



Chronic Suppurative Otitis Media Type Benign Left Auricle: A Case Report

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ABSTRACT

Keywords:

Chronic suppurative
otitis media;
perforation of the
tympanic membrane;
Hearing;
pengobatan;
patient education.

Chronic suppurative otitis media (CSOM) is a persistent middle ear infection characterized by tympanic membrane perforation and chronic otorrhea, which can cause significant hearing loss and complications if not properly managed. A 65-year-old male patient presented with a two-week history of discharge from the left ear, accompanied by pain and hearing loss. Physical examination revealed perforation of the tympanic membrane and mucopurulent secretion in the left ear. Tuning fork tests (Rinne negative on the left, Weber lateralized to the left, and Schwabach prolonged on the left) confirmed conductive hearing loss. The working diagnosis was benign-type chronic suppurative otitis media of the left ear (*auricula sinistra*). The patient received medical therapy consisting of oral ciprofloxacin 500 mg twice daily, oral diclofenac sodium 50 mg twice daily, and ofloxacin 0.3% ear drops three times daily to the left ear. Patient education regarding CSOM etiology, risk factors, complications, and proper ear hygiene was provided as an essential component of management. With appropriate medical treatment and comprehensive patient education, the prognosis for this patient is favorable (*dubia ad bonam*). This case emphasizes the importance of early diagnosis, proper antimicrobial therapy, and patient education in managing CSOM to prevent complications and recurrence.

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INTRODUCTION

Chronic suppurative otitis media (OMSK) is a disease of the middle ear that causes significant hearing problems and can lead to complications in sufferers (Khairkar et al., 2023; Poluan et al., 2025). *OMSK* is a chronic inflammation or infection of the middle ear characterized by perforation of the tympanic membrane with or without *otorrhea* (Avnstorp et al., 2016; Hamaduna et al., 2023; Mansour et al., 2018). The global incidence of chronic suppurative otitis media is 65 to 330 million people, and 39 to 200 million (60%) of those affected have significant hearing problems; thus, appropriate and effective diagnosis and management are needed to address the rising incidence (Nasution et al., 2023).

There are 31 million new cases of *OMSK* per year, with 10,000 patients experiencing hearing loss (hearing threshold >25 dB). The global prevalence of *OMSK* cases is estimated at 65 to 330 million people, of which about 60% suffer from significant hearing loss. According to the WHO, Western Pacific countries have the highest prevalence (2.5% to 43%), followed by Southeast Asia (0.9% to 7.8%), Africa (0.4% to 4.2%), South and Central America (3%), Eastern Mediterranean (1.4%), and Europe (0.4%). Research by Abdulrazak (2021) concluded that the main perforation is located in the central tympanic membrane (45%). In addition, the research of Louei and Ahmed (2019) concluded that the most common perforation site was the central area (66.7%) (Triola et al., 2023).

In *OMSK* patients, audiometry results based on the type and degree of hearing loss can vary, including conductive, sensorineural, or mixed (Dhingra et al., 2023; Khair et al., 2024; Poluan et al., 2021). Based on the degree of hearing loss, it ranges from mild, moderate, moderately severe, severe, or profound. This depends on the extent of the tympanic membrane perforation and the ear infection. Proper and effective diagnosis and management can prevent *OMSK* from progressing to complications in sufferers (Yuliyani et al., 2023).

The management of CSOM in elderly patients presents unique challenges due to age-related factors such as decreased immune response, potential comorbidities, and reduced healing capacity. Elderly patients with CSOM are at higher risk for complications, including mastoiditis, intracranial infections, and progressive hearing loss, which can significantly impact their quality of life and functional independence. Despite well-established clinical guidelines for CSOM management, there remains a gap in the literature regarding comprehensive approaches that emphasize both pharmacological intervention and patient education in the elderly population.

This case report presents clinical value by highlighting the integration of appropriate antimicrobial therapy with structured patient education as a comprehensive management strategy for CSOM in an elderly patient. Patient education has been increasingly recognized as a critical component in chronic disease management, yet its specific role and implementation in CSOM care—particularly for elderly patients—remains underemphasized in clinical practice. This case demonstrates how patient education regarding disease etiology, risk factors, proper ear hygiene practices, and recurrence prevention can complement medical therapy to optimize treatment outcomes.

The objective of this case report is threefold: (1) to describe the clinical presentation, diagnostic approach, and comprehensive management of benign-type CSOM in a 65-year-old male patient; (2) to emphasize the importance of combining appropriate medical therapy with patient education in CSOM management; and (3) to discuss the clinical implications and expected prognosis when this integrated approach is applied in elderly patients with CSOM.

METHOD

Patient Status

Patient Identity

Name: Mr. R	Gender: Male
Age: 65 years old	Religion: Islam
Occupation: Retired	Education: High School/Vocational School
Address: Banten	Marital Status: Married

Anamnesis

It was carried out autoanamnesis at the ENT Polytechnic of Cilegon Hospital on June 4, 2024 at 10.45 WIB.

- Main complaint: The patient complained of discharge in the left ear since 2 weeks before admission to the hospital (SMRS).
- Additional complaints: Left ear pain, itching, and buzzing.

- c. Disease Course History (RPS): Male patient, aged 65 years, came to the ENT polyclinic of Cilegon Hospital with complaints of discharge from the left ear since 2 weeks before entering the hospital (SMRS). This complaint is only felt by patients for the first time. Initially, the patient felt itching in the left ear, so the patient used a cotton bud to pluck his ear. After that, the patient's ears seem to rumble and there is fluid coming out of the ear. At first, the liquid is clear and then turns yellow and smelly. Patients also complained of hearing loss and ringing in the left ear.

History of Past Illness (RPD)

- a. History of similar complaints : Denied
b. Operation history : Denied
c. History of the disease : Hypertension (-), DM (-), asthma (-), tuberculosis (-), vertigo (-).
d. History of allergies : None
e. Riwayat trauma : None

Family History of Illness

No family of the patient had similar complaints.

Physical Examination

General Inspection

- a. General Conditions : Appears to be mildly sore
b. Awareness : Compos Mentis
c. Blood pressure : 110/70 mmHg
d. Pulse : 80x/min

Status Generalis

- a. Head : Normocephal, jejas (-), hematoma (-)
b. Face : Simetris bilateral
c. Eye : Konjungtiva anemik (-/-), sklera ikterik (-/-), ptosis (-/-)
d. KGB : No KGB enlargement
e. Lung : Vesikuler +/+, ronchi (-/-), wheezing (-/-)
f. Heart : Inspection: Ictus cordis is not visible
1) Palpation : Ictus cordis teraba of ICS V of left parasternalis line
2) Percussion:
a) Left heart boundary : ICS V anterior axillary line sinistra
b) Right heart boundary : ICS IV linea parasternalis dextra
c) Waist limit of the heart : ICS III linea parasternalis sinistra
g. Abdominal: Inspection: Symmetrical, ascites(-)
1) Auskultasi : Bising usus (+) normal
2) Percussion : Slap all over the abdominal area
h. Palpation : Pressure pain (-), hepatosplenomegaly (-), shifting
i. dullness (-)
j. Extremities: Warm acral, CRT < 2 seconds, edema (-/-)

k. Skin Scarlett (Scott) - Back to the drawing board

Nutritional Status

- a. Weight : 65 kg
- b. Height : 165 cm
- c. IMT : 23.9 kg/m² (Normal)

Localist Status

Ear

	Right	Left
Shape of the earlobe	Normotia	Normotia
Congenital abnormalities	Bat ear (-), fistula (-), Microtia (-), Atresia (-)	Bat ear (-), fistula (-), Microtia (-), Atresia (-)
Inflammation, tumors	Hyperemisis (-), pain (-), hyperthermi (-), edema (-), Mass (-)	Hyperemisis (-), pain (-), hyperthermi (-), edema (-), Mass (-)
Tragus pressure pain	None	None
Pre, infra, retroauricular abnormalities	Fistula (-), Abses (-), Hyperemisis(-), Mass (-), Pressure pain (-), edema (-)	Fistula (-), Abses (-), Hyperemisis(-), Mass (-), Pressure pain (-), edema (-)
Region mastoid	Within normal limits	Within normal limits
Liang telinga	Spacious, hyperemic (-), Serum (-), Secretion (-), Edema (-)	Spacious, hyperemic (-), serumen (-), secretion (+) yellowish mucourul, Edema (-)
Tympanic membrane	Whole, Intak, White shiny, light reflex (+) 5 o'clock, hyperemic (-), bulging (-) perforation (-)	Perforation, 7 o'clock (-) directional light reflex, hyperemic (-), bulging (-),

Penal Tests

	Right	Left
Rinne	+	-
Weber	Lateralization to the left	
Schwabach	Same as checker	Schwabach elongated
Impression	: Conductive deafness of the left ear	

Nose

	Right	Left
Shape	Normal, simetris, deformitas (-)	Normal, simetris, deformitas (-)
Signs of inflammation	Hyperemisis(-), oedema (-), pressure pain (-), mass (-)	Hyperemisis(-), oedema (-), pressure pain (-), mass (-)
Frontal Sinus	Hyperemisis (-), Pressure pain (-), Knock pain (-)	Hyperemisis (-), Pressure pain (-), Knock pain (-)
Sinus maxillaris	Hyperemisis (-), Pressure pain (-), Knock pain (-)	Hyperemisis (-), Pressure pain (-), Knock pain (-)
Vestibulum	Visible nose hair	Visible nose hair
	Secretion(-), boil (-), crust (-)	Secretion(-), boil (-), crust (-)
Cavum nasi	The Secret (-)	The Secret (-)
Lower Konka	Hyperemisis (-), Edema (-),	Hyperemisis (-), Edema (-),

Konka medius	Hypertrophy (-), Secretion (-) Invisible, difficult to judge	Hypertrophy (-), Secretion (-) Invisible, difficult to judge
Meatus nasi medius	Invisible, difficult to judge	Invisible, difficult to judge
Septum nasi	Symmetrical, no deviation	Symmetrical, no deviation

Tenggorok

Pharyngeal

Pharyngeal wall	Hyperemis(-), flat mucosa, granules (-), post nasal drip (-), mucous mucus (-)
Arcus	Simetris, hiperemis (-)
Tonsils	T1-T1, calm, hyperemic (-), crypt (-), detritus (-)
Rainbow	Normal form, in the median line, hyperemic (-)
Tooth	Cavities (-), caries (-)

Resume

The male patient, aged 65, came to the ENT polyclinic with complaints of fluid discharge in the left ear since one week ago. This complaint is only felt by patients for the first time. At first, the liquid is clear and then turns yellow and smelly. Patients also complain of reduced hearing as well as ringing in the left ear. On physical examination, it was found that the patient appeared to be mildly ill and composing consciousness. Examination of the left ear revealed yellowish mucopurulent secretions with tympanic membrane perforation and negative light reflex. Rinne's tuner test (-) in the left ear, Weber lateralized to the left, and Swabach extended to the left ear, resulting in the impression of conductive deafness of the left ear.

RESULTS AND DISCUSSION

Occupational Diagnosis

Chronic suppurative otitis media benign auricula sinistra

Diagnosis Banding

Chronic suppurative otitis media malignant type

Penatalaksanaan

Medicosa

1. Siprofloxacin 500 mg tablet 2x1 PO
2. Sodium diklofenak 50 mg tablet 2x1 PO
3. Oflocacin ear drops 3% 2x3 auricula drops sinistra

Non-Medicinated

- a. Educate patients about OMSK, causes, risk factors, complications, treatment, and prevention so that complaints do not recur.
- b. Education about ear toilets.

Suggestion

Audiometric examination

Prognosis

1. Ad vitam : Dubia Ad Bonam
2. Ad functionam : Dubia Ad Bonam
3. Ad sanationam : Dubia Ad Bonam

Discussion

Clinical Presentation and Diagnosis

This case presents a 65-year-old male patient with classic clinical features of benign-type chronic suppurative otitis media (CSOM) of the left ear. The patient's presentation is consistent with published literature regarding CSOM epidemiology and clinical manifestations. According to Khairkar et al. (2023), CSOM typically presents with persistent otorrhea lasting more than 6-12 weeks, tympanic membrane perforation, and hearing loss, all of which were evident in this patient. The two-week duration of otorrhea in this case, while shorter than the classical definition, combined with the presence of mucopurulent discharge and tympanic membrane perforation, warranted the working diagnosis of CSOM.

The location of tympanic membrane perforation in this case is clinically significant for classification and prognosis. Physical examination revealed perforation with absent light reflex at the 7 o'clock position, suggesting a central perforation. This finding aligns with research by Triola et al. (2023), which reported that central tympanic membrane perforations are the most common presentation in benign-type CSOM, occurring in 45-66.7% of cases. Central perforations, as opposed to marginal or attic perforations, are characteristic of benign CSOM and carry a more favorable prognosis with lower risk of cholesteatoma formation and intracranial complications.

The audiological assessment in this case utilized tuning fork tests, which demonstrated conductive hearing loss consistent with CSOM pathophysiology. The Rinne test was negative in the left ear (bone conduction > air conduction), Weber lateralized to the affected left ear, and Schwabach was prolonged in the left ear. These findings are characteristic of conductive hearing loss resulting from tympanic membrane perforation and potential ossicular chain involvement. According to Yuliyani et al. (2023), the degree and type of hearing loss in CSOM patients can vary from mild conductive hearing loss to severe mixed hearing loss, depending on the extent of tympanic membrane perforation, middle ear effusion, and ossicular damage. Audiometry was recommended for this patient to quantify the degree of hearing loss and establish a baseline for monitoring treatment response and potential complications.

Therapeutic Approach: Rationale for Antibiotic Selection

The medical management in this case employed a combination of systemic and topical antibiotics, which represents the current standard of care for active CSOM. Ciprofloxacin 500 mg orally twice daily was chosen as the systemic antibiotic based on several clinical considerations. Ciprofloxacin, a fluoroquinolone antibiotic, possesses broad-spectrum activity against both Gram-negative and Gram-positive organisms commonly implicated in CSOM, including *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Proteus* species. According to Hussain et al. (2022), fluoroquinolones are considered first-

line systemic antibiotics for CSOM due to their excellent penetration into middle ear tissues and low ototoxicity profile compared to aminoglycosides.

For topical therapy, ofloxacin 0.3% ear drops were prescribed three times daily to the left ear. Ofloxacin is a fluoroquinolone with demonstrated efficacy against the common bacterial pathogens in CSOM and, importantly, has a well-established safety profile with minimal ototoxicity risk even when applied to the middle ear through a perforated tympanic membrane. Research by Hussain et al. (2022) emphasizes that non-ototoxic topical antibiotics such as fluoroquinolones should be preferred over potentially ototoxic agents like aminoglycosides, particularly in elderly patients who may be more susceptible to sensorineural hearing damage. The combination of systemic and topical antibiotics provides synergistic antimicrobial coverage and optimizes tissue penetration to eradicate infection.

Diclofenac sodium 50 mg twice daily was included for pain management and anti-inflammatory effects. While not directly antimicrobial, controlling pain and inflammation improves patient comfort and may facilitate better treatment compliance. The dosing regimens employed in this case are consistent with evidence-based guidelines for CSOM management (Nasution et al., 2023; Rosario & Mendez, 2023).

Comparison with Current Literature

The findings and management approach in this case can be compared with recent studies on CSOM. Fayyaza and Nasution (2024) reported similar clinical presentations in their case series of CSOM without cholesteatoma, emphasizing the importance of thorough otoscopic examination to differentiate benign from malignant types. The presence of mucopurulent discharge, central perforation, and absence of cholesteatoma or granulation tissue in this case supported the benign-type classification.

A comprehensive review by Khairkar et al. (2023) highlighted the multifactorial pathogenesis of CSOM, including Eustachian tube dysfunction, bacterial biofilm formation, and host immune factors. In elderly patients like the one presented here, age-related changes in immune function and potential comorbidities may contribute to disease chronicity and require more vigilant management. The cotton bud use reported by this patient as a precipitating event aligns with recognized risk factors for CSOM, as mechanical trauma can disrupt the protective epithelial barrier and introduce bacteria into the middle ear.

Regarding perforation characteristics, the findings in this case are consistent with the literature showing that central perforations are most common in benign CSOM. Studies cited by Triola et al. (2023) report central perforation rates of 45-66.7%, supporting the classification of this case as benign-type CSOM. The size and location of perforation correlate with the degree of hearing loss and prognosis for spontaneous healing versus surgical intervention.

The Role of Patient Education in CSOM Management

A distinctive feature of the management approach in this case is the emphasis on comprehensive patient education as an integral component of therapy. Patient education in CSOM serves multiple critical functions: (1) promoting treatment adherence, (2) teaching proper ear hygiene techniques, (3) preventing recurrent infections, and (4) enabling early recognition of complications. In elderly patients, who may have reduced health literacy or

cognitive changes, structured education delivered in clear, simple language with written materials and demonstration is particularly important.

The patient education provided in this case included several key components:

1. **Disease Understanding:** Explaining to the patient that CSOM is a chronic middle ear infection caused by bacteria, characterized by persistent ear discharge and tympanic membrane perforation. Understanding the nature of the disease helps patients recognize the importance of completing treatment and following up regularly.
2. **Risk Factor Education:** Discussing modifiable risk factors such as improper ear cleaning practices (cotton bud use), water entry into the ear, and upper respiratory tract infections. The patient was specifically counseled to avoid inserting any objects into the ear canal and to keep the ear dry during bathing and swimming.
3. **Ear Toilet Technique:** Demonstrating proper ear cleaning methods, including gentle removal of discharge with dry cotton pledgets without inserting them deep into the canal. Patients should be instructed to clean only the outer ear and allow drainage to flow out naturally rather than attempting to clean deep within the canal.
4. **Medication Compliance:** Emphasizing the importance of completing the full course of antibiotics even if symptoms improve, proper administration technique for ear drops, and potential side effects to monitor.
5. **Complication Awareness:** Educating patients about warning signs that require immediate medical attention, including fever, severe headache, facial paralysis, vertigo, or worsening discharge, which may indicate complications such as mastoiditis, labyrinthitis, or intracranial extension.
6. **Prevention of Recurrence:** Counseling on avoiding smoking, managing allergies and upper respiratory infections promptly, and maintaining good general health to support immune function.

While the therapeutic efficacy of antibiotics in CSOM is well-established, emerging evidence suggests that patient education significantly impacts long-term outcomes. Studies in chronic disease management across various conditions have demonstrated that patient education improves medication adherence, reduces recurrence rates, and enhances patient satisfaction and quality of life. In the context of CSOM, education about proper ear hygiene and avoidance of harmful practices (such as cotton bud use and water exposure) is essential for preventing reinfection after successful treatment. Future research should further investigate the specific impact of structured patient education programs on CSOM recurrence rates and long-term hearing outcomes, particularly in elderly populations.

Prognosis and Follow-up Considerations

The prognosis for this patient was classified as *dubia ad bonam* (guarded to good) for *vitam, functionam, and sanationam*. This classification reflects several favorable prognostic factors: (1) benign-type CSOM with central perforation, (2) absence of cholesteatoma or significant complications, (3) early presentation and treatment initiation, (4) patient's stable

general health status without significant comorbidities, and (5) patient's willingness to adhere to treatment and education.

However, several factors warrant cautious optimism rather than an excellent prognosis. The patient's age (65 years) may be associated with slower healing and reduced regenerative capacity. Additionally, the duration and completeness of treatment response remain to be determined. Audiometric evaluation was appropriately recommended to quantify baseline hearing loss and monitor for improvement or deterioration. Regular follow-up is essential to assess treatment response, monitor for complications, and determine if surgical intervention (such as tympanoplasty) may be indicated if medical management fails or if the perforation does not heal.

According to Rosario and Mendez (2023), most patients with benign CSOM respond well to appropriate medical therapy, with resolution of otorrhea and improvement in hearing. However, some patients may require surgical intervention for persistent perforation or recurrent infections. The decision for surgery is typically made after an adequate trial of medical therapy (usually 6-12 weeks) and consideration of patient factors such as hearing status, frequency of infections, and impact on quality of life.

Clinical Implications and Recommendations

This case underscores several important clinical principles for managing CSOM in elderly patients:

2. **Comprehensive Clinical Assessment:** Thorough otoscopic examination and tuning fork tests are essential for accurate diagnosis and classification. Audiometry should be performed to quantify hearing loss and guide treatment decisions.
3. **Evidence-Based Antimicrobial Therapy:** Selection of appropriate antibiotics based on common pathogens, safety profile (especially ototoxicity), and tissue penetration is crucial. The combination of systemic and topical fluoroquinolones represents current best practice for active CSOM.
4. **Integration of Patient Education:** Medical therapy alone is insufficient; comprehensive patient education addressing disease understanding, risk factors, proper ear hygiene, medication compliance, and complication recognition should be a standard component of CSOM management.
5. **Individualized Approach:** Treatment plans should consider patient-specific factors including age, comorbidities, cognitive status, and social support systems, particularly in elderly patients who may face unique challenges in self-care and adherence.
6. **Regular Follow-up:** Close monitoring of treatment response, audiometric follow-up, and early detection of complications are essential for optimizing outcomes in CSOM patients.

CONCLUSION

This case report describes a 65-year-old male with benign-type chronic suppurative otitis media (CSOM) in the left ear, featuring mucopurulent otorrhea, central tympanic

membrane perforation, and conductive hearing loss, managed per evidence-based guidelines through combined systemic ciprofloxacin, topical ofloxacin, analgesics, and structured patient education on disease etiology, risk factors, ear hygiene, and complication recognition. This multifaceted approach addressed the acute infection while promoting long-term recurrence prevention and adherence, yielding a favorable prognosis (*dubia ad bonam*) without major complications, though ongoing audiometric follow-up is advised to assess response and potential surgical needs. For elderly patients, it underscores the need to integrate patient education routinely beyond pharmacotherapy to enhance outcomes. A suggestion for future research is to conduct randomized controlled trials evaluating structured patient education programs' effects on recurrence rates, quality of life, and long-term hearing preservation in diverse CSOM populations.

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