

Unfolding the Attributes and Quality of Life in Chronic Suppurative Otitis Media Patients at Tertiary Care Hospital

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Abstract

Background: Chronic Suppurative Otitis Media (CSOM) is a persistent middle ear infection characterized by continuous ear discharge due to a perforated tympanic membrane. It is often associated with hearing loss and poses significant social, psychological, and physical challenges. **Aim:** This study aimed to evaluate the demographic characteristics and impact of CSOM on patients' quality of life (QoL) at a tertiary care hospital. **Methodology:** A prospective observational study was conducted over six months at the Department of ENT, Government General Hospital, Kurnool. A total of 110 patients diagnosed with CSOM were included. Participants' demographic data were collected, and QoL was assessed using the COMAT-15 scale. Statistical analysis included chi-square tests, paired t-tests, and descriptive measures (mean, median, mode). **Results:** Out of the 110 patients participated in the study, 52 were male and 58 were female, with ages ranging from 18 to 65 years. The majority of the patients were seen from the age group (18-28). patients were assessed using a standardized QOL questionnaire (COMAT- 15 SCALE), and the correlation between the severity of the disease and its influence on daily living was analyzed. Social interactions, physical activity, and emotional well-being among patients have improved. **Discussion:** The findings indicate that CSOM significantly affects various dimensions of patients' QoL. Using Standardized QoL tools like the COMAT-15 scale allows for better understanding and management of the psychosocial burden associated with the disease. This study focused to assess the clinical, psychological and treatment outcomes in patients with chronic suppurative Otitis Media (CSOM), focusing on demographic variables, symptomatology, quality of life before and after intervention and psychological burden. **Conclusion:** Chronic Suppurative Otitis Media has a profound impact on the quality of life of affected individuals, particularly in terms of social and psychological well-being. This study underscores the importance of a comprehensive management strategy that addresses the full spectrum of the disease, including physical, social and emotional health. Early diagnosis and intervention, along with access to adequate healthcare facilities, can significantly improve the outcomes for patients with CSOM.

Keywords: CSOM (Chronic Suppurative Otitis Media), Ear discharge, perforated tympanic membrane, Hearing loss, QOL (Quality of Life), COMAT-15, Emotional well-being, Middle ear, Social and Psychological impact

1. Introduction

Chronic Suppurative Otitis Media (CSOM) is a common cause of hearing impairment, particularly in developing nations where access to early medical intervention is limited. It is a persistent infection of the middle ear characterized by ear discharge and hearing loss, often resulting from repeated acute otitis media episodes that have not healed completely. The World Health Organization (WHO) estimates that CSOM affects millions of people worldwide, with a higher prevalence in low-income countries due to factors like overcrowding, poor hygiene, and inadequate healthcare infrastructure. CSOM not only leads to physical disabilities like hearing loss but also has severe psychosocial consequences. Many patients suffer from low self-esteem, social isolation, and difficulty in maintaining normal daily activities due to hearing impairment and the stigma of malodorous ear discharge. However, while the physical complications of CSOM are well documented, its impact on quality of life (QoL) has not been extensively studied. Chronic Suppurative Otitis Media (CSOM) is a long-standing infection of a part or whole of the middle ear cleft characterized by continuous or intermittent discharge through the persistent tympanic membrane perforation and is divided into two types.¹ The understanding of middle ear infections dates back to ancient civilizations, with archaeological findings indicating mastoiditis in Egyptian mummies. Hippocrates (460–370 BC) was among the first to describe ear suppuration and its complications, linking it to systemic illness. During the 19th century, the development of otoscopy and microbiology led to a more refined classification of middle ear diseases. Joseph Toynbee and Adam Politzer contributed significantly to the anatomical and pathological understanding of otitis media. The introduction of antibiotics in the mid-20th century significantly reduced the morbidity and mortality associated with CSOM, though challenges remain due to antimicrobial resistance and inadequate treatment compliance.²

CSOM is of two main types which include, Tubotympanic type and atticoantral type. Tubotympanic type chronic suppurative otitis media (CSOM) is a long-standing infection of the middle ear that primarily involves the anteroinferior, “safe” parts of the tympanic membrane, especially the pars tensa. It is usually associated with a central perforation, which allows persistent discharge to escape and reduces the risk of serious complications. This form of CSOM commonly develops after repeated episodes of acute ear infections or prolonged Eustachian tube dysfunction, which interfere with proper ventilation of the middle ear. Patients typically present with intermittent or continuous mucopurulent, non-foul-smelling ear discharge and varying degrees of conductive hearing loss. Management focuses on thorough aural cleaning, controlling infection with topical antibiotics, and eventually repairing the perforation through tympanoplasty once the ear becomes dry. Because it rarely spreads to surrounding structures, tubotympanic CSOM is considered less dangerous than the atticoantral (unsafe) type, though timely treatment is still important to prevent chronic hearing impairment. Atticoantral type is a Posterosuperior marginal

perforation and perforation of pars flaccida, retractions with granulations and or cholesteatoma at similar site. Chronic Suppurative otitis media (CSOM) is a persistent and debilitating ear infection that affects millions of people worldwide. Characterized by chronic inflammation, discharge and hearing loss. CSOM significantly impacts quality of life, causing discomfort, pain and social isolation. Despite its prevalence, CSOM remains a neglected tropical disease, with limited research on its attributes and impact on patients' lives.³

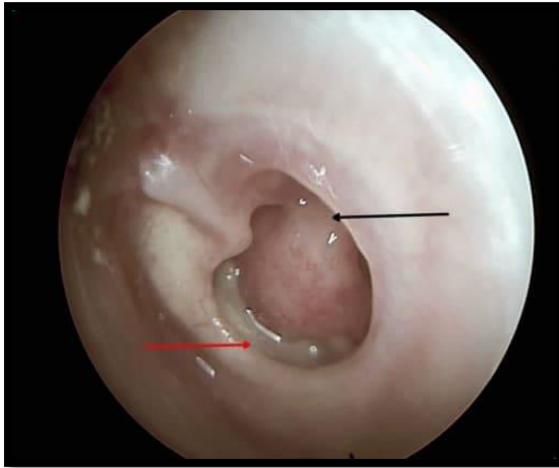


Figure 1.1. Tubotympanic Type CSOM⁴



Figure 1.2 . Atticoantral Type CSOM⁴

While looking upon its epidemiology CSOM is estimated to affect 65 to 330 million people worldwide, with nearly 60% suffering from significant hearing impairment. Highest prevalence is seen in South Asia, Africa, and Indigenous populations in Australia and Canada. Developed nations report a lower prevalence due to better healthcare access, vaccination programs, and improved hygiene. Children under 10 years are the most affected demographic due to immature immune responses and shorter, horizontal Eustachian tubes, which predispose them to recurrent infections.⁵ The etiology of Chronic Suppurative Otitis Media (CSOM) is multifactorial and involves various predisposing factors. One of the most common causes is the sequelae of acute otitis media, where incomplete resolution of an acute infection leads to chronic inflammation in the middle ear. Ascending infection through the eustachian tube from the nasopharynx is another significant contributing factor, especially when eustachian tube function is impaired. Nasal allergies, such as allergic rhinitis, can also predispose individuals to CSOM by causing mucosal inflammation and obstruction of the eustachian tube. Additionally, gastroesophageal reflux disease (GERD) has been implicated in the pathogenesis of CSOM, as refluxed gastric contents can reach the nasopharynx and irritate the middle ear lining. Structural abnormalities, particularly craniofacial anomalies like cleft palate or syndromic conditions such as Down syndrome, further increase the risk due to

anatomical dysfunction of the eustachian tube. Autoimmune diseases can also contribute to the development of CSOM by altering the immune response and impairing the normal healing process of the middle ear mucosa.⁶ The bacteriology of Chronic Suppurative Otitis Media (CSOM) is diverse, involving both aerobic and anaerobic organisms. Among the most commonly isolated pathogens is *Pseudomonas aeruginosa*, which is known for its resistance to antibiotics and its ability to thrive in moist environments such as the middle ear. *Proteus* species, particularly *Proteus mirabilis*, are also frequently implicated due to their motility and virulence factors. *Escherichia coli*, although typically associated with intestinal infections, can occasionally be isolated in CSOM cases.⁷ *Staphylococcus aureus* is another major pathogen, often associated with persistent and recurrent infections. Anaerobic bacteria, including *Bacteroides fragilis* and anaerobic *Streptococci*, also play a significant role, especially in chronic and long-standing infections. The polymicrobial nature of CSOM infections often complicates treatment and necessitates broad-spectrum or targeted antibiotic therapy based on culture sensitivity.

The progression of CSOM involves a multifactorial interplay of infection, inflammation, and structural damage to the middle ear and mastoid. Key pathological mechanism is Eustachian tube dysfunction which leads to negative middle ear pressure, facilitating bacterial colonization then Persistent infection take place this bacterial biofilm formation results in chronic inflammation and poor antibiotic penetration which leads to Inflammatory mediators where cytokines and enzymes contribute to mucosal damage, granulation tissue formation and ossicular erosion later it under goes cholesteatoma formation (unsafe CSOM) due to this the accumulation of keratinizing squamous epithelium cause bone destruction. The pathophysiology of CSOM is complex and multifactorial. Current theories suggest that CSOM is initiated by an episode of acute infection. The pathophysiology of CSOM begins with irritation and subsequent inflammation of the middle ear mucosa. The inflammatory response creates mucosal edema. Persistent inflammation eventually leads to mucosal ulceration and subsequent breakdown of the epithelial lining. The hosts attempt to resolve the infection or inflammatory insult manifests as granulation tissue, which can develop into polyps in the middle ear space (A study by Wang et al suggested that in CSOM, T- cell-mediated cellular immunity plays a role in the formation of granulation tissue. The cycle of inflammation, ulceration, infection and tissue formation of granulation can continue, eventually. destroying the surrounding bone edges and ultimately lead to various complications of CSOM.⁸ Several predisposing factors contribute to the development of CSOM. The main risk factors are Poor socioeconomic conditions (overcrowding, malnutrition, inadequate healthcare access). Recurrent upper respiratory tract infections (URTIs). Eustachian tube dysfunction, commonly seen in children. Environmental pollutants (exposure to tobacco smoke, air pollution). Inadequate antibiotic treatment of acute otitis media (AOM).⁹

Clinical Features of CSOM include, Persistent or recurrent ear discharge (otorrhea) – mucoid, purulent, or blood-stained, Hearing loss – conductive in safe CSOM mixed or sensorineural in unsafe CSOM, Tinnitus – commonly associated with longstanding cases, Vertigo – may indicate inner ear involvement, Otolgia – usually absent unless complications arise. The examination finding involved to identify the CSOM or to diagnose are Otoscopic Examination as well as Central tympanic membrane perforation and Attic or marginal perforation, cholesteatoma, or granulation tissue and Tuning Fork Tests (Rinne & Weber) which Typically show conductive hearing loss.¹⁰ Complications of CSOM can occur two ways, one is Intratemporal Complications which include Mastoiditis, Facial nerve paralysis, Labyrinthitis, Petrositis and the other one is Intracranial Complications which include Meningitis, Brain abscess, Lateral sinus thrombosis, Otitic hydrocephalus. Advancements in HRCT Temporal Bone and MRI have significantly improved early detection and management of complications.¹¹ For the Management of CSOM we have medical management and surgical management. In Medical Management Topical and systemic antibiotics are given, Ear cleaning and dry ear precautions are followed, Corticosteroid therapy is done for inflammatory control. While coming to Surgical Management the followed surgery is Tympanoplasty (Repair of tympanic membrane perforation), Mastoidectomy (Removal of infected mastoid air cells in unsafe CSOM).Ossiculoplasty (Reconstruction of ossicular chain for hearing restoration).¹²

2. Aim and Objectives

2.1. Aim:

The main aim of this study is to investigate the attributes and quality of life patients in Chronic Suppurative Otitis Media patients at Tertiary care hospital.

2.2. Objectives:

2.2.1. Primary objective

To identify the demographic, clinical and audiological attributes of chronic suppurative otitis media patients

2.2.2. Secondary objective

- To assess the quality of life of chronic suppurative otitis media patients by using COMAT- 15 questionnaire form.
- To determine the relationship between attributes (demographic, clinical, audiological) and QOL in chronic suppurative otitis media patients

3. Materials and Methods

- **Study site:** E.N.T Department, Government General Hospital, Kurnool
- **Study duration:** Six months
- **Sample size:** 110patients were included
- **Study design:** Prospective Observational study

3.1 Study criteria

3.1.1. Inclusive Criteria

- Patients who are willing to participate in the study
- Patients who were having otorrhea and diagnosed with CSOM
- Conscious and co-operative patients are only included.
- Age from 18 to 65 years as per study requirements

3.1.2. Exclusive Criteria

- Pregnant women and lactating women
- Pediatrics and patients with insufficient data.
- COMAT score <16
- Patients who are not willing to participate in the study

3.2. Sources of data

Data was collected through patient documentation form and interview with the patient and/or patient representatives, followed by an interrelation of all available information.

3.3. Plan of study

Data of our study were collected from case sheets of patients admitted to the ENT Department at Government General Hospital, Kurnool. Additional patient information was obtained through a structured patient documentation form and interviews with the patient or their representative. The clinical signs and symptoms of each patient were assessed using the COMOT-15 questionnaire. After data collection, the findings were reviewed and discussed with the attending physician to confirm the clinical relevance of the COMOT-15 results. All collected data were entered into a database and analyzed using appropriate statistical methods to evaluate patient characteristics, symptom patterns, and questionnaire outcomes.

3.4. Statistical Analysis:

Data analysis was performed using SPSS software (version 26.0). Categorical variables were summarized as frequencies and percentages, while continuous variables were expressed as mean \pm standard deviation or as median with interquartile range, depending on the data distribution. The Shapiro-Wilk test was used to assess normality. For comparisons, the student's t-test was applied to evaluate differences between two means, and the Chi-square test was used to compare proportions. A p-value of less than 0.05 was considered statistically significant.

4. Results

4.1. Age Wise Distribution

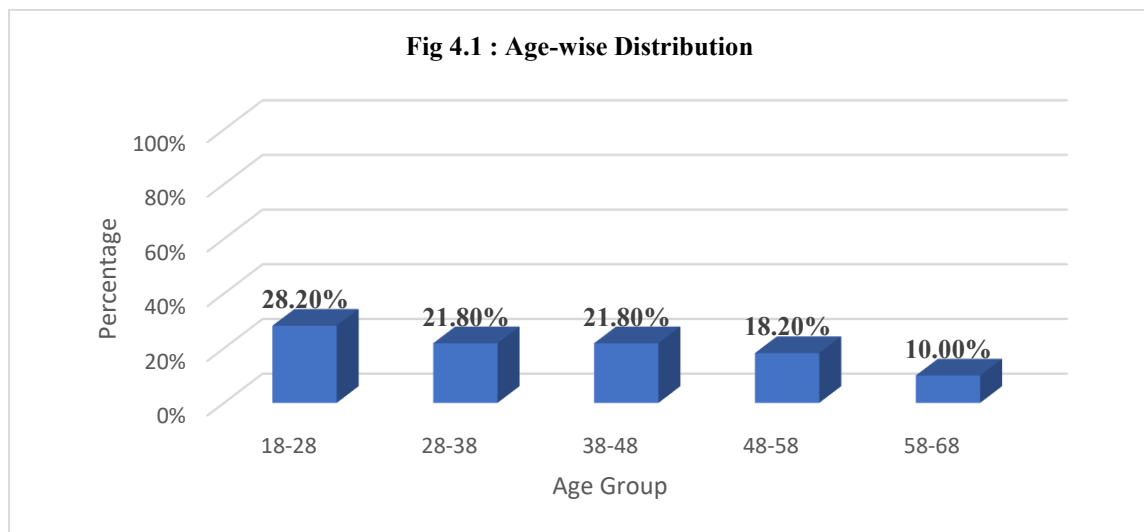
The age-wise distribution of the participants reveals a varied demographic spread. The largest group falls within the 18-28 years, comprising 31 individuals(28.2%) . Both the 28-38 and 38-48 age groups have an equal number of participants, with 24 individuals(21.8%) respectively. The 48-58 age group includes 20 participants (18.2%),

Table 4.2: Gender Wise Distribution		
Gender	Frequency	Percentage
Female	58	52.70%
Male	52	47.30%

while the smallest group is the 58-68 age range, with 11 individuals(10%) . Overall, the data includes 110 participants.

Table 4.1: Age Wise Distribution

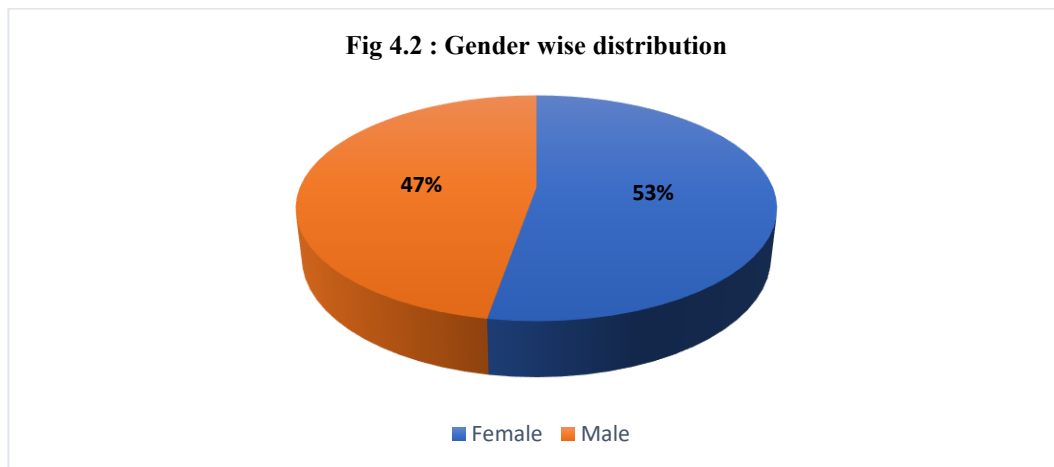
Age-Wise Distribution (Years)	Frequency	Percentage
18-28	31	28.20%
28-38	24	21.80%
38-48	24	21.80%
48-58	20	18.20%
58-68	11	10.00%
Total	110	100%



4.2. Gender wise distribution

The gender-wise distribution of participants shows a fairly balanced representation. Out of the total 110 participants, 58 are female(52.7%) , while 52 are male (47.3%). This slight majority of female participants indicates a nearly equal gender distribution, which helps ensure diverse perspectives in the study.

Total	110	100%
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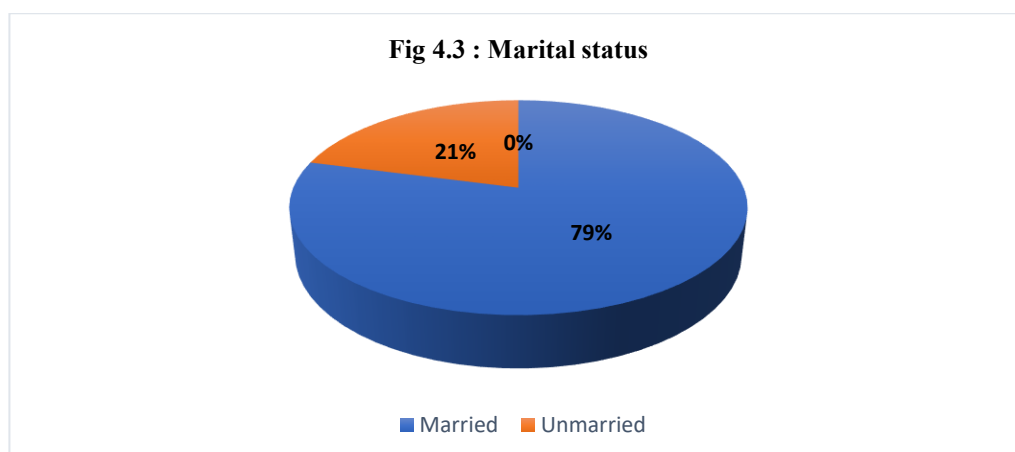


4.3. Personal data distribution

The marital status of the participants indicates that a significant majority are married. Out of 110 individuals, 87 participants (79.1%) reported being married, while 23 (20.9%) identified as unmarried. This suggests that most of the sample population comprises individuals with marital commitments, which may influence their perspectives and experiences in various aspects.

Table 4.3: Marital Status

Marital Status	Frequency	Percentage
Married	87	79.1%
Unmarried	23	20.9%
Total	110	100%



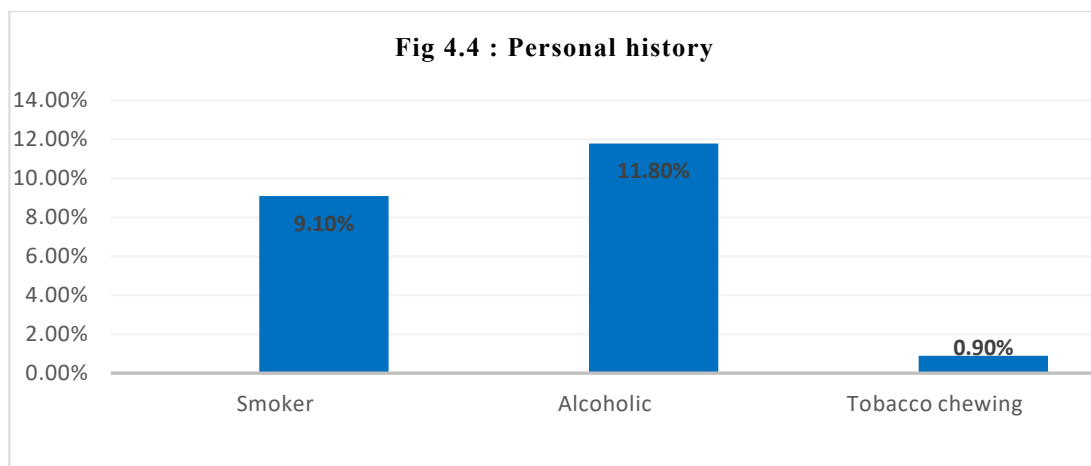
4.4 Social history

The personal history of the participants highlights the prevalence of certain lifestyle habits within the group. Among the 110 individuals surveyed, 10 participants (9.1%)

reported being smokers, while 13 (11.8%) identified as alcohol consumers. Tobacco chewing was the least common habit, with only 1 participant (0.9%) engaging in it. These findings suggest that while smoking and alcohol use are present among a minority of the participants, tobacco chewing is relatively rare in this population.

Table 4.4: Social History

Personal History	Frequency	Percentage
Smoker	10	9.1%
Alcoholic	13	11.8%
Tobacco chewing	1	0.9%

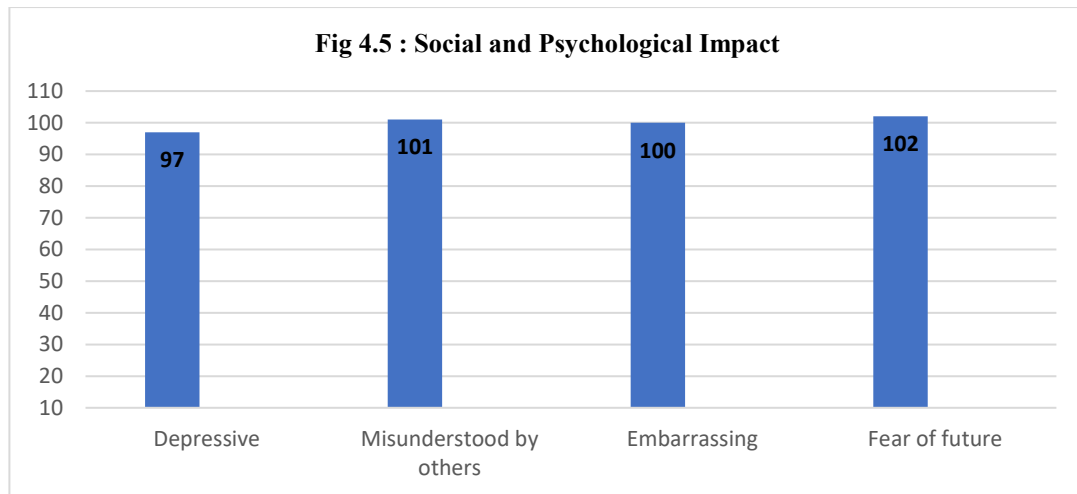


4.5. Psychological impact

In the present study assessing the social and psychological impact of Chronic Suppurative Otitis Media (CSOM), a significant proportion of patients reported various emotional and social difficulties. About 88.1% of patients experienced depressive feelings, while 91.8% reported being misunderstood by others. Embarrassment due to their condition was noted by 90.9% of the participants. Furthermore, 92.7% of patients expressed a fear of the future associated with their illness. These findings highlight the profound psychological burden and social stigma faced by individuals suffering from CSOM.

Table 4.5: Social and Psychological Impact

Condition	Frequency	Percentage
Depressive	97	88.1%
Misunderstood by others	101	91.8%
Embarrassing	100	90.9%
Fear of future	102	92.7%

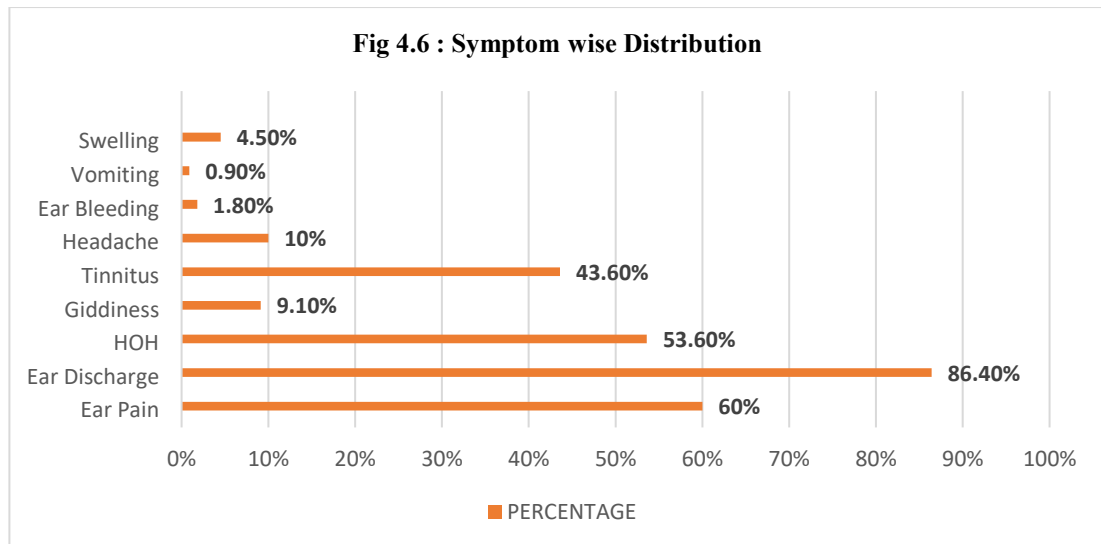


4.6. Symptom wise distribution

The symptom-wise distribution among the 110 participants reveals that ear-related complaints were highly prevalent. The most commonly reported symptom was ear discharge, observed in 95 individuals (86.4%), followed by ear pain in 66 (60%). Hearing loss or hard of hearing (HOH) was also frequently noted, affecting 59 (53.6%). Tinnitus was reported by 48 participants (43.6%), while giddiness and headache were experienced by 10 (9.1%) and 11 (10%) individuals, respectively. Less commonly reported symptoms included swelling (4.5%), ear bleeding (1.8%), and vomiting (0.9%). These findings highlight that ear discharge, pain, and hearing loss are the dominant symptoms among the study group.

Table 4.6: Symptom Wise Distribution

Symptom	Frequency	Percentage
Ear Pain	66	60%
Ear Discharge	95	86.4%
HOH	59	53.6%
Giddiness	10	9.1%
Tinnitus	48	43.6%
Headache	11	10%
Ear Bleeding	2	1.8%
Vomiting	1	0.9%
Swelling	5	4.5%

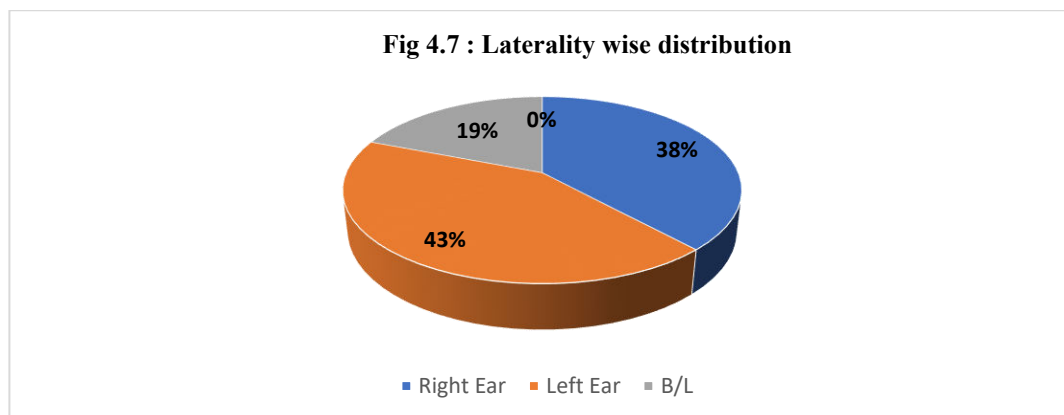


4.7. Distribution based on laterality

The laterality of ear involvement among the participants shows a nearly even distribution between the ears. Out of 110 individuals, 47 (42.7%) reported symptoms in the left ear, while 42 (38.2%) experienced issues in the right ear. Additionally, 21 participants (19.1%) had bilateral (B/L) involvement, indicating symptoms in both ears. This distribution suggests that while unilateral ear issues are more common, a notable proportion of individuals experience bilateral symptoms.

Table 4.7: Laterality Wise Distribution

Laterality	Frequency	Percentage
Right Ear	42	38.2%
Left Ear	47	42.7%
B/L	21	19.1%
Total	110	100%



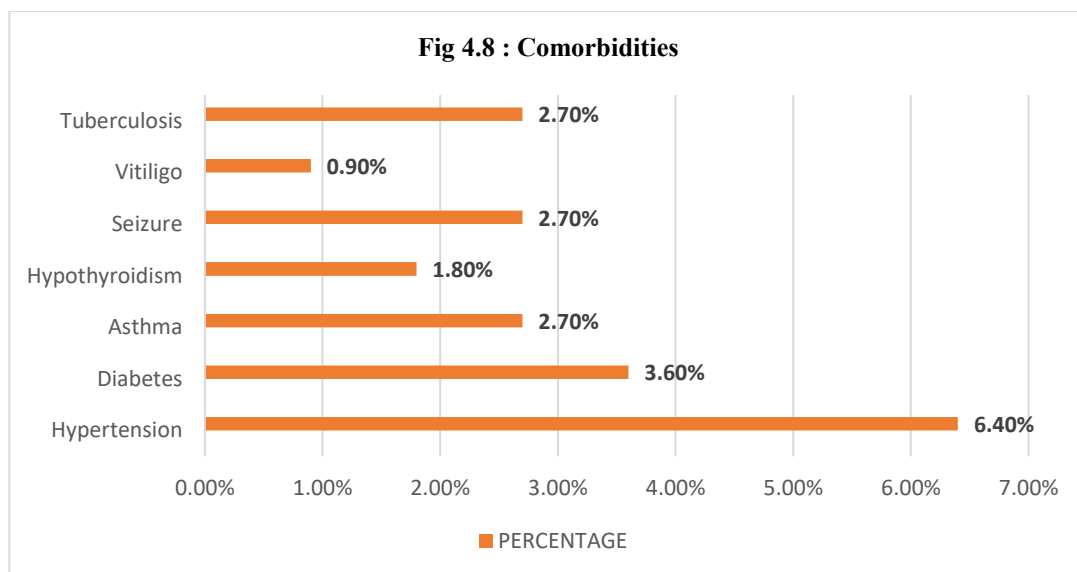
4.8. Distribution based on co morbidity

The distribution of comorbidities among the 110 participants indicates the presence of various underlying health conditions. Hypertension was the most commonly reported

comorbidity, affecting 7 individuals (6.4%), followed by diabetes in 4 (3.6%). Asthma, seizures, and tuberculosis were each reported by 3 (2.7%). Hypothyroidism was noted in 2 (1.8%), while vitiligo was the least common, reported by only 1 individual (0.9%). Although the overall prevalence of comorbidities is relatively low, their presence may have implications for the overall health and treatment outcomes of the affected individuals.

Table 4.8: Comorbidity Conditions

Comorbidity	Frequency	Percentage
Hypertension	7	6.4%
Diabetes	4	3.6%
Asthma	3	2.7%
Hypothyroidism	2	1.8%
Seizure	3	2.7%
Vitiligo	1	0.9%
Tuberculosis	3	2.7%

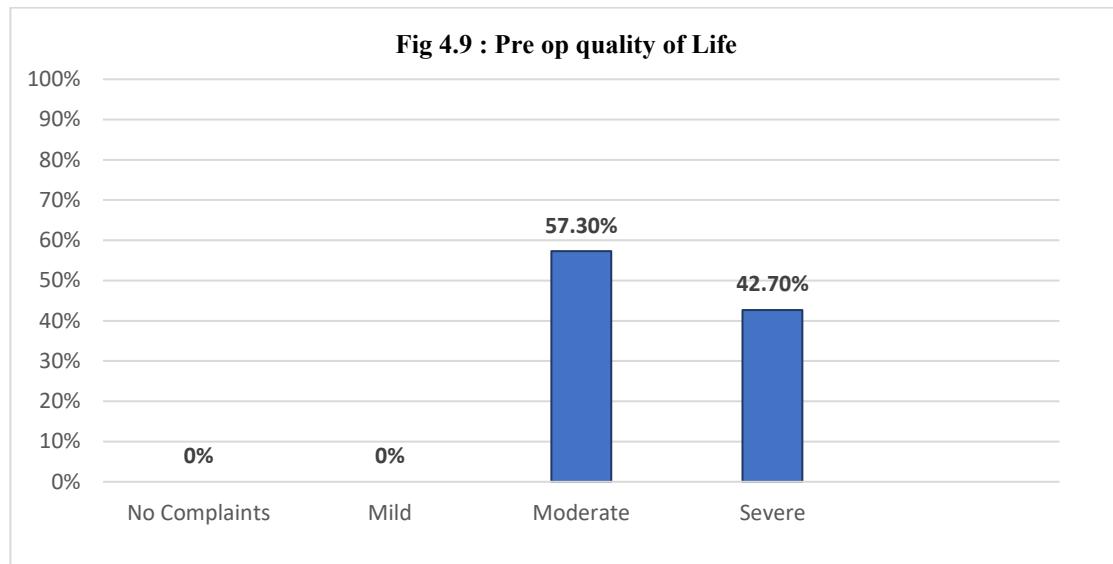


4.9. Pre-OP Quality of life

The pre-operative status of the participants highlights the severity of their symptoms prior to undergoing any intervention. Among the 110 individuals assessed, none reported having no complaints or only mild symptoms. A majority of 63 participants (57.3%) experienced moderate symptoms, while 47(42.7%) reported severe symptoms. This indicates that all participants were symptomatic, with a significant proportion facing considerable discomfort or impairment, emphasizing the need for medical attention and possible surgical intervention.

Table 4.9 pre op quality of life

Pre-Op Condition	Frequency	Percentage
No Complaints	0	0%
Mild	0	0%
Moderate	63	57.3%
Severe	47	42.7%
Total	110	100%

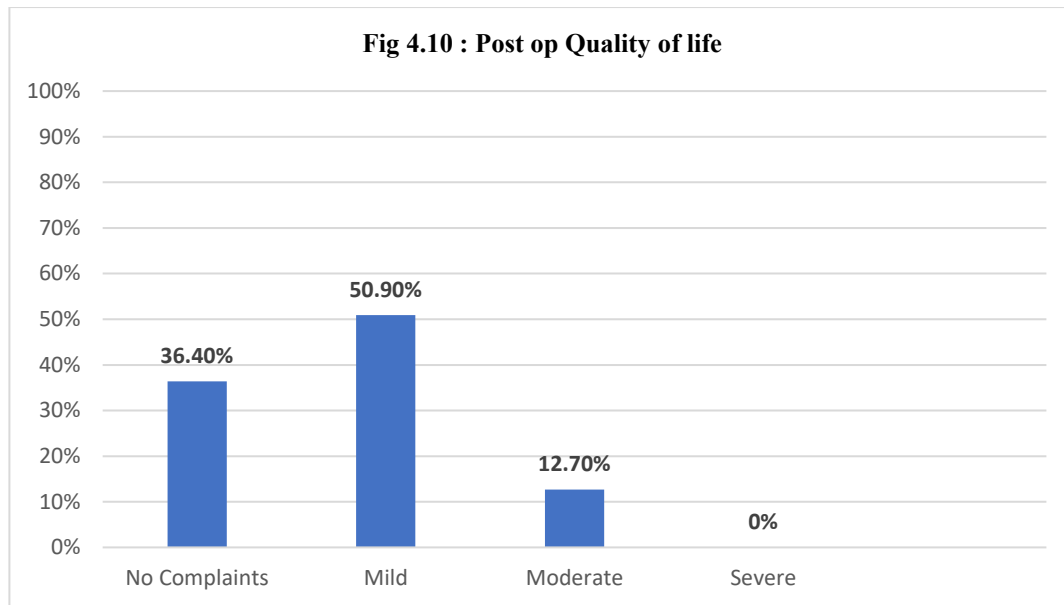


4.10. Post-OP Quality of Life

The post-operative evaluation of the participants shows a significant improvement in symptoms following the intervention. Out of 110 individuals, 40 (36.4%) reported no complaints, while 56 (50.9%) experienced only mild symptoms. Moderate symptoms were observed in 14 participants (12.7%), and notably, no participants reported severe symptoms post-operatively. This shift from moderate and severe symptoms pre-operatively to predominantly mild or no symptoms post-operatively indicates a positive outcome and suggests the effectiveness of the treatment provided.

Table 4.10: Post-Op Quality of Life

Post-Op Condition	Frequency	Percentage
No Complaints	40	36.4%
Mild	56	50.9%
Moderate	14	12.7%
Severe	0	0%
Total	110	100%



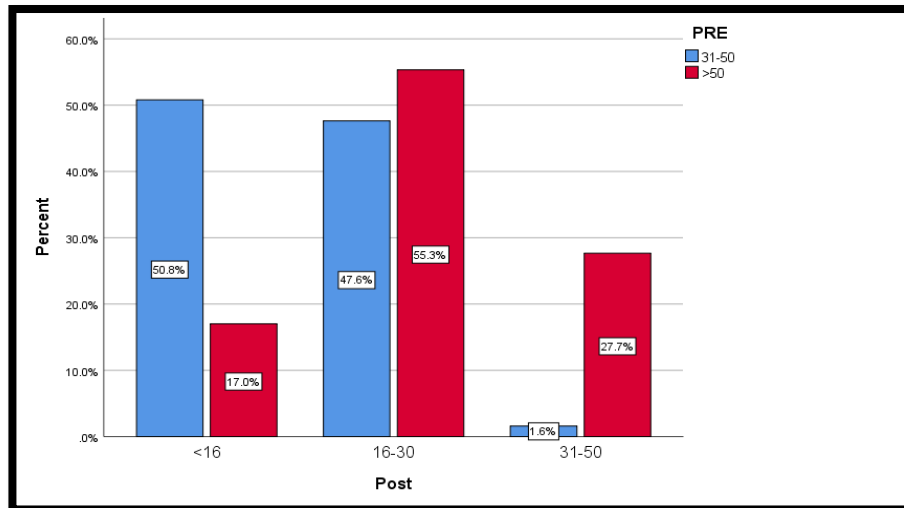
4.11. Chi-square analysis

The comparison between pre-operative and post-operative symptom severity using the Chi-Square test reveals a statistically significant improvement in patient outcomes following treatment. Among the 63 patients who initially presented with moderate symptoms, the majority shifted to either having no complaints 32(50.8%) or only mild symptoms 30 (47.6%) post-operatively, with just one remaining in the moderate category. Of the 47 patients who initially had severe symptoms, 8 (17%) improved to no complaints, 26 (55.3%) to mild, and 13 (27.7%) to moderate levels post-operatively. The Chi-Square value of 23.134 with a p-value of <0.001 indicates a highly significant statistical difference between the pre- and post-operative conditions, confirming the effectiveness of the treatment in reducing symptom severity.

Table 4.11: Chi-Square Test Values

Pre Op	No Complaints	Mild	Moderate	Total	Chi-Square Test (P Value)
Moderate	32 (50.8%)	30 (47.6%)	1 (1.6%)	63	23.134, p < 0.001
Severe	8 (17%)	26 (55.3%)	13 (27.7%)	47	
Total	40 (36.4%)	56 (50.9%)	14 (12.7%)	110	

Fig4.11: Chi-square test values



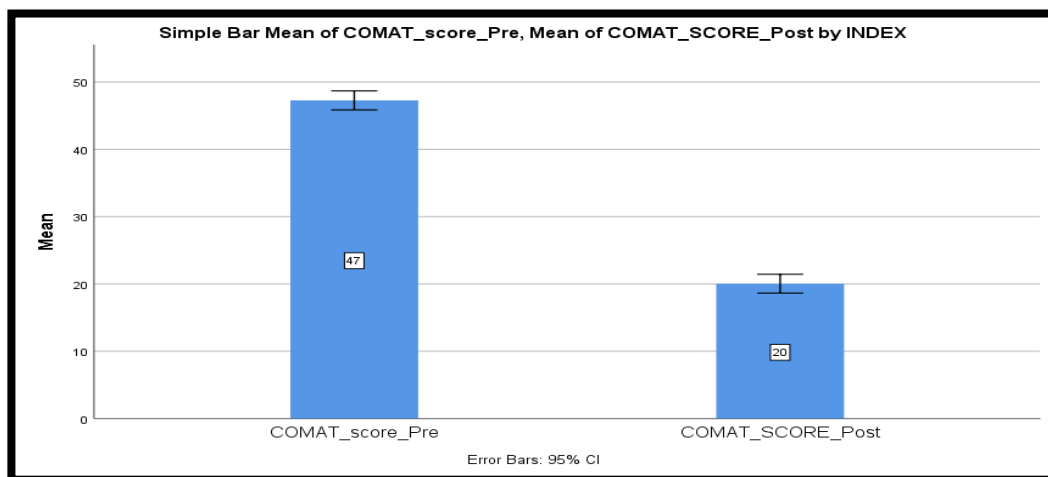
4.12. Paired t-test analysis

The paired samples statistics demonstrate a significant improvement in the participants' COMAT scores from pre-operative to post-operative assessments. The mean pre-operative COMAT score was 47.26 (with a standard deviation of 7.489), indicating a relatively high severity of symptoms at the start of the study. In contrast, the mean post-operative COMAT score decreased to 20.04 (with a standard deviation of 7.427), reflecting a notable improvement in symptom management following treatment. The paired t-test yielded a t-value of 36.773 with a p-value of <0.001, confirming that the difference in scores before and after the intervention is statistically significant, further supporting the efficacy of the treatment.

Table 4.12: Paired Sample Statistics (COMAT Scores)

Timepoint	Mean	Std. Deviation	T-Value	P Value
Pre-OP	47.26	7.489	36.773	<0.001
Post-Op	20.04	7.427		

Fig 4.12: Paired t-test analysis



5. Discussion

The results of this study demonstrate that CSOM not only causes physical disabilities but also significantly impairs the social and psychological well-being of patients. The high prevalence of hearing loss among CSOM patients is consistent with previous studies, but the social isolation and psychological stress experienced by these patients highlight the need for comprehensive care that addresses both the medical and psychosocial aspects of the disease. Hearing impairment, in particular, leads to communication difficulties, which severely limits the patient's ability to interact socially and maintain employment. Additionally, the stigma associated with malodorous discharge often forces patients into social isolation, further aggravating their emotional distress. This is particularly true in low-income settings where healthcare resources are limited, and patients may have to live with the condition for extended periods without receiving proper treatment.

The present study involved 110 participants, with a slight predominance of females (52.7%) over males (47.3%). Most participants were in the 18–28 age group (28.2%), followed by 28–38 and 38–48 age brackets (21.8% each). The majority were married (79.1%), and a minority had a history of smoking (9.1%) or alcohol consumption (11.8%).

5.1 Physical Impact

Chronic Suppurative otitis media is characterized by the clinical symptoms of hearing loss, otorrhea, fullness of the ear, ear pain, headaches, and often tinnitus. In terms of clinical symptoms, the most common complaints were ear discharge (86.4%), ear pain (60%), and hearing loss (53.6%). Fewer participants reported tinnitus (43.6%), headache (10%), or giddiness (9.1%). The left ear was slightly more frequently affected (42.7%) than the right ear (38.2%), with bilateral involvement noted in 19.1%. Many patients reported difficulty sleeping due to the discomfort caused by the ear discharge and pain. Comorbid conditions were relatively rare in this population, with hypertension (6.4%) and diabetes (3.6%) being the most reported.

To know the severity of symptoms COMAT-15 scale has been used, when evaluating the severity of symptoms before and after the procedure, a significant clinical improvement was observed. Preoperatively, 57.3% of patients experienced moderate symptoms and 42.7% had severe symptoms. Postoperatively, 50.9% reported only mild symptoms, and 36.4% had no complaints at all, indicating a marked reduction in symptom severity.

The Chi-square test revealed a statistically significant difference between preoperative and postoperative symptom severity ($p < 0.001$), confirming that the procedure had a substantial effect. This was further supported by the paired t-test, which compared COMAT scores before and after the intervention. The mean COMAT score decreased significantly from 47.26 ± 7.49 to 20.04 ± 7.43 ($p < 0.001$), indicating improved clinical outcomes.

5.2 Social and Psychological Impact

The social domain of QOL was significantly impaired in patients with CSOM. Overall, 25% of COMAT -15 scale carries Social and psychological impact. A total of 88.1% subjects reported feeling depressive due to their condition. Additionally, hearing impairment was found to cause communication difficulties, leading to social isolation and fear to misunderstand other people 91.8% of the subjects. 90.9% of subjects expressed feelings of embarrassing situation due to the chronic nature of the disease. Scared and fear were reported by 92.7% of the subjects, as they felt their ear problems might increase in future. The fear of future is most commonly seen psychological impact.

5.3 Correlation between Disease Severity and QOL

There was a strong correlation between the degree of hearing loss and the deterioration of quality-of-life scores. Patients with bilateral CSOM had significantly lower QoL scores than those with unilateral disease. Furthermore, patients with a longer duration of illness had greater impairments in physical functioning and psychological health, indicating that prolonged exposure to the symptoms of CSOM exacerbates its impact on daily living.

5.4 Recommendations for Management

Effective management of CSOM requires a multidisciplinary approach. Medical treatment with appropriate antibiotics, topical ear drops, and surgical interventions such as tympanoplasty can address the physical aspects of the disease. However, equally important is the provision of psychological support and counseling services to help patients cope with the social stigma and emotional challenges associated with the condition. Hearing aids should also be made accessible to patients with significant hearing impairment, and public awareness campaigns should focus on educating the community about ear health to reduce stigma.

6. Conclusion

Chronic Suppurative Otitis Media has a profound impact on the quality of life of affected individuals, particularly in terms of social and psychological well-being. This study underscores the importance of a comprehensive management strategy that addresses the full spectrum of the disease, including physical, social, and emotional health. Patient education and hygiene measures plays critical role in mitigating the disease burden. Many patients experience limitations in daily activity and workplace performance which reduce their quality of life. Early diagnosis and intervention, along with access to adequate healthcare facilities, can significantly improve the outcomes for patients with CSOM.

7. Reference

1. Bluestone, Charles (2004). *Pediatric Otolaryngology. Chronic Otitis Media: Pathogenesis and Clinical Features.* pp. 101–120.
2. O'Donoghue, Gerard (2003). *Otology Textbook. Microbiology and Pathogenesis of Middle Ear Infections.* pp. 221–230.
3. Marx, Malte (2011). *Otology & Neurotology. Quality-of-Life Assessment in Chronic Suppurative Otitis Media.* pp. 378–383.
4. Dyna Medex (2025). EBSCO Information Services. *Chronic Suppurative Otitis Media (CSOM).*
5. Roland, Peter (2008). *Current Opinion in Otolaryngology. Risk Factors for Persistent Otitis Media.* pp. 450–456.
6. Wang, Xiaoming (2015). *American Journal of Otolaryngology. T-Cell Immunity and Granulation Tissue Formation in CSOM.* pp. 301–308.
7. Brook, Itzhak (2002). *Annals of Otology, Rhinology & Laryngology. Anaerobic Bacteriology in Chronic Otitis Media.* pp. 45–50.
8. Berger, Gary (2005). *Ear, Nose and Throat Journal. Clinical Features of Safe and Unsafe CSOM.* pp. 210–218.
9. Meyerhoff, William (2006). *Journal of Laryngology & Otology. Global Burden of Chronic Otitis Media.* pp. 89–95.
10. Gopen, Quinton (2009). *Otolaryngologic Clinics of North America. Complications of Chronic Suppurative Otitis Media.* pp. 721–736.
11. Thompson, Leigh (2010). *Surgery of the Ear & Temporal Bone. Surgical Management of Chronic Middle Ear Disease.* pp. 455–470.
12. Schwartz, Scott (1998). *Archives of Otolaryngology. Historical Perspectives on Middle Ear Disease.* pp. 112–119.