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Overview of Sensorineural Deafness Patients at Cut Meutia General Hospital, North Aceh, Indonesia

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A B S T R A C T

Introduction: Sensorineural deafness is deafness that occurs due to disturbances in the inner ear or in the nerve pathways from the inner ear to the brain. This study aimed to provide an overview of sensorineural deaf patients at Cut Meutia General Hospital, North Aceh, Indonesia. **Methods:** This study was a descriptive observational study and used secondary data obtained from medical record data at the medical records installation of Cut Meutia General Hospital. A total of 50 research subjects participated in this study, and the research subjects met the inclusion criteria. The inclusion criteria in this study were patients aged > 18 years who were diagnosed with sensorineural hearing loss at Cut Meutia General Hospital, North Aceh, Indonesia, for the January-December 2022 period and had complete medical record data. **Results:** The majority of research subjects have an age range of > 50 years. Subject the majority of studies have male gender. The majority of research subjects complained of deafness in both ears. The majority of research subjects have a profound hearing threshold. **Conclusion:** Characteristics of sensorineural deafness at Cut Meutia General Hospital, North Aceh, Indonesia, generally occur at the age of > 50 years, male gender, occurs bilaterally, and has a very poor hearing threshold.

1. Introduction

Sensorineural deafness is reduced hearing or hearing loss that occurs as a result of damage to the inner ear, the nerve that runs from the ear to the brain (auditory nerve) or the brain.[1-3] This deafness can affect all ages with different etiologies. About 50% of cases are genetic, and the other 50% are acquired.[3-5] Of all hearing loss cases, 90% are sensorineural deafness. Sensorineural deafness is deafness that occurs due to disturbances in the inner ear or in the nerve pathways from the inner ear to the brain. Sensorineural deafness is a problem for millions of people. This hearing loss is divided into several degrees, namely mild, moderate, moderate-severe, severe, and profound.

Estimates of an annual incidence of approximately 15,000 cases of sensorineural hearing loss are reported annually worldwide, with 4000 occurring in the United States. One in every 10,000 to 15,000 people will suffer from this condition, with the highest incidence occurring between 50 and 60 years of age. The lowest incidence is between 20 and 30 years.[5,9-11] Of the patients with sensorineural hearing loss, 2% are bilateral. The incidence rate is almost the same in men and women. The estimated annual incidence of sensorineural hearing loss is 5 to 20 cases per 100,000 people.[2-4] Exposure to noise has long been recognized as a risk factor for hearing loss of more than 30 million Americans who are exposed to dangerous levels of sound on a regular basis.[4,12,13] This study aimed to provide an overview of sensorineural deaf patients at Cut Meutia General Hospital, North Aceh, Indonesia.

2. Methods

This study was a descriptive observational study and used secondary data obtained from medical record data at the medical records installation of Cut Meutia General Hospital, Aceh, Indonesia. A total of 50 research subjects participated in this study, and the research subjects met the inclusion criteria. The inclusion criteria in this study were patients aged > 18 years who were diagnosed with sensorineural hearing loss at Cut Meutia General Hospital for the period January – December 2022 and who have complete medical record data. This study was approved by the medical and health research ethics committee at Cut Meutia General Hospital, North Aceh, Indonesia. Observations on sociodemographic data as well as observations on clinical data, were carried out in this study. Univariate data analysis was performed to present the distribution of frequencies and percentages of each variable. Data analysis was carried out using SPSS version 25.

3. Results and Discussion

Table 1 presents an overview of sensorineural deaf patients' data. The majority of research subjects have an age range of > 50 years. Subject the majority of studies have male gender. The majority of research subjects complained of deafness in both ears. The majority of research subjects have a profound hearing threshold.

Table 1. Overview of sensorineural deaf patient data.

Variable	Frequency	Percentage
Age		
19-25 years	3	6
26-36 years	9	18
37-50 years	10	20
> 50 years	28	56
Gender		
Male	31	62
Female	19	38
Ear side		
Bilateral	32	64
Unilateral	18	36
Hearing threshold		
Mild	10	20
Moderate	7	14
Moderately-severe	6	12
Severe	2	4
Profound	25	50

This is appropriate other research, which states that the incidence of sensorineural hearing loss increases with age and often occurs at the age of more than 50 years. Other studies also state that incidents of sensorineural hearing loss often occur in the 5th and 6th decades of life. However, these results are slightly different from studies that state that sensorineural hearing loss is very common in patients aged 60-69 years. Other research states that the incidence of sensorineural hearing loss is increasing and often occurs over the age of more than 70 years. This suggests that the incidence of sensorineural hearing loss increases with age. Some of the differences in the studies that occurred may be related to differences in the cut-off used in the age groups. Based on other studies, it is stated that men experience sensorineural deafness slightly more often than women, with a ratio of 1.07: 1. This is also comparable to other studies which state that the ratio between men and women is 1.22: 1. Some of these studies showed that there was no statistically significant difference in sensorineural hearing loss based on gender. Deaf Sensorineural It is more common on both sides of the ear or bilaterally than on one side of the ear or unilaterally. In that study, a striking difference was found. Namely, as many as 88.23% had bilateral sensorineural hearing loss, while as many as 11.77% experienced unilateral hearing loss. Other studies also state the same thing, where sensorineural deafness is more common bilaterally than unilaterally. This is because sensorineural hearing loss is often associated with multiple etiologies such as autoimmune, neoplastic, vascular conditions, and toxic substances (alcohol, illegal drugs,

chemotherapy drugs). Other studies state that both the right and left ears are more likely to experience very severe or profound sensorineural hearing loss (>90 dB). This can be caused by several factors, such as old age and accompanying disease factors, such as hypertension and diabetes mellitus, which can worsen hearing conditions.[12-16]

4. Conclusion

Characteristics of sensorineural deafness at Cut Meutia General Hospital, North Aceh, Indonesia, generally occurs at the age of > 50 years, male gender, occurs bilaterally, and has a very poor hearing threshold.

5. References

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