Original Research Article

Demographic analysis of hearing impaired in MJPJAY scheme

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Abstract

Background: Hearing impaired cases attending ear, nose, and throat (ENT) OPD in PDMMC, Amravati were assessed for hearing loss. **Objective** of our study was to investigate the hearing loss and provide hearing aids to needy masses. This was a prospective study carried out on OPD basis and a total of 1400 patients were included in the study. Predominantly, 77% patients were males, 23% were females. Age related sensorineural hearing loss was the predominant cause (76%) cases. Severe- profound sensory neural hearing loss was the most common type of hearing loss in 75% cases and intact tympanic membrane being most common otoscopic finding. Flat type Audiogram was predominant finding in 45% and gently sloping audiogram was found in 35% cases. **Conclusion:** Sensorineural hearing loss (Age related) is very common. People simply neglect their hearing loss due to multiple social constraints. In developing countries government should see that such beneficial schemes like MJPJAY should be implemented and reach much needy poor masses.

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INTRODUCTION

Hearing impairment is a serious but grossly neglected condition in India. The country also suffers a huge economic impact due to lost productivity, higher unemployment, and lower wages for the hearing impaired. The real issue in India is the woeful inadequacy of facilities of any type for the deaf. The government of India has recently signed and ratified the United Nations Convention on Rights of People with Disability. This shows the desire to conform to international norms and appear progressive. It is a very positive move and seen by all as a wonderful step in the right direction. However, despite good intentions, the lack of services and facilities continues to plague the Indian deaf community. The Government of India has launched the National Programme for Prevention and Control of Deafness (NPPCD). Since the program is also being implemented at the primary healthcare level, it envisages a reduction in the burden of deafness and prevention of future hearing loss in India. India celebrates the International Week for the Deaf in September, and September 26 is recognized as the "Day of the Deaf" in India. Hearing loss could be a very distressing symptom and a disease. It causes developmental difficulties in children and communicational difficulties in adults. These all have a major impact on quality of life and work efficacy leading to cognitive and emotional problems. It also increases the burden on the health care system and society both causing an adverse effect on health and survival. The WHO estimates 360 million individuals in the world have disabling hearing loss, of which 91% are adults and only 9% are children. Disabling hearing loss is >40 dB hearing loss in better ear in a person above the age of 15 years and >30 dB in better ear below the age of 15 years. With the increasing life span, we expect the prevalence of deafness as high as 40% above the age of 75 years. The worst part of this deafness is it affects speech frequencies hence only

20% will be benefited even with the best possible hearing aids. This huge population of senior citizen will be a big liability and great national loss. Hence, we have to make all the efforts.

In the legislature of India, deafness is defined as:

- The Rehabilitation Council of India Act, 1992, has defined "hearing handicapped" as - hearing impairment of 70 decibels and above, in the better ear or total loss of hearing in both ears.
- The legal definition followed in India of "hearing disability" as per the Persons with Disability Act 3, 1995 is - "A hearing disabled person is one who has the hearing loss of 60 decibels or more in the better ear for conversational range of frequencies."
- The term "deaf" is now days replaced to "hearing impaired." "Hearing challenged' is also an alternate and appropriate term. Though terminology for being hearing impaired since birth was "deaf and dumb" but in today's age it has being designated to "congenitally deaf." Hearing Loss can be classified on the basis of Severity of loss
- It has been noted by the WHO that half the causes of deafness are preventable and about 30%, though not preventable, are treatable or can be managed with assistive devices. Thus, about 80% of all deafness can be said to be avoidable. It has also been stated by the WHO that there is a shortage of human resources to address the issue of deafness
- **Integrated Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY)** was launched with the objective of providing cashless quality medical care to beneficiaries under the scheme for catastrophic illnesses requiring hospitalization for surgeries and therapies under identified specialty services through network of health care providers.
- MJPJAY Yojana is a flagship health insurance scheme of Government of Maharashtra. The scheme provides end to end cashless services for identified diseases through a network of service providers from Government and Private sector. The scheme earlier was known as Rajiv Gandhi Jeevandayee Arogya Yojana which was started from 2nd July,2012 in eight districts and then was expanded to 28 districts of Maharashtra from 21st November, 2013.
- The Integrated Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY) and Ayushman Bharat-Pradhan Matri Jan Arogya Yojana (AB-PMJAY) was launched in the state on 1st April, 2020. United India Insurance Company Limited (Public sector Undertaking Company) is providing health insurance coverage to beneficiaries under the insurance mode and State Health Assurance Society providing coverage on assurance mode.

MATERIALS AND METHODS

This was a Prospective study, carried out at the Department of ENT, Dr.PDMMC, Amravati from Jan 2019 to Dec 2019. A total of 1400 patients were included in the study.

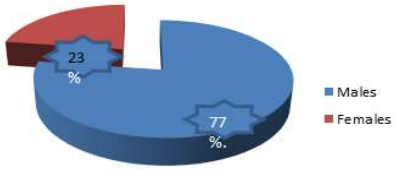
The inclusion criteria: MPJY Patients attending ear, nose, and throat OPD with complaints of hearing loss. The **exclusion criteria** were: Patients who were unable to respond to pure tone audiometry (PTA).

Methods: The selected patients were subjected to a detailed history and complete ear, nose and throat examination. The ears were examined by otoscopy so as to aid in making diagnosis. Assessment of hearing was done by PTA test in sound processed room for both air and bone conduction. Hearing loss was further divided into subdivisions according to Goodman's classification. A certified audiologist performed PTA. Testing was conducted in isolated sound processed room. Instruments used for Audiometry includes Arphi Audiometer with standard headphones and insert headphones. Air conduction thresholds were done for both ears from 0.25 to 8Khz at an intensity ranging from-10 to 120 dB. Each Audiometry was done and rechecked for the possibility of error if any. If a difference of more than 10 dB was noted on rechecking the test results were discarded as unreliable audiometry. Test subjects included in the study were the OPD patients with difficulty in hearing. A detailed record of age, gender and location was maintained. Each patient underwent a detailed ear examination and status of tympanic membrane was noted. This examination was followed by audiometry test which further aid in diagnosis.

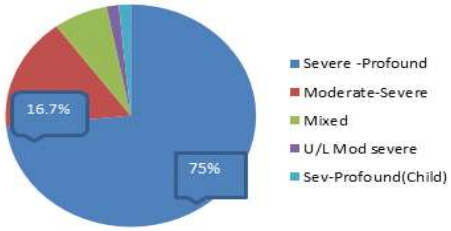
RESULTS

Table 1: Age distribution of patients:

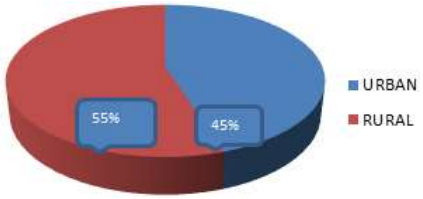
Sr.No	Age Groups	No of Patients	Percentage
1	0-20 years	22	1.57%
2	20-40 years	54	3.85%
3	40-60 years	262	18.71%
4	60-80 years	958	68.42%
5	>80 years	104	7.45%



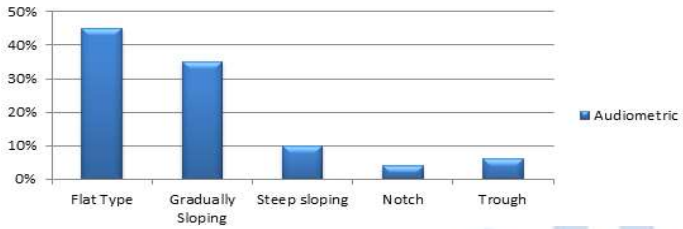
Graph 1: Sex Distribution



Graph 2: Degree Of Hearing Loss



Graph 3: Residence



Graph 4: Audiometric Patterns

DISCUSSION

Around 1400 patients were included in study; 1083 were males and 317 were females. They were divided in 5 age categories. Majority of patients (68%) belonged to 60-80 year age group followed by 40-60 years age group (19%) and >80 years (7.5%) Around 770(55%) patients belonged to Amravati Rural area whereas 630(45%) patients were from Amravati City. Amongst all 20 patients belonged to Ex.govt service, Retired staff/ or had salaried job in past. 280 patients had history of prior consultation. 138 patients had a past history of otitis, out of which only 18 underwent surgery. Out of 1400 patients evaluated, 1022(74.57%) patients had severe- profound hearing loss, 234 (16.7%) patients had moderate severe hearing loss, 100(7.14%) patients had mixed hearing loss, 22(1.57%) had unilateral hearing loss .22 children were having severe –profound hearing loss. Depending upon audiometric configuration 630(45%) had flat type audiogram, 490(35%) had gradually sloping audiogram, 140(10%) had steep sloping pattern, 56(4%) had notch type and 84(6%) had trough type audiogram respectively.

CONCLUSION

Considering the enormous impact of deafness on the social, economic and productive life in India due to its burden and also gaps in human resources to meet this health challenge, primary healthcare remains the strategy of choice for the provision and implementation of prevention of deafness and hearing loss in India. Early detection and rehabilitation should remain primary goal.

Let us see the deaf with smiling sympathetic approach, medical expertise, and modern technologies but early detection of deafness is absolutely necessary to minimize deaf cases in our country.

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Finally, we express deep appreciation to the patients who willing provided us information utilized in the study.

Ethical Approval – All procedure performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee. Records of all patients along with photographs and data are available with our department as well as concerned MJPJAY government authorities.

Informed Consent – Informed consent was obtained from all individual participants included in the study.

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