Anterior external bony ear canal bulge

Raman Rajagopalan

Abstract

Objective To study the prevalence of anterior external bony ear canal bulge.

Methods Hundred patients each of the sexes among three races in Malaysia were studied with an otoscope and microscope.

Results Anterior external ear canal wall bulge is seen in 34% of the Malays, 32% of the Chinese and 29.5% of the Indians

Conclusion In about one third of the population in Malaysia an anterior canal wall bulge is seen.

Keywords External bony ear canal · Bulge

Introduction

Anterior external bony ear canal bulge is often mentioned in the western literature in the surgery of tympanoplasty. This bulge does not give a good view of the anterior most part of the tympanic membrane (anterior annulus). Hence it is advised that this bulge is drilled after raising an anterior canal wall skin flap. The prevalence of the bulge in a population is not mentioned to the best of our knowledge. We rarely come across the ear canal bulge in our population. Hence this study was undertaken.

Materials and methods

Patients from the outpatient clinic were recruited for this study. Since there are three races in Malaysia namely Malays, Chinese and Indians. Hundred patients from each sex among the races were studied. Inclusion criteria included all adults of both sexes from the age range of 13–80 with no complaints pertaining to the ears. Exclusion criteria were subjects below the age of 13, other races and subjects with ear complaints and previous ear surgery.

The ears were examined with a naked eye with an aural speculum, otoscope and under microscope with an aural speculum. Under the microscope, the subjects heads were turned to the maximum right or left as possible and the microscope was tilted accordingly to confirm the inability to see the anterior annulus. Subjects where the anterior annulus could be seen fully from the superior to the inferior aspect were considered to have no canal wall bulge.

Results

Racial distribution were 100 each. Sex distribution was 100 each. Age distributions was 13–80. Subjects where an anterior ear canal bulge is seen Table 1 were as follows: Malays 34%, Chinese 32%, Indians 29.5%.

Raman R.
Department of Otolaryngology,
Faculty of Medicine (UMMC),
University Malaya, Kuala Lumpur,
Malaysia

Raman R. (✉)
E-mail: ramanr_99@yahoo.com

Table 1 Anterior canal wall bulge distibution

Chinese 200 subjects				Malay 200 subjects				Indian 200 subjects			
Male-100		Female-100		Male-100		Female-100		Male-100		Female-100	
Seen	Not seen	Seen	Not seen	Seen	Not seen	Seen	Not seen	Seen	Not seen	Seen	Not seen
66	34	70	30	64	36	68	32	70	30	71	29
Chinese				Malay				Indian			
Seen		Not seen		Seen		Not seen		Seen		Not seen	
136		64 (32%)		132		68 (34%)		141		59 (29.5%)	

Discussion

The anterior external ear canal bulge is often mentioned in the western literature, as the cause of inability to see the anterior annulus and the need for the bulge to be drilled to do a satisfactory myringoplasty. Our study shows that only about a third of the patients seen in Malaysia have an anterior canal wall bulge.

Conclusions

Roughly, in about one third of the population in Malaysia an anterior external ear canal bulge is seen.