



## A STUDY ON EARLY INTRAVENOUS METHYLPREDNISOLONE IN THE MANAGEMENT OF SUDDEN SNHL

### ENT

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### ABSTRACT

**Background And Rationale:** Sudden sensorineural hearing loss is a critical medical emergency that requires prompt treatment to achieve the best long-term hearing outcomes. Steroids are the preferred treatment regardless of the cause of the hearing loss, but the method of administration and treatment duration differ among various centers. There is no agreement on the effectiveness of these approaches. **Objective:** The aim of this study was to evaluate the effectiveness of a short course of intravenous methylprednisolone in treating sudden sensorineural hearing loss (SSNHL). **Materials And Method:** This study was carried out in the ENT department of a tertiary care hospital. It involved cases from March 2023 to February 2024 that met the inclusion criteria for sudden sensorineural hearing loss (SSNHL) and had been treated with intravenous methylprednisolone for nine days. The study assessed the duration and severity of hearing loss, co-morbidities, and hearing improvement following therapy. Pure tone audiograms taken before admission and nine days after steroid treatment were compared to evaluate the improvement. **Results:** Among the 30 patients, the male-to-female ratio was 1.5:1. The average hearing loss before intravenous methylprednisolone treatment was 61.5 dB, compared to 48.7 dB nine days after the treatment. Of these patients, eleven experienced complete recovery, twelve had partial recovery, and seven saw no improvement following nine days of intravenous methylprednisolone therapy. **Conclusion:** A short course of intravenous methylprednisolone is effective for treating sudden sensorineural hearing loss (SSNHL) with minimal side effects.

### KEYWORDS

Sudden sensorineural hearing loss (SSNHL), Methylprednisolone, Steroids.

### INTRODUCTION

Sudden sensorineural hearing loss is a critical medical emergency that requires prompt treatment for the best chance of preserving long-term hearing. Steroids are generally the preferred treatment, regardless of the cause of the hearing loss. However, the method of administration and the treatment duration can differ between medical centers.

### Objective

To determine the efficacy of short course intravenous methylprednisolone in the management of SSNHL.

### MATERIALS AND METHOD

**Study design:** Observational cross-sectional study.

**Sample size:** The estimated annual incidence is 5–30 per 100000 persons and 99% of cases are unilateral.

**Study population:** All patients that satisfy inclusion and exclusion criteria.

**Study settings:** Tertiary health care Latur.

### Method of data collection:

**Inclusion Criteria:** As per our departmental protocol, we consider intravenous methylprednisolone in cases that present with SSNHL within seven days of its onset; Age: any age group; Patient of either sex; Patient willing for admission. **Exclusion Criteria:** Intravenous methylprednisolone is not considered in cases with uncontrolled DM, hypertension, and any other medical conditions where systemic steroids are contraindicated; Patients with complaints of vertigo. Patient not willing for admission and not reporting for follow up.

This study assesses the initial level of hearing loss before treatment, the time elapsed since symptom onset, the duration of therapy, the hearing level after treatment, and any associated comorbid factors.

As per our departmental protocol, we consider intravenous methylprednisolone in cases that present with SSNHL within seven days of its onset. On admission, the patients receive injection methylprednisolone 1 gm IV for three consecutive days followed by 500 mg IV for three consecutive days followed by 250mg IV for three consecutive days.

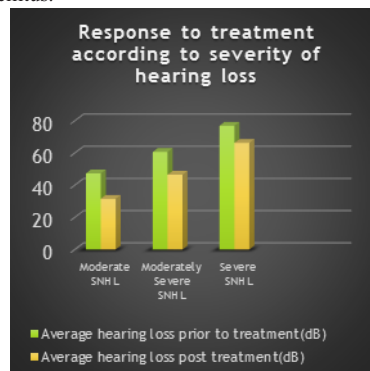
In this study, we evaluated the improvement in hearing following the completion of IV methylprednisolone therapy.

### RESULTS

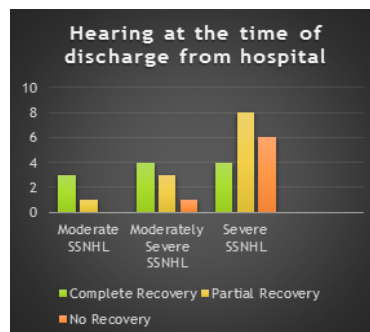
The study included data from 30 patients who met the inclusion criteria. Among them were 18 males (60%) and 12 females (40%). The

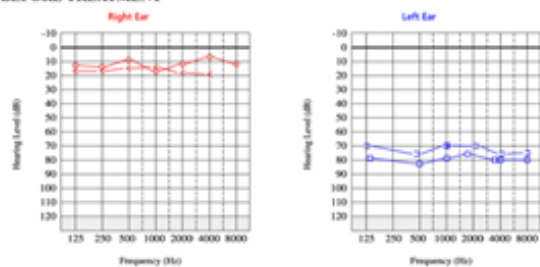
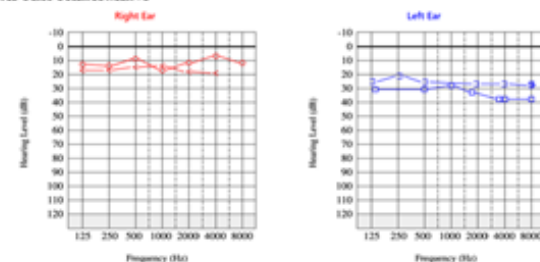
patients' ages ranged from 18 to 60 years, with an average age of 45.43 years.

Nineteen patients (63.3%) were admitted within three days of presentation, while eleven patients (36.7%) were admitted after more than three days. At presentation, four patients (13.3%) had moderate hearing loss, eight patients (26.7%) had moderately severe hearing loss, and eighteen patients (60%) had severe hearing loss. Tinnitus was present in eighteen patients (60%). Among the 30 patients, 12 (40%) had comorbidities, with nine having hypertension and three having Diabetes mellitus.



In cases of moderate SSNHL, most patients experienced complete recovery. Conversely, in severe SSNHL cases, most patients had partial recovery. Overall, 36.7% of patients achieved complete recovery, 40% experienced partial recovery, and 23.3% showed no recovery.



**BEFORE TREATMENT****AFTER TREATMENT****PTA of patient before & after treatment.****CONCLUSION**

There was a significant improvement in hearing loss following a short course of IV Methylprednisolone therapy. A brief regimen of Methylprednisolone can be an effective treatment option for patients with SSNHL.

Hearing outcomes are more favorable in patients without comorbidities. Treatment should be brief to minimize complications, while still ensuring an adequate dose is administered.

**Recommendation**

To increase awareness of sudden sensorineural hearing loss among both the medical community and the public, thereby encouraging earlier diagnosis and prompt treatment.

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