Assessment of Otomycosis and Frequency Distribution of Patients in Iraq

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ABSTRACT

This study aims to Assessment of Otomycosis and Frequency Distribution of Patients in Iraq; and we were collected 50 patients from different Hospitals in Thi-Qar, Iraq, and the were divided into 35 men, and 15 women and this study targeted patients who suffer from Otomycosis

The methodology of this study depends on taking a sample from the ear. The next step is to use 10% KOH for the purpose of culture of samples was performed on Saburo dextrose agar.

Treatment of otomycosis is selected for each patient individually and depends on the type of fungal infection, as well as on the general condition of the body. The main goal is to get rid of the fungal infection and the factors that contribute to its development and exacerbation. Therefore, it is necessary to stop using antibiotics and ear drops (with a hormonal or antibacterial component) and to treat all diseases in a timely manner. Treatment should be aimed at preventing the development of complications, such as hearing loss perforation of the eardrum.

Keywords: KOH, otomycosis, ENT.

Introduction

Otomycosis (OM) is a fungal disease caused by the development on the skin of the ear, the walls of the external auditory canal, the tympanic membrane, in the tympanic cavity, and the postoperative middle ear cavity of various molds and yeast-like fungi. OM can be classified according to several modes: according to the localization - fungal otitis external, onychomycosis, fungal otitis media, postoperative fungal otitis media; by the nature of the pathogen - moldy, yeast-like; The clinical course is chronic [1,2,3].

Various endogenous and exogenous factors play a role in the pathogenesis of rheumatoid arthritis. The main external factor in fungal otitis externa is trauma to the skin as a result of improper hygiene of the external auditory

canal using cotton swabs and other hygiene products [4,5,6,16,17].

During manipulations of the external auditory canal, which the patient performs alone, not only the skin of the external auditory canal is damaged, but also earwax is removed - the main factor in its protection. When the skin is damaged, pathways for the penetration of the fungus into the depths of the tissues are opened, and protective reactions are weakened at the site of damage, which facilitates the growth of the fungus. In addition, the secreted secret of the affected membranous epithelium is a good nutrient medium for the reproduction of fungi [7,8,9,10].

Otitis media is one of the most pressing problems in otolaryngology. Among outpatients, the proportion of patients with various forms of otitis media reaches 28%. According to the City Medical Statistics Office of the Ministry of Health in Iraq, for the period 2003-2013, the proportion of otitis media among patients in ENT rooms in urban multidisciplinary clinics is on average 50% [11,12,13,14,15].

Material and method

Patient sample

50 patients were collected from different Hospitals in Thi-Qar, Iraq, and the patients were divided into 35 men, and 15 women and This study targeted patients which suffer from Otomycosis

Study design

The patients were divided into two groups: males and females

Clinical diagnosis was relied upon by observing the fungal elements present in the outer ear through the use of an ear speculum, sterile swab moistened with sterile saline

Experiments were conducted directly for the purpose of controlling the fungal elements. In addition, the attached plates were kept at a temperature equal to that of the laboratory and for a period of one month.

As with any other diseases of the auditory system, the diagnosis of fungal otitis media primarily requires a physical examination of the patient. During the examination of the external auditory canal, the otolaryngologist will determine the degree of damage to the ear, determine the possible causative agent of the appearance of otomycosis through Characteristic signs, and be able to clean the outer ear, an important step in the treatment of otitis externa media.

Also, in the diagnosis of otomycosis, a bacteriological examination of secretions or smears from the ear is recommended. In most cases, other methods of studying the auditory analyzer will not be needed in this pathology.

In the case of recurrent ear fungus, it may be necessary to examine the patient for other diseases that can create favorable conditions for the occurrence and recurrence of episodes of otomycosis.

The survey is carried out in order to get acquainted with the complaints submitted by patients, as well as to find out the possible causes of this disease and its concomitant diseases. When collecting anamnesis, it is necessary to clarify how long the disease began and pay attention to the features of its course. It is important to know if the patient had previously had a fungal infection of the ear or other organs, how it lasted, and how long it lasted. If a fungal infection was observed before, you need to know what treatment was performed (medicines, physiotherapy) and how effective it was. To determine the possible cause of otomycosis, it is necessary to know the working and living conditions of the patient the presence of allergic and other diseases (recently transmitted or chronic). Since some groups of drugs (antibiotics, hormonal drugs, cytostatics) are one of the possible causes of the development of the disease, the doctor must clarify with the patient how long the course of treatment with these drugs has been and for how long.

Study period

This study was conducted over a period of approximately one year from 5-5-2019 to 4-6-2020 one, including statistical analyzes, in addition to diagnoses and patient collection, in addition to withdrawing information and demographic data.

Aim of research

This paper aims to Assessment of Otomycosis and Frequency Distribution of Patients in Iraq.

Statistical analysis

Patients' demographic information and data were collected and analyzed statistically by relying on mean ± SD, in addition to extracting statistical significance to patient groups.

Results

Table 1- distribution of patients according to age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30.00	1	2.0	2.0	2.0
	32.00	2	3.9	4.0	6.0
	35.00	2	3.9	4.0	10.0
	37.00	4	7.8	8.0	18.0
	39.00	2	3.9	4.0	22.0
	40.00	1	2.0	2.0	24.0
	41.00	1	2.0	2.0	26.0
	42.00	2	3.9	4.0	30.0
	44.00	4	7.8	8.0	38.0
	45.00	6	11.8	12.0	50.0
	47.00	2	3.9	4.0	54.0
	48.00	5	9.8	10.0	64.0
	49.00	2	3.9	4.0	68.0
	50.00	4	7.8	8.0	76.0
	51.00	2	3.9	4.0	80.0
	52.00	2	3.9	4.0	84.0
	53.00	2	3.9	4.0	88.0
	55.00	4	7.8	8.0	96.0
	60.00	2	3.9	4.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Figure 1- distribution of patients according to gender

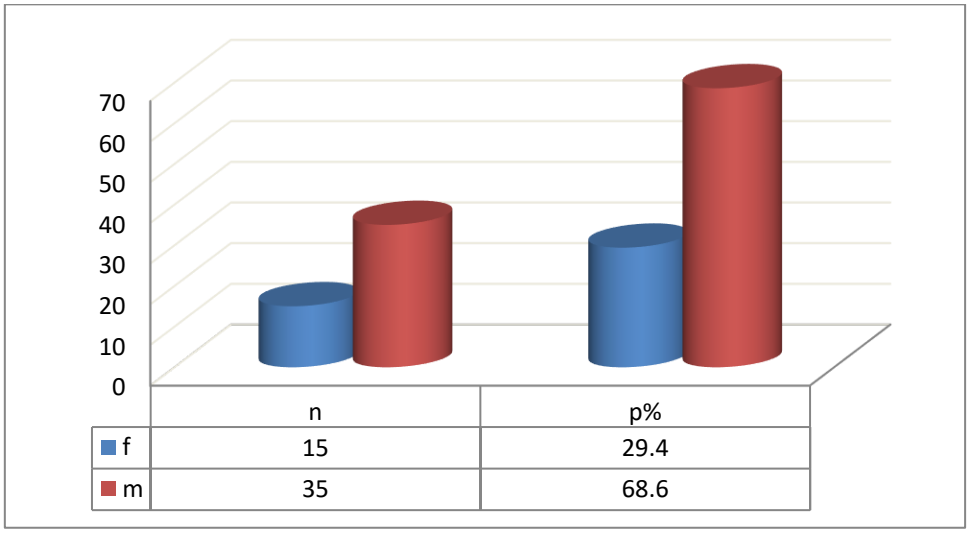

Figure 2- distribution of patients according to positive cases

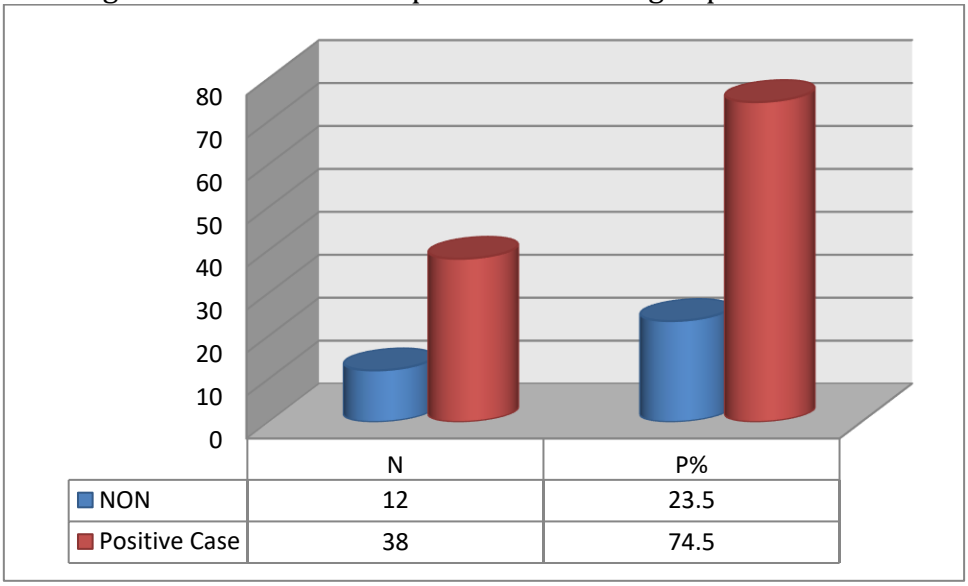

Figure 3- distribution of patients according to Type of Fungus

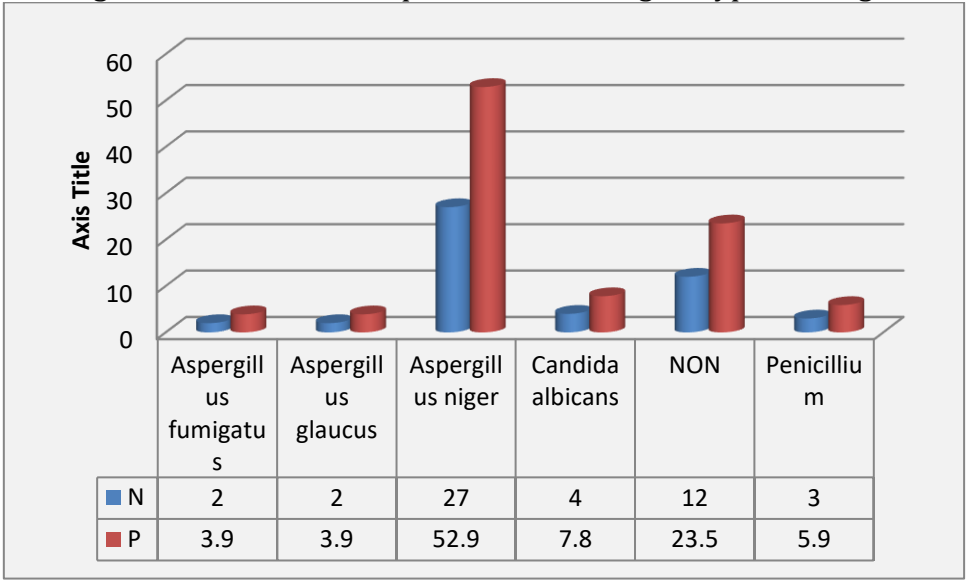

Table 2-Meta-analysis of positive samples with age

Descriptives[a]					
	+cases			Statistic	Std. Error
VAR00001	NON	Mean		41.0833	1.57854
		95% Confidence Interval for Mean	Lower Bound	37.6090	
			Upper Bound	44.5577	
		5% Trimmed Mean		41.3148	
		Median		43.0000	
		Variance		29.902	
		Std. Deviation		5.46823	
		Minimum		30.00	
		Maximum		48.00	

		Range		18.00	
		Interquartile Range		8.00	
		Skewness		-.683	.637
		Kurtosis		-.303	1.232
	Positive	Mean		47.1579	1.13054
		95% Confidence Interval for Mean	Lower Bound	44.8672	
			Upper Bound	49.4486	
		5% Trimmed Mean		47.2865	
		Median		48.0000	
		Variance		48.569	
		Std. Deviation		6.96915	
		Minimum		32.00	
		Maximum		60.00	
		Range		28.00	
		Interquartile Range		8.50	
		Skewness		-.441	.383
		Kurtosis		-.135	.750

a. There are no valid cases for VAR00001 when VAR00003 = .000. Statistics cannot be computed for this level.

Discussion

Fifty patients were collected from different Hospitals in Thi-Qar, Iraq, and the patients were divided into 35 males and 15 females. The statistical analysis program spss soft 20 was also relied on to analyze the results and demographic information to the patients, where the mean value +SD was found To the patients' ages, which was equal to 45.7000 ±7.08908, as shown in the figure below

Table 3- Mean SD age of patients

Statistics		
age		
N	Valid	50
	Missing	1
Mean		45.7000
Median		46.0000
Mode		45.00
Std. Deviation		7.08908
Variance		50.255
Range		30.00
Minimum		30.00
Maximum		60.00
Percentiles	25	40.7500
	50	46.0000
	75	50.2500

The number of patients in relation to the positive cases in this study was equal to 38 patients, or 74%.

Usually, the first sign of otitis externa is the disappearance of the fatty layer covering the skin of the external auditory canal; this may be associated with chronic microtraumas of the skin and high humidity. At this point, a bulge in the ear canal may appear as a result of blockage of the sebaceous glands in his skin. This stage is characterized by the patient's complaints of congestion and pain in the ear. Often, when these symptoms appear, patients believe they have a sulfur plug or a blocked external auditory canal. Attempts to self-medicate damage the integrity of the skin of the ear canal and contribute to the penetration of a fungal infection into it.

The acute stage of otomycosis is accompanied by a more abundant outflow of secretions from the ear. The contents of the discharge may contain mycelium and epithelial cells. Sometimes the lumen of the ear canal is completely blocked by swelling, and this process is accompanied by severe hearing impairment and noise in the ear as a result of a violation of the sound conduction function of the ear canal. During the acute phase, otomycosis is accompanied by a pronounced pain syndrome, which intensifies at the time of swallowing movements.

In most cases, otomycosis is limited to skin lesions of the external auditory canal, but sometimes inflammatory processes spread to the middle ear cavity, and this complication is common in patients with diabetes mellitus and leukemia.

Aspergillus and Candida albicans were the most common fungal species isolated from otomycosis patients. In addition, reported the prevalence of Aspergillus fumigatus, Aspergillus niger, and Candida albicans in study

Conclusion

In otolaryngological practice, otomycosis is a common problem whose symptoms and course of otomycosis are diverse. Clinical manifestations depend on the type of fungus (causative agent), localization (site) of the pathological process, the nature of the course of the disease, and the presence of concomitant or previous diseases. The fungus persists in the initial stage unnoticeably. The most striking manifestation of the disease can be seen when the fungus grows deep in the skin. A fungal infection of the ear leads to inflammation, the accumulation of fungal elements, suppuration, and pain

Recommendations

For the prevention of otomycosis, the following recommendations are used:

1. systematic elimination of foci of localized and chronic infection in the ear is carried out;
2. avoid activities that may cause injury to the ears;
3. It is necessary to clean the ear canals very carefully with cotton
4. According to experts, ear sticks should not be used at all so as not to harm the skin
5. Do not touch the ears with dirty hands or objects.

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