FREQUENCY OF COMPLICATIONS IN CHRONIC SUPPURATIVE OTITIS MEDIA

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ABSTRACT

OBJECTIVE: To determine the frequency of complications in patients suffering from chronic suppurative otitis media (CSOM).

METHODS: This study was done in Saidu Sharif Teaching Hospital from 1st March 2010 to 30th June 2013.

In this prospective studies 53 patients of

Chronic suppurative otitis media were selected.

RESULTS: In our study 31(58.4%) male and 22 (41.5%) were female. Age distribution was from 1 to 10 years 11(20.7%), 11 to 20 years 25(47.1%), 21 to 30 years 13(24.5%), 30 to 40 years 04(7.54%). Out of 53 patients 28 (52.8%) presented with different complications. Mastoid abscess 10 (18.8 %), Facial nerve paralysis 05 (9.43%), Meningitis 03 (5.66%), Bezold abscess 02 (3.77%), Brain abscess 02 (3.77%), %, Lateral sinus thrombo phlebitis 02 (3.77%), Labrynthitis 02 (3.77%), Ototic hydrocephalus 01 (1.88%) Sigmoid sinus thrombo phlbitis 01 (1.88%).

CONCLUSION: Early recognition and treatment of CSOM can reduce the number of cases and complications of the disease.

KEY WORDS: CSOM, Complications

INTRODUCTION

Chronic otitis media refers to an inflammatory process within the middle ear cleft associated with irreversible tissue pathology. It may be active with ongoing suppuration, or inactive demonstrating sequel of a previous infection. A complication from suppurative ear disease is defined as the spread of infection beyond the confines of the pneumatized spaces of the temporal bone and its mucosa. The first such area is the bone surrounding the pneumatized spaces; hence, bone destruction is a sign of complication. Chronic suppurative otitis media (CSOM) is a common disease in low socioeconomic stratum and rural areas, with poor hygienic and dietary conditions. The disease is now-a-days less aggressive, due to excessive use of antibiotics, but its atticointral type with marginal perforation and cholesteatoma can lead to serious complications. Bone erosion is an established complication of this type and may involve extra cranial and intracranial structures. Previously the morbidity and mortality were high due to less awareness of disease, and less effective treatment measures. Now-a-days, the frequency of complications is greatly reduced due to effective and prompt treatment; but still the erosive and

spreading effects of cholesteatoma may lead to a grave prognosis¹⁻⁴. The CT scan with and without intravenous contrast is no doubt the most important investigation in the diagnosis of brain abscess, and is also the most valuable method for observing the progress of an abscess during treatment. The MRI has further improved the diagnosis⁵.

MATERIAL AND METHODS

The study was approved from hospital ethical board. A well informed consent was taken from the patients explaining risks, benefits, complication associated with procedure and regarding publication of study which may have their photos. This study was done in Saidu Sharif Teaching Hospital from 1st March 2010 to 30th June 2013. In this prospective study 53 patients of Chronic suppurative otitis media with complications were included. Previously operated and patients having malignant disease were excluded. Otoscopy and audiological assessments were performed in all cases. Examination under microscope was performed in selected cases. All cases were subjected to CT scan. Patients with persistent disease and recurrent foul smelling ear discharge,

and marginal perforation were selected for mastoid exploration. Selection of surgical operation was done according to type and extent of disease and included radical or modified radical mastoidectomy. All patients with intracranial complications were referred to neurosurgical management and later on were treated for primary source afterwards.

RESULTS

In our study 31 (58.4%) male and 22 (41.5%) were female (table 1).

Male	Female
31 (58%)	22 (41%)

Age distribution is shown in table 2, majority of our patients were in the age range of 11 to 20 years 25(47.1%), 21 to 30 years 13(24.5%), 30 to 40 years 04(7.54%).

Table 2
Age distribution

1 to 10 years	11 to 20 years	21 to 30 years	30 to 40 years
11 (20.7%)	25(47.1%)	13(24.5%)	04(7.54%)

Out of 53 patients 28 (52.8%) are presented with different complications (table 3).

Table 3
Type of complications

Complications	Number of time occurred	% age
Mastoid abscess	10	18.8 %
Facial nerve palsy	05	9.43 %
Meningitis	03	5.66 %
Bezold abscess	02	3.77 %
Brain abscess	02	3.77 %
Lateral sinus thrombo phlebitis	02	3.77 %
labyrinthitis	02	3.77 %
Ototic hydrocephalus	01	1.88 %
Sigmoid sinus thrombo phlebitis	01	1.88 %
Total with complications	28	52.8 %

Mastoid abscess 10 (18.8 %), Facial nerve paralysis 05 (9.43%), Meningitis 03 (5.66%), Bezold abscess 02 (3.77%), Brain abscess 02 (3.77%), Lateral sinus thrombo phlebitis 02 (3.77%), Labrynthitis 02 (3.77%), Ototic hydrocephalus 01 (1.88%), Sigmoid sinus thrombo phlebitis 01 (1.88%), Total no of 48(90.5%) patients were subjected to radical

mastoidectomy while 5(9.4%) were treated as modified radical mastoidectomy.

DISCUSSION

Most complications arise from chronic rather than acute otitis media. Factors causing complications include high virulence of organism, poor resistance of the patient, presence of chronic systemic diseases, and resistance of the organism to antibiotics. In our study majority of our patients were male 31 cases (58%) as compared to females 22 (41%) compatible with study by Maksimovic Z, Rukovanjski M⁶. In our study the maximum patients presented was in age group 11 to 20 years (47%) contrary to the findings of Muhammad and Alam J. et al study, in which frequency of maximum patients presentation age was 3rd decade^{7,8}. This age difference from advanced countries may be due to overcrowding, malnutrition and poor hygiene in our country. Majority of the patients were from poor socioeconomic stratum and this is in accordance with the study of Chaudhary MA et al⁹. Out of 53 patients 28 (52.8%) presented with different complications. Mastoid abscess 10 (18.8 %), were the highest in frequency in the patients presented followed by Facial nerve paralysis 05 (9.43%). The course of study reveals that extracranial complications are the commonest than intracranial; these results are similar to the results of Memon MA and Osama U^{10,11}.

In our study meningitis 03 (5.66%), remained on top in the list of intra cranial complications with similar results mentioned in different parts of world literature analyzed by Maksimovic Z et al, in his most recent series of over 1400 patients with chronic ear disease and cholesteatoma followed over 15 years, nearly 7.5% developed intra cranial complications. Meningitis still the most common complication⁵. Maksimovic Z et al studied the frequency of intracranial complications and found that as brain abscess is the second most common intracranial complication after meningitis and lateral sinus thrombophlebitis to follow, which is compatible with our study. All his findings are similar in terms of pattern distribution with findings of Kangsanarak et al¹². All cases with intracranial

complications revealed papilledema on fundoscopic examination as stated by Abdul Aziz A. Patients confirmed with intra cranial disease were stabilized with heavy doses of antibiotics and referred to neurosurgical management¹³. Patients with atticointral disease were treated with modified radical and radical mastoidectomies. Patients diagnosed as lateral sinus thrombosis were managed with primary surgical modality that is radical mastoidectomy.

CONCLUSION

Complications of CSOM are most common in low socioeconomic people. Extra cranialintratemporal complications outnumber intracranial complications. Intracranial complications of CSOM need neurosurgical management on urgent basis. All patients of CSOM with complications, intracranial or extracranial need mastoid exploration.

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