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Original Research Article.

Analysis of Skin Diseases of the External Ear in Older Adults at a Tertiary Care Centre

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ABSTRACT

Background: Malformations can affect the outer ear (pinna and external auditory canal, EAC), middle ear and inner ear, not infrequently in combination. The study was conducted for the assessment of skin disease of the external ear in older adults.

Materials and Methods: This study was comprised of 200 participants. The participants were informed about the procedure and were asked to give consent. Clinical examination of the external ear of these subjects was done. Out of 200, 100 participants were found to have external ear infections. Only subjects of more than 60 years were screened. The mean age of the subjects was 57.3 years. Statistical analysis was conducted using SPSS software.

Results: Out of 100 subjects, 73 subjects were males and 37 were females. Otitis externa was seen in 60 subjects, otitis media was seen in 29 subjects, Infectious myringitis was evident in 7 subjects and herpes zoster was observed in 4 subjects.

Conclusion: Otitis externa was found to be the most common external ear infection among the subjects followed by otitis media.

Keywords: Otitis Externa, Otitis Media, External Ear Infection.

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INTRODUCTION

When evaluating skin lesions on the ear, specific anatomical peculiarities should be considered. The outer ear consists of the skin bearing external ear canal and the auricle. Both are of elastic cartilage covered with skin. It is attached to the periost and poorly vascularised. The epidermis on the concave aspect lies on a very thin subcutis which is strongly attached to the auricular cartilage. In contrast the convex aspect of the outer ear has a thicker subcutis with a stronger layer of subcutaneous fat which causes a certain laxity and displaceability compared to the concave side. An additional anatomical uniqueness is the high concentration of holocrine ceruminal glands in the skin of the external ear canal. The cerumen may mask existing diseases of the skin in the entrance of the external ear canal. In case of a ceruminal obstruction, an adequate assessment of the external auditory meatus should be done only after cleaning, which may demask existing dermatosis. The auricle is susceptible to environmental influences and trauma. Because of its exposed localization, the ear is particularly liable to the effects of ultraviolet (UV) light and, consequently, to pre-neoplastic and neoplastic skin lesions.[1]

Malformations can affect the outer ear (pinna and external auditory canal, EAC), middle ear and inner ear, not infrequently in combination. Swartz and Faerber[2] reported inner ear malformation frequencies of 11-30% in individuals with outer and middle ear malformations. Nevertheless, the different embryogenesis of the outer/middle ear and inner ear resulted in malformations of outer and/or middle ear without inner ear malformations and vice versa.[3] This study was conducted for the assessment of skin disease of the external ear in older adults.

MATERIALS AND METHODS

Present study was conducted at Department of Dermatology, MNR Medical College & Hospital, Sangareddy, Telangana, India. Study comprised of 200 participants. The participants were informed about the procedure and were asked to give consent. Clinical examination of the external ear of these subjects was done. Out of 200, 100 participants were found to have external ear infections. Complete demographic and clinical details of all the patients were obtained. Only subjects of more than 60 years were screened. A Performa was made, and detailed record of medical and clinical findings were recorded in it. The mean age of the subjects was 57.3 years. Statistical analysis was conducted using SPSS software.

Table 1: Gender-wise distribution of subjects.

Gender	Number of subjects	Percentage
Males	73	73
Females	37	37
Total	100	100%

Table 2: Types of external ear infections.

Types of infections	Number of subjects	Percentage
Otitis externa.	60	60%
Otitis media	29	29%
Infectious myringitis.	07	07%
Herpes zoster of the ear	04	04%

RESULTS

Out of 100 subjects, 73 subjects were males and 37 were females. Otitis externa was seen in 60 subjects, otitis media was seen in 29 subjects, Infectious myringitis was evident in 7 subjects and herpes zoster was observed in 4 subjects.

DISCUSSION

Acute otitis externa (AOE), also known as 'swimmer's ear', is a common disease of children, adolescents and adults. It is defined by diffuse inflammation of the external ear canal. Primarily a disease of children over two years of age, it is commonly associated with swimming. Local defense mechanisms become impaired by prolonged ear canal wetness. Skin desquamation leads to microscopic fissures that provide a portal of entry for infecting organisms.[4] Other risk factors for AOE include: trauma, a foreign body in the ear, using a hearing aid, certain dermatological conditions, chronic otorrhea, wearing tight head scarves and being immunocompromised. Ear piercing may lead to infection of the pinna.[5,6] While AOE is primarily a local disease, more serious and invasive disease can occur in certain situations. Several evidence-based clinical practice guidelines and reviews have been published.[7-11]

Ramsay Hunt syndrome (RHS), first described by James Ramsay Hunt in 1907[12], is caused by reactivation of VZV which lies latent in sensory root ganglion for years in a patient who had chickenpox earlier. Involvement of geniculate ganglion of sensory branch of facial nerve leads to herpes zoster oticus (HZO) also known as RHS. Involvement of facial nerve leads to otalgia, lower motor neuron homolateral facial paralysis, and vesicular eruptions in auricle. In severe cases of HZO, involvement of vestibulocochlear nerve leads to sensorineural hearing loss in 10% and vestibular symptoms in 40% patients. Definitive treatment consists of antiviral therapy and steroids. This study was conducted for the assessment of external ear infection among older adults.

In this study, there were 73 males and 37 females. The most common infection was otitis externa (60 cases), followed by otitis media (29 cases). Herpes zoster was seen in 4 subjects and infectious myringitis was evident in 7 subjects. Biles RW et al[13] didn't observe overall sex or ethnic differences in association with otitis media. Thirty-five per cent of the sample had at least one episode of otitis media during 1975 and, of these, one-third had two or more episodes, yielding a conservative annual incidence rate of 55.1 per cent for this age group. The overall age-specific incidence pattern indicated the highest rates for the 0-2 year age group (71 to 114 episodes per 100 children) with a steady decline in risk with increasing age. Infants who received an initial diagnosis within the first 12 months of life experienced significantly more episodes of otitis during a two-year period than did children who received an initial diagnosis after one year of age. Seasonal patterns of otitis media were comparable with those reported in other studies. Analysis by birth month of children who experienced repeated episodes of otitis indicated an increased number of children born in the late summer and fall.[13] Kim EK et al determined the prevalence of depression in elderly patients with dermatological disease in Korea and to identify factors associated with depression. The questionnaire was completed by 313 patients (39.94% men, mean age 69.04 years, mean disease duration 3.23 years). Dermatological disease overall had a significant effect on patients' depression ($\chi 2=177.13$, $p<0.0001$), with a mean GDS score of 12.35 (out of 30). The patients who had a GDS score greater than 10 was 62.3% which indicated increased prevalence of mild to severe depression when compared to the general population among whom only 22.22% percent have GDS score greater than 10. In the univariate analysis, physical health, education level, and the presence of concurrent diseases were risk factors for geriatric depression. Geriatric patients with dermatological disease experience an increase burden of depression.[14]

CONCLUSION

Otitis externa was found to be the most common external ear infection among the subjects followed by otitis media.

REFERENCES

1. Sand M, Sand D, Brors D, Altmeyer P, Mann B, Bechara FG. Cutaneous lesions of the external ear. Head Face Med. 2008 Feb 8; 4:2.

2. Swartz JD, Faerber EN. Congenital malformations of the external and middle ear: high-resolution CT findings of surgical import. AJR. 1985;144:501–506.
3. Helms J. Mittelohrmissbildungen. In: Helms J, editor. Oto-Rhino-Laryngologie in Klinik und Praxis. Bd. 1. Stuttgart: Thieme; 1994. pp. 545–563.
4. Wright DN, Alexander JM. Effect of water on the bacterial flora of swimmer's ears. Arch Otolaryngol. 1974;99(1):15–8.
5. Rowshan HH, Keith K, Baur D, Skidmore P. Pseudomonas aeruginosa infection of the auricular cartilage caused by "high ear piercing": A case report and review of the literature. J Oral Maxillofac Surg. 2008;66(3):543–6.
6. Keene WE, Markum AC, Samadpour M. Outbreak of Pseudomonas aeruginosa infections caused by commercial piercing of upper ear cartilage. JAMA. 2004;291(8):981–5. 25.
7. Rosenfeld RM, Brown L, American Academy of Otolaryngology – Head and Neck Surgery Foundation et al. Clinical practice guideline: Acute otitis externa. Otolaryngol Head Neck Surg. 2006;134(4 Suppl):S4–23.
8. Osguthorpe JD, Nielsen DR. Otitis externa: Review and clinical update. Am Fam Physician. 2006;74(9):1510–6.
9. McKean SA, Hussain SSM. Otitis externa. Clinical Otolaryngology. 2007;32(6):457–9.
10. Stone KE, Serwint JR. Otitis externa. Pediatr Rev. 2007;28(2):77–8.
11. Kaushik V, Malik T, Saeed SR. Interventions for acute otitis externa. Cochrane Database Syst Rev. 2010;1:CD004740.
12. Hunt JR. On herpetic inflammation of the geniculate ganglion. A new syndrome and its complications. J Nerv Ment Dis. 1907;34:73–96.
13. Biles RW, Buffler PA, O'Donell AA. Epidemiology of otitis media: a community study. Am J Public Health. 1980 Jun;70(6):593-8.
14. Kim EK, Kim HO, Park YM et al. Prevalence and risk factors of depression in geriatric patients with dermatological diseases. Ann Dermatol 2013;25:278–84.

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