ORIGINAL RESEARCH PAPER

Volume-7 | Issue-3 | March-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF FUNGAL INFECTIONS IN DISCHARGING EARS IN DIABETES PATIENTS:

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ABSTRACT

Ear Discharge especially the chronic variety is a widely encountered clinical entity since Hippocrates. It is an inflammatory condition of the ear that causes recurrent ear discharge through a perforation in the eardrum. This has always been a subject of active speculations, differences of opinion and controversies. CSOM and its complications are the bearbug of otologist, paediatrician and general practitioner. It is a disease of multiple aetiology and well known for its persistence and recurrences inspite of treatment. One of the reason for the refractoriness to treatment and chronicity is coexisting fungal infection of the ear. This opinion is shared by Callahan et al. (1960) and Sengupta et al. In this study the mycological aspects of chronic otitis media with actively discharging ears is studied.

KEYWORDS

Ear Infection, Fungal, CSOM, Discharge

Introduction:

Ear Discharge is a widely encountered clinical entity since Hippocrates. It is an inflammatory condition of the ear that causes recurrent ear discharge through a perforation in the eardrum.(1,2) CSOM and its complications are the bearbug of otologist, paediatrician and general practitioner. It is a disease of multiple aetiology and well known for its persistence and recurrences inspite of treatment. One of the reason for the refractoriness to treatment and chronicity is coexisting fungal infection of the ear. This opinion is shared by Callahan et al. (1960) and Sengupta et al.(3,4) In this study the mycological aspects of chronic otitis media with actively discharging ears is studied. This has always been a subject of active speculations, differences of opinion and controversies.

The common infections that can cause major problems and are associated with increased blood glucose levels and Advanced Glycation Products (AGPs).[5,6] Skin disorders in diabetics are usually consistent as in the medical literature, but the data is limited with respect to early stage skin disorders in diabetic patients.[2] Awareness is needed for better understanding the importance of skin disorders in diabetes patients for prevention and management. Diabetes Mellitus (DM) is non-infectious disease with a high prevalence accounting for a very high rates of morbidity and mortality. Two years back in 2014, the prevalence of diagnosed DM was 387 million and a reported worldwide deaths accounting to 4.9 million. DM has taken a serious toll in the developing countries and the less developed countries where the prevalence comes close to 77% and has become a major health problem.[7]

It is evident that a regular laboratory examination with a definite search for fungi and bacteria is desirable in all the cases of chronic suppurative otitis media, with continuous otorrhoea and who do not respond to the antibacterial treatment. Prolonged use of topical antibiotics or antibiotics-steroids ear drops may cause suppression of bacterial flora and the subsequent emergence of fungal flora.

Aims and Objectives:

To find the fungal infections present in the ear discharge.

Materials and Methods:

One hundred patients were selected who were diabetics and this was taken in as the sample size.

This study was done in the Department of ENT, Travancore Medical College, Kollam

This study was done from June 2016 to May 2017 .

Detailed clinical history was taken and the clinical examination was conducted.

The swabs were taken in an aseptic condition and the complications if any were noted and reported.

Results:

Table 1: Mean age of the Patients

Patients	Mean age	Standard Deviation
100	32.11	16.33

Table 2: Total Number of Patients who had fungal infection

Patients	Incidence	Percentage
60	27	60%

Table 3: Table of Significance

Patients	X-Value	P-Value (<0.05)
60	0.837	0.048

This is significant.

Table 4: Fungal Infection:

Fungal Infection	Frequency
Aspergillus Niger	28
Candida Albicans	32

Discussion:

Candida species are well-known opportunistic pathogens, which are also the normal human commensal. They were identified first as a cause of oral cavity lesions in the 1840s. Incidence of Candida infections has increased dramatically. They have significantly contributed to mortality in immunocompromised patients including DM patients. Candida organisms are oval microscopic yeasts (4-6 µm) having thin wall and reproduce by budding. Of the 150 Candida spp., only about 10 are pathogenic to humans. Breakdown of human immune defence system is essential for Candida to be pathogenic. This study is undertaken to see the pattern of cutaneous fungal infections in type 2 diabetes mellitus to enrich literature with data to help in effective management of diabetes mellitus as well as fungal infections. According to Sampath Kumar et al. the type of fungal infections, total of twenty four patients suffered from tinea pedis infection out of which seventeen were males and seven were females. Eleven patients suffered from onychomycosis, out of which, ten were males and one was female. A total of four patients suffered from Candidal skin infection, out of which, three were males and one was female. Four patients suffered from Candida angular cheilitis, out of which, male and female amounted to two cases each. Six males were noted to have Candida balanitis and three females suffered from vaginal yeast infections. A total number of eight patients suffered from Candida intertrigo, out of which, three cases were males and five cases were female. Skin problems are usually not considered and never attended in diabetics. They are usually neglected and they are only taken note of when they pose problems. Many of these skin problems that go undiagnosed diabetic patients later complicate diabetes and its treatment. The common skin infections that can cause major problems and are associated with increased blood glucose levels and Advanced

Glycation Products (AGPs).

Conclusion:

Candida Albicans are the most common species involved in the fungal infections of the ear.

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