ORIGINAL ARTICLE

Efficacy of Topical Clotrimazole in Otomycosis

AMIR HAMZA, QAISAR KHAN, MUHAMMAD KHAN

ABSTRACT

Objective: To determine the efficacy of topical clotrimazole in the treatment of otomycosis.
Subjects & methodology: This quasi experimental study was carried out in the ENT Unit Outpatient Department of Govt. Lady Reading Hospital, Peshawar among 110 patients between June 2010 to July 2011. The age 20-40 years with itching discharge and pain from ear were included and patients having bacterial infection of external ear were excluded from the study. The patients diagnosed as otomycosis on the basis of history and examination was given clotrimazole lotion twice a day for 2 weeks.
Results: There were 43 males and 67 females with male to female ratio 1:1.5. The greatest number (33) belonged to age group 26-30 years followed by (27) 31-35 years. The mean age was 30.48±5.62 years. Out of total 110 patients, 93(84.5%) showed complete resolution of disease while only 17(15.5%) did not respond well.
Conclusion: Otomycosis is common in females than males and *A. niger* is the major etiologic agent, we also concluded that clotrimazole is quite effective in the treatment of otomycosis.
Key words: Otomycosis, Otitis externa, Clotrimazol

INTRODUCTION

Otomycosis also known as fungal otitis externa has typically been described as fungal infection of the external auditory canal[1]. The prevalence of otomycosis has been reported to be as low as 9% in cases of otitis externa and as high as 30.4% in patients presenting with symptoms of otitis or inflammatory conditions of the ear[2]. Otomycosis occur more commonly in females than in males. Moreover it usually occurs most frequently in adults, and less in children[3]. The most common fungal agents causing otomycosis are Aspergillus followed by niger (80% of case) and Candida albicans second common, Actinomyces, Trichophyton, Aspergillus fumigatus and Candida tropicalis[4]. Several factors have been reported predisposing otomycosis which include; bacterial infections, use of hearing aid or a hearing prosthesis, self inflicted trauma, swimming in contaminated pools, broad spectrum antibiotic therapy, steroids and cytostatic medication, neoplasia and immune disorders[5]. Recurrence rate and complications are higher in otomycosis and they need longer duration of treatment. The infection is usually unilateral and characterized by inflammation, pruritus, scaling and severe discomfort such as pain and suppuration.[6] Treatment options for otomycosis include elimination of predisposing factors, thorough canal cleaning and topical antifungal agents. It is worthwhile syringing and drying the ear gently. Topical antifungals are specific (clotrimazole, miconazole, econazole, nystatin, tolnaftate, potassium sorbate) and non-specific (acetic acid, alcohol, boric acid, m-cresyl acetate and gentian violet)[7]. Efficacy of clotrimazole has been reported 83% in one study[8].

Otomycosis is a common clinical problem which requires a prompt treatment and has a tendency to recur. Management of otomycosis can be really challenging. The rationale of my study is to see the efficacy of clotrimazole in the treatment of otomycosis.

Department of Head & Neck Surgery Postgraduate Medical Institute, Lady Reading Hospital Peshawar
Correspondence to Dr Amir Hamza E-mail: dramir.hamza@yahoo.com

PATIENTS AND METHODS

This quasi experimental study was carried out in the ENT Unit Outpatient Department of Govt. Lady Reading Hospital, Peshawar among 110 patients between June 2010 to July 2011. All patients were diagnosed as cases of otomycosis on the basis of history of pain, itching and discharge from ear, and masses of white, grey or black debris invading the external auditory meatus on physical examination. The patients of age between 20-40 years were included. Patients having bacterial infection of external ear were excluded from the study. Informed consent were taken from these patients were given topical clotrimazole lotion twice a day for 2 weeks. Patients were followed at the end of 2 weeks to assess the efficacy of treatment. Efficacy were ascertained by disappearance of pain, itching and discharge from ear as well as clearance of masses of white, grey or black debris invading the external auditory meatus. The collected data was entered into computer using SPSS version 10 for analysis.

Frequency and percentages were calculated for age and efficacies.

RESULTS

A total of 110 patients with documented diagnosis of otomycosis were included in the study. The group consisted of 43 (39.1%) males and 67 (60.9%) females with male to female ratio 1:1.5 (Table 1).

Table 1: Frequency of patients according to gender distribution

Sex	No.	%age
Male	43	39.1
Female	67	60.9

Table 2: Frequency distribution of patients according to age

Age (years)	No.	%age
20 – 25	26	23.6
26 – 30	33	30.0
31 – 35	27	24,6
36 – 40	24	21.8

Table 3: Frequency distribution of patients according to efficacy

Efficacy	No.	%age
Yes	93	84.5
No	17	15.5

The age at diagnosis ranged from 20 to 40 years with a mean of 30.48 years and a standard deviation of 5.62 years. The greatest number belonged to age group 26-30 years with 33(30%), 31-35 years with 27 (24.6%), 20-25 years with 26 (23.6%) and 36-40 years with 24 (21.8%) [Table 2]. Table 3 showed 93 patients (84.5%) had healing and 17 patients (15.5%) were not healed.

DISCUSSION

Otomycosis is an entity frequently encountered by otolaryngologists and can usually be diagnosed by clinical and laboratory examination. Otomycotic are infections frequent in tropical countries, because of humidity and heat[9-11].

Otomycosis occur more commonly in female than male and our finding confirmed the results other researcher's have reported.[12,13] Otomycosis usually occurs more frequently in adults, and less in children.[13,14] In our study, we found that otomycosis was more common in young men which is similar to the findings of the other researchers[14,15]. The women (60.9%) in the present study were more often affected by otomycosis, and such figures were closer to those observed by Zaror et al[16] (65%). However, these data are in disagreement from the finding by Ho et al[17] who found 56% in males. Otomycosis was seen in patients aged between 20 and 40 years. Nonetheless, 30% of the cases were diagnosed in patients between 26 and 30 years of age. Kaur et al[18] reported the occurrence of 41.1% were seen in patients within the age range of 16 to 30 years.

Species of Aspergillus and Candida are the most commonly identified organisms causing otomycosis. Studies found a greater prevalence of Aspergillus (A. niger, A. fumigatus, A. flavus and/or Aspergillus spp.) as otomycosis agents[19-22] Jaiswal et al (1990)[23] and Navarrete et al. (2000)[24] found 46% and 35% of Candida spp., respectively. In São Paulo, there were 75% of Aspergillus and 20% of Candida species identified.[16] The data found in the present study were of 55% of isolates of Candida (C. albicans, C. parapsilosis and C. tropicalis) and 35% of Aspergillus (A. niger, A. flavus and A. fumigatus).

Otomycosis is a primary infection of the ear and predisposing factors are responsible for the invasion of fungi. Secondary, bacterial infection was one of the most common predisposing factors in the history of our patients followed previous antibiotic therapy for one to four months duration and lastly swimming was the causative factor. These factors may differ from region to region.

CONCLUSION

We concluded that topical clotrimazole is effective in the treatment of Otomycosis.

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