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Assessment Of Surgical Outcomes In Patients With Chronic Suppurative Otitis Media

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Background: One of the most prevalent viral children illnesses in the world, chronic suppurative otitis media (CSOM) is a major factor in hearing loss in settings with minimal resources. In environments with plenty of resources, it is less common. Chronic middle ear drainage linked to tympanic membrane (TM) perforation is its defining feature. Acute otitis media frequently occurs prior to CSOM (AOM). The long-term consequences of COM-related hearing loss on language development, communication, and the educational process make it a serious concern. It is estimated that developing nations account for two thirds of the global population with hearing impairments. The present study was intended to assess the surgical outcomes in patients with chronic suppurative otitis media who has undergone surgery at our tertiary care hospital.
Methodology: The present prospective hospital based observation study was conducted in the department of ENT at our tertiary care hospital. The study was approved by institutional ethical committee. The data were collected by the active participation of the patients' interview by the preformed proforma of data collection sheet and then data were gathered and tabulated. Detail history, physical examination and relevant investigations were done pre-operatively and post-operatively. Post-operative follow up after 1month and 3 months were done.
Results: The present study included a total of 50 patients aged between 10 years to 50 years based on inclusion and exclusion criteria who presented with CSOM and underwent surgical procedure. Out of the 50 patients enrolled 33 were males and 17 were females. Majority of the patients were in the age group 10-20 years. It is evident from the table 2 that 32% presented with postero-superior perforation, 36% with attic perforation, 96% discharge, 38% aural polyp, 46% granulation tissue. The most commonest clinical presentation was discharge. It is evident from table 3 that at one month and three months follow ups 16%, 12% had discharging ear, 24% and 22% had dry ear, 2% and 0% had granulation tissue, 84% and 86% had improved hearing, 10% and 8% had unchanged and 6% and 6% had deteriorated hearing loss.
Conclusion: In this study, most CSOM cases occur in the age range of 10-20 years. The most frequent clinical presentation is otorrhea. Hearing loss arising from COM is a matter of serious concern because of its long-term effects on communication, language development and educational process. Early diagnosis and intervention by skilled Otologist is recommended to regain hearing as well as to prevent disability and complications.

Key-words: chronic suppurative otitis media, discharge, attic perforation, hearing loss and granulation tissue.

Introduction

One of the most prevalent viral children illnesses in the world, chronic suppurative otitis media (CSOM) is a major factor in hearing loss in settings with minimal resources. In environments with plenty of resources, it is less common. Chronic middle ear drainage linked to tympanic membrane

(TM) perforation is its defining feature. Acute otitis media frequently occurs prior to CSOM (AOM) [1-2]. The long-term consequences of COM-related hearing loss on language development, communication, and the educational process make it a serious concern. It is estimated that developing nations account for two thirds of the global population with hearing impairments [3-5]. Active squamous COM is treated surgically using a variety of approaches. It is divided into two categories: open cavity (canal wall down) and closed cavity (intact canal wall mastoidectomy). Surgery for active squamous COM (cholesteatoma) aims to restore the ear as close to normal as possible while also removing the disease completely and reducing the chance of recurrence. The ear should be able to clean itself and not need to be cleaned often. It should also be able to recover hearing. These days, canal wall down tympanoplasty (CWDT) is frequently done, recurrences are decreased, and hearing preservation is maintained [6-8]. A novel form of surgery called tympanomastoid surgery combines tympanoplasty with a single stage mastoidectomy. Since the early 1980s, it has undergone continuous change. Newer approaches to ear surgery have progressively refined and molded the original procedure. The diagnosis category of CSOM (with and without cholesteatoma), pathogenic organisms, degree of mastoid pneumatization, regional factors such as related mucosal illness of the nose and paranasal sinuses, and systemic factors such as diabetes all influence how the surgery turns out. Following tympanomastoid surgery, there is a 10-25 dB hearing gain and a 5-71% recurrence rate. When necessary, mastoidectomy can avoid graft failure and enhance the outcome of tympanoplasty. A history of excessive otorrhea, particularly purulent otorrhea, a prior tympanoplasty failure, a secondary acquired cholesteatoma, and a severe tympanic membrane that is not respectable without more exposure supplied by mastoidectomy are relative reasons for mastoidectomy during tympanoplasty. The degree of the disease will frequently dictate how aggressive the surgical procedure will be [9-12]. The present study was intended to assess the surgical outcomes in patients with chronic suppurative otitis media who has undergone surgery at our tertiary care hospital.

Materials and Methods

The present prospective hospital based observation study was conducted in the department of ENT at our tertiary care hospital. The patients diagnosed with chronic suppurative otitis media with active squamous disease who underwent tympanomastoid surgery were included. Patients not willing to provide the consent, patients who needed revision surgery, patients dropped out from follow up study, patients unfit for general anesthesia and tubotympanic variety of CSOM were excluded from the study. Informed consent was obtained from all patients included in the study. The study was approved by institutional ethical committee. The data were collected by the active participation of the patients' interview by the preformed proforma of data collection sheet and then data were gathered and tabulated. Detail history, physical examination and relevant investigations were done pre-operatively and post-operatively. Post-operative follow up after 1month, 2 months and 3 months were done.

Results

The present study included a total of 50 patients aged between 10 years to 50 years based on inclusion and exclusion criteria who presented with CSOM and underwent surgical procedure. Out of the 50 patients enrolled 33 were males and 17 were females. Majority of the patients were in the age group 10-20 years.[Table 1]

Table 1: Shows age-wise and gender wise distribution of patients

	Number =50	Percentage
Age-wise distribution		
10 – 20 yrs.	15	30%
21 – 30 yrs.	13	26%
31 – 40 yrs.	12	24%
41 – 50 yrs.	10	20%
Gender wise distribution		

Males	33	66%
Females	17	34%

Table 2: Clinical presentation of Study Subjects

Clinical presentation	Number of Cases=50	Percentage
Postero-superior marginal perforation	16	32%
Attic perforation	18	36%
Discharge	48	96%
Aural polyp	19	38%
Granulation tissue	23	46%

It is evident from the table 2 that 32% presented with postero-superior perforation, 36% with attic perforation, 96% discharge, 38% aural polyp, 46% granulation tissue. The most commonest clinical presentation was discharge.

Table 3: Results of post-operative follow up at month 1 and month 3

Clinical presentation	1st month		3rd month	
	Number	Percentage	Number	Percentage
Discharging ear	8	16%	6	12%
Dry ear	12	24%	11	22%
Granulation tissue	1	2%	0	0%
Hearing loss				
Improved	42	84%	43	86%
Unchanged	5	10%	4	8%
Deteriorated	3	6%	3	6%

It is evident from table 3 that at one month and three months follow ups 16%, 12% had discharging ear, 24% and 22% had dry ear, 2% and 0% had granulation tissue, 84% and 86% had improved hearing, 10% and 8% had unchanged and 6% and 6% had deteriorated hearing loss.

Discussion

Chronic suppurative otitis media (CSOM) is a chronic inflammation of the middle ear with perforation of the tympanic membrane and discharge from the ear for more than two months, either continuously or intermittently [13]. According to the WHO, CSOM affects between 65 and 330 million people worldwide, 60% of whom suffer from hearing loss. Meanwhile, the incidence is 9 cases per 100,000 inhabitants [14]. The high incidence of CSOM is influenced by the etiology and pathogenesis of CSOM itself. There are several contributing factors such as infection, anatomy or physiological dysfunction, environment, allergy or patient factors including immunity, gender and others. Clinically, CSOM is classified into two types, namely tubotympanic and atticatral. CSOM disease begins with otitis media, which lasts a long time and is not adequately treated [15]. The present study included a total of 50 patients aged between 10 years to 50 years based on inclusion and exclusion criteria who presented with CSOM and underwent surgical procedure. Out of the 50 patients enrolled 33 were males and 17 were females. Majority of the patients were in the age group 10-20 years. It is evident from the table 2 that 32% presented with postero-superior perforation, 36% with attic perforation, 96% discharge, 38% aural polyp, 46% granulation tissue. The most commonest clinical presentation was discharge. It is evident from table 3 that at one month and three months follow ups 16%, 12% had discharging ear, 24% and 22% had dry ear, 2% and 0% had granulation tissue, 84% and 86% had improved hearing, 10% and 8% had unchanged and 6% and 6% had deteriorated hearing loss.

Conclusion

In this study, most CSOM cases occur in the age range of 10-20 years. The most frequent clinical presentation is otorrhea. Hearing loss arising from COM is a matter of serious concern because of its long-term effects on communication, language development and educational process. Early diagnosis and intervention by skilled Otologist is recommended to regain hearing as well as to prevent disability and complications.

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