visualized. Left ear revealed grade 3 pars tensa retraction. No signs of intracranial complications could be elicited. Nasal endoscopy findings were normal.

Figure 1: 23×10 cm swelling on the right side of the neck extending from mastoid tip to lower border of the right 3rd rib.

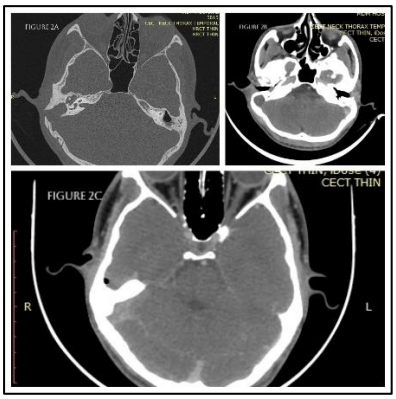

Figure 2: High resolution computed tomography of temporal bone axial cut showing (A) coalescent right mastoid cavity with dehiscence of an outer cortex and sinus plate with left ear shows dependent soft tissue density; (B) right sigmoid sinus thrombosis; (C) subdural enhancing collection of maximum thickness 8 mm with an air pocket.

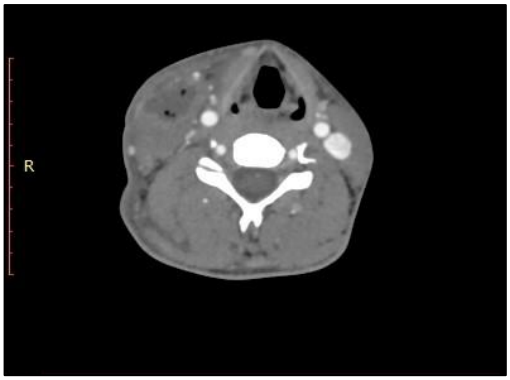

Figure 3: Contrast enhanced computed tomography scan of neck axial cut showing collection with air pockets in right side neck along sternocleidomastoid muscle and internal jugular vein thrombosis.

Figure 4: Contrast-enhanced computed tomography scan of the chest, showing collection at anterior chest wall.

HRCT of the temporal bone and CECT head, neck, and thorax showed soft tissue density in the right middle ear cavity with the widening of prussak's space causing blunting of the scutum, resorption of mastoid septations forming coalescence cavity (Figure 2A). Significant cortical defects are seen in the lateral wall of the mastoid with significant ill-defined peripherally enhancing hypodense collection/ area 19.8×3 cm with internal air foci seen over the mastoid bone which is extending in the right lateral wall of the neck along the sternocleidomastoid muscle, along the right anterior chest wall up to the right anterior 3rd rib and inferio-medially into post styloid parapharyngeal space (Figure 3 & 4).

Superiorly the collection is extending intracranially along the tegmen tympani in form of a subdural enhancing collection of maximum thickness 8 mm along the posterior squamous part of the right temporal bone (Figure 2C). Dehiscence of sinus plate measuring about 15×13 mm with sigmoid sinus thrombosis extending to the ipsilateral internal jugular vein (Figure 2B). The left ear shows dependent soft tissue density (Figure 2A). Incision and drainage of the chest wall and mastoid abscess was done under local anaesthesia and

approximately 250 ml pus was drained out and sent for bacterial culture and sensitivity, which showed growth of Enterococcus sensitive to Meropenam. Injection Meropenam and regular dressing with 5% povidone Iodine solution were continued for 4 weeks along with ear toileting. Right modified radical mastoidectomy with type 3 tympanoplasty was performed under general anesthesia. Intraoperatively mastoid cavity and middle ear were seen filled with cholesteatoma and granulations with bony defects as per radiological findings. Remnant of malleus and stapes footplate could be visualized. The patient was discharged on postoperative day 6.

DISCUSSION

Chest wall abscess is an unusual complication of chronic suppurative otitis media. Occurrence of complications relating to otitis media have diminished due to the widespread use of antibiotics. However, still few patients of otitis media develop serious complications that may be due to delay in diagnosis on the part of clinicians, inadequate antibiotic therapy, increased bacterial resistance, negligence by the patients and the concomitant presence of cholesteatoma.[5] Although cholesteatoma is a benign disease, its behavior may be aggressive and locally erosive, which may lead to complications. Inflammation and infection may result in necrosis of the mastoid process through the digastric groove. The pus is prevented from reaching the surface by neck musculature but can track along the fascial planes of digastric or sternomastoid muscle leading to various abscesses like Citelli's abscess, and Bezold's abscess.[2] Extensive research in the literature revealed only one such case report. Singh et al reported a case of the anterior chest wall abscess secondary to Bezold's abscess.[1]

CONCLUSION

The case is an eye-opener as having several complications at the time of presentation that reflects inattention at the community level health provider and patient. Through this article, we emphasis on early diagnosis and proper management of disease so as to avoid life-threatening complications. High index of suspicion and timely intervention is needed for any patient presenting with neck or chest swelling as it may be a complication of COM.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Chouhan M, Gupta R, Solanki B, Dhakar P. A neglected case of chronic suppurative otitis media presented with a chest wall abscess. Int J Otorhinolaryngol Head Neck Surg 2024;10:575-7.