

돌발성난청 환자에서 체질량지수와 예후와의 관계

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백 무 진 · 황 문 섭

Correlation between Body Mass Index and Prognosis in
Idiopathic Sudden Hearing Loss

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-ABSTRACT -

Background and Objectives : Steroid hormone is known as the main treatment of sudden sensorineural hearing loss. Yet there have been controversies over the dose of steroid hormone. This study was designed to investigate the correlation between the body mass index (BMI) and prognosis in sudden sensorineural hearing loss by comparing the BMIs of patients who treated with the same dose. **Materials and Methods** : The subjects were 94 patients with idiopathic sudden hearing loss who had admitted our hospital from 1997 January to 2001 December. We performed the pure tone audiometry every other day when they admission and classified them into 4 groups as complete recovery (CR), partial recovery (PR), slight recovery (SR) ; CR, PR, SR-steroid response group; and no response (NR) ; NR-steroid nonresponse group; by degree of hearing gain. Also we checked weight and height of patients during admission to find out body mass index (BMI). Correlations between body mass index and prognosis in idiopathic sudden hearing loss was analyzed by Pearson correlation coefficient. **Results** : Correlation between degree of hearing gain and BMI was high in SR, and in case of patient's age over 50 year old but statistically meaningless. In case of women showed high correlation except SR, but also statistically meaningless. **Conclusion** : According to BMI, no significant difference was seen statistically between steroid response group and nonresponse group. But relative dosage of steroid hormone is different as to BMI, so further investigations are needed for the best suited dosage of steroid hormone in idiopathic sudden hearing loss. (J Clinical Otolaryngol 2003;14:256-261)

KEY WORDS : Hearing loss · Sudden · Body mass index.

De Kleyn 1944 가 3 1980 Williams 30 dB¹⁾²⁾
가 3 , 가

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대상 : 1-3) 가 가 46
 . 48 , 94
 가 19 75 45.7
 가 , , , carbogen , prednisolon 80 mg 4
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 .¹⁾²⁾ Siegel⁴⁾ (complete recovery ;
 CR), (partial recovery ; PR), (slight
 recovery ; SR), (No improvement ; NI)
 , 2 3
 .¹⁾ 가 10 dB
 , (kg) meter
 (Body Mass
 Index ; BMI) BMI
 가 .¹⁾ 6
¹⁾ 가
 , 가
 (25 dB
)⁵⁾
 가 가 15 ,
 10
 가 Pearson
 correlation coefficients(PCCs) .

결 과

대상 및 방법

1997 1 2001 12 94 Siegel
 4 Table 1
 (CR)가 25 (26.6%),
 (PR)가 12 (12.8%),

Table 1. Siegel's criteria and sex distributions of each group

Type	Hearing recovery	Male	Female	Total
Complete recovery (CR)	Final hearing better than 25dB	11	14	25 (26.6%)
Partial recovery (PR)	More than 15 dB gain, and final hearing 25 - 45 dB	6	6	12 (12.8%)
Slight recovery (SR)	More than 15 dB gain, and final hearing poorer than 45 dB	7	13	20 (21.3%)
No improvement (NI)	Less than 15 dB gain, or final hearing poorer than 75 dB	22	15	37 (39.4%)

Table 2. BMI distributions of each group

Group	16 - 18	18.1 - 20	20.1 - 22	22.1 - 24	24.1 - 26	26.1 - 28	28.1 -	Mean BMI
CR	0	1	9	6	6	3	0	22.97
PR	1	0	3	3	1	4	0	23.34
SR	0	2	4	5	5	3	1	23.33
NI	1	2	8	11	15	0	0	23.15
Total	2	5	24	25	27	11	1	23.17

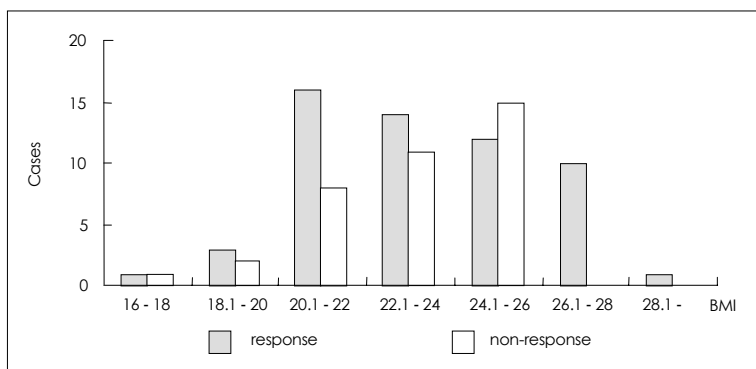


Fig. 1. BMI distributions at steroid response group and non-response group.

(SR) 가 20 (21.1%) ,
 37 (39.5%)
 (NI) .

94 가 57 60.6%
 BMI Table 2 .
 CR 39.8 , PR 43.9
 , SR 47.3 , NI 49.4 가

CR 11 , 14 , PR
 6 , SR 7 , 13
 가 가 NI
 가 22 15
 가
 , (p>0.05). , SR 8.95
 , NI 7.54

CR 4.52 , PR 3.92 가
 6.47

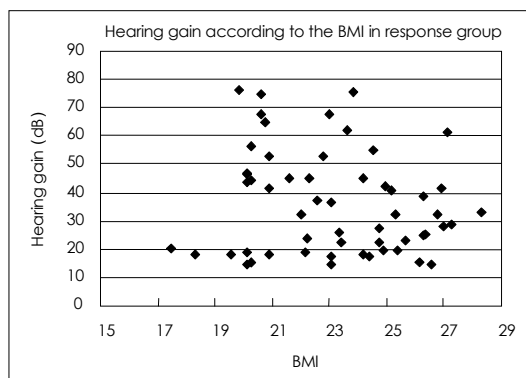


Fig. 2. Relationship between BMI and degree of hearing gain at steroid response group. Pearson Correlation Coefficients (PCCs) : 0.20158. p>0.05.

76.2 dB
 54.1 dB 22.1 dB 가 , NI
 36.0 dB

스테로이드 치료 반응군과 비반응군에서 BMI의 비교
 BMI 16.6 kg/m²
 28.4 kg/m² 23.2 kg/m²
 BMI

23.2 kg/m², (Fig. 1).
 BMI
 PCCs : 0.20158, p>0.05 (Fig.
 2). BMI CR
 (PCCs - 0.08210, p>0.05) PR
 (PCCs : 0.14460, p>0.05) SR (PCCs : 0.53016,

p<0.05) (Fig. 3). SR
 가 가
 연령에 따른 청력개선 정도와 BMI의 상관관계
 BMI
 CR 50 (PCCs :
 - 0.2488, p>0.05) , 50
 (PCCs : 0.06432, p>0.05) , PR 50
 (PCCs : 0.05232, p>0.05) 50 (PCCs :
 0.08049, p>0.05), SR 50 (PCCs : 0.26037,
 p>0.05), 50 (PCCs : 0.67585, p<0.05)
 50
 BMI 가

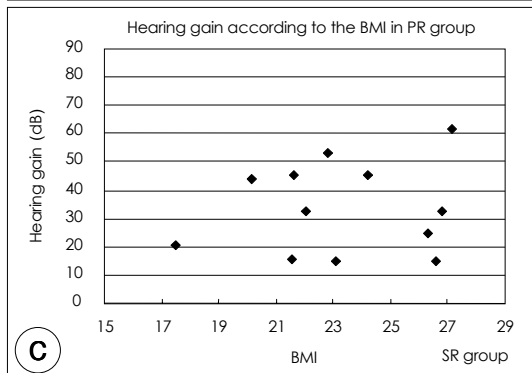
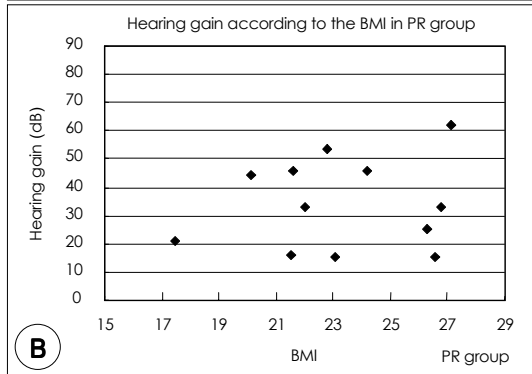
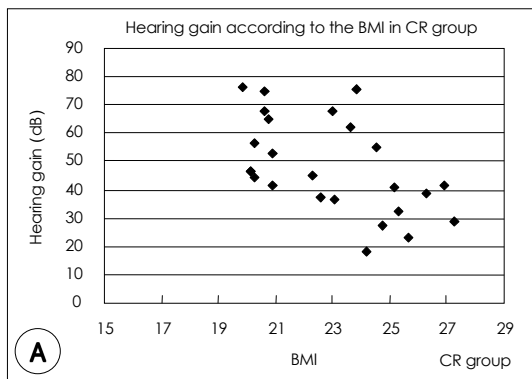


Fig. 3. Relationships between BMI and degree of hearing gain at each group. PCCs : - 0.08210. p>0.05.

성별에 따른 청력개선 정도와 BMI의 상관관계
 BMI
 CR (PCCs :
 - 0.23056, p>0.05) ,
 (PCCs : 0.01501, pp>0.05) PR
 (PCCs : 0.23118, p>0.05), (PCCs : 0.39322,
 p>0.05) SR (PCCs : 0.45443, p>0.05),
 (PCCs : 0.44525, p>0.05)
 SR
 가 BMI 가

고 찰

가 가
 , Hypaque,
 Carbogen
 1)6)7)
 가
 가

Wilson (audiogram) (profound hearing loss)

40 dB 90 dB

40 dB 90 dB

Siegel 4

2)⁸⁾ 가 가

4)

1)

9)

2)¹²⁾

1)

3)

12)

10)

가 가

결 론

19.8 19.8 24.2 24.2 26.4 26.4

11)

가 가

중심 단어 :

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