Intratympanic Steroids in Severe to Profound Sudden Sensorineural Hearing Loss as Salvage Treatment

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INTRODUCTION

Sudden sensorineural hearing loss (SSNHL) is a very frightening and incapacitating event with profound and profound SSNHL have difficulty with hearing rehabilitation such as hearing aids if hearing loss is poor.

METHODS AND MATERIALS

We reviewed the medical records of all patients with SSNHL seen from January 2005 to November 2008 at the Soon Chun Hyang University. Patients with unilateral SSNHL, with an average hearing loss greater than 70 dB across four frequencies (800, 1200, 2000, and 4000 Hz), were included in this study. The patients were divided into two groups depending on the severity of their hearing loss. Group I (S-SSNHL) included 25 patients with severe SSNHL (average hearing loss of more than 70 dB at 250, 500, 1000, 2000, and 4000 Hz lasting for more than 1 month) and Group II (P-SSNHL) included 22 patients with profound SSNHL (average hearing loss of more than 90 dB at all frequencies above 125 Hz lasting for more than 1 month). Diagnostic criteria for SSNHL were based on a sudden onset of deafness. The intratympanic medecine was used at a dose of 0.3 mL of 4 mg/mL dexamethasone (5 mg/mL) instead of 0.1 mL of 4 mg/mL dexamethasone for all patients. The patients were instructed to stay supine for 1 hour after the injection. The follow-up period was 12 weeks after the initial systemic treatment.

RESULTS

The demographics and audiometric data of the patients are summarized in Table 1. The patients in the severe SSNHL group showed significant improvement overall compared with profound SSNHL group (Fig. 1). The early recovery rate 2 weeks after the initial systemic treatment was 36% (9/25) in the S-SSNHL group and 18.1% (4/22) in the profound SSNHL group. Compared with the profound SSNHL, the early recovery rate was higher in the severe SSNHL group (p = 0.017). The total recovery rate of severe SSNHL was 36% (9/25) in the severe SSNHL group (2 patients showed complete recovery and 4 patients showed partial recovery). In the profound SSNHL group, only one patient was recovered (4.5%, 1/22). The total recovery rate was 20.6% (7/34) in the profound SSNHL group. We did not choose this modality in SSNHL because even though the recovery rate is low, the patients were satisfied with the results of treatment because they had not had a previous hearing test. In addition, side effects of systemic steroids in SSNHL are very rare because they are usually associated with long-term therapy and ITD has potential negative outcomes such as peptic ulcers and osteonecrosis. Therefore, the patients did not experience any side effects.

Discussion

We reviewed the medical records of all patients with SSNHL seen from January 2005 to November 2008 at the Soon Chun Hyang University. Patients with unilateral SSNHL, with an average hearing loss greater than 70 dB across four frequencies (800, 1200, 2000, and 4000 Hz), were included in this study. The patients were divided into two groups depending on the severity of their hearing loss. Group I (S-SSNHL) included 25 patients with severe SSNHL (average hearing loss of more than 70 dB at 250, 500, 1000, 2000, and 4000 Hz lasting for more than 1 month) and Group II (P-SSNHL) included 22 patients with profound SSNHL (average hearing loss of more than 90 dB at all frequencies above 125 Hz lasting for more than 1 month). Diagnostic criteria for SSNHL were based on a sudden onset of deafness. The intratympanic medecine was used at a dose of 0.3 mL of 4 mg/mL dexamethasone (5 mg/mL) instead of 0.1 mL of 4 mg/mL dexamethasone for all patients. The patients were instructed to stay supine for 1 hour after the injection. The follow-up period was 12 weeks after the initial systemic treatment.

REFERENCES