

비중격 만곡증과 하비갑개 비후의 상관관계

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The Relationship between Nasal Septal Deviation and Inferior Turbinate Hypertrophy

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ABSTRACT

Background and Objectives : The purpose of this study was to evaluate the correlation of nasal septal deviation and co-existent inferior turbinate hypertrophy of both side. It also focused on proportional relationships between nasal septal deviation and each compartment of inferior turbinate hypertrophy. **Materials and Method** : PNS CT of 106 patients treated during the period from September, 2001 to July, 2002 at the Keimyung University Dongsan Medical Center were reviewed retrospectively to measure nasal septal deviation angle and inferior turbinate hypertrophy. Using PACS (picture archiving and communicating system), we measured the thickness of medial and lateral mucosal, conchal bone by 0.1 mm unit. Each measurement was compared according to the degree of septal deviation angle and its correlation to the co-existent turbinate hypertrophy was analyzed. **Results** : Inferior turbinates of the concave side were more hypertrophied when compared with the convex side ($p<0.05$) and its medial mucosa and conchal bone thickness were also increased more in the concave side ($p<0.05$). However, in view of correlations, there was no statistically significant relationship between septal deviation angle and the degree of hypertrophy of medial, lateral mucosa and conchal bone of inferior turbinate. **Conclusion** : Although it is a common belief that the nasal septal deviation may cause inferior turbinate hypertrophy of the concave side, there is a possibility of another explanation for this phenomenon, such as the developmental theory. (Korean J Otolaryngol 2003;46:950-4)

KEY WORDS : Nasal septum · Inferior turbinate · Hypertrophy.

가 (compensatory)

가 가 가

1958 Paik ¹⁾ 77.6%,
63.1%, 1995 Min ²⁾ 22.4%,
24.2%, 19.8%

(concave side)

³⁾

(medial flap)

(convex side)

(conchal bone), (lateral flap)

(nasal valve) (OMU, ostiomeatal unit) level

가

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2001 9 2002 7
273
15 65
106 (48 , 58)
41.5 (Table 1). Marotech Maroview
PACS(picture archiving and communicating system)

Table 1. Age and sex distribution of patients

Age	Sex		Total
	Male	Female	
15 - 20	10	3	13
21 - 30	7	6	13
31 - 40	10	11	21
41 - 50	14	15	29
51 - 60	5	13	18
61 - 65	2	10	12
Total	48	58	106

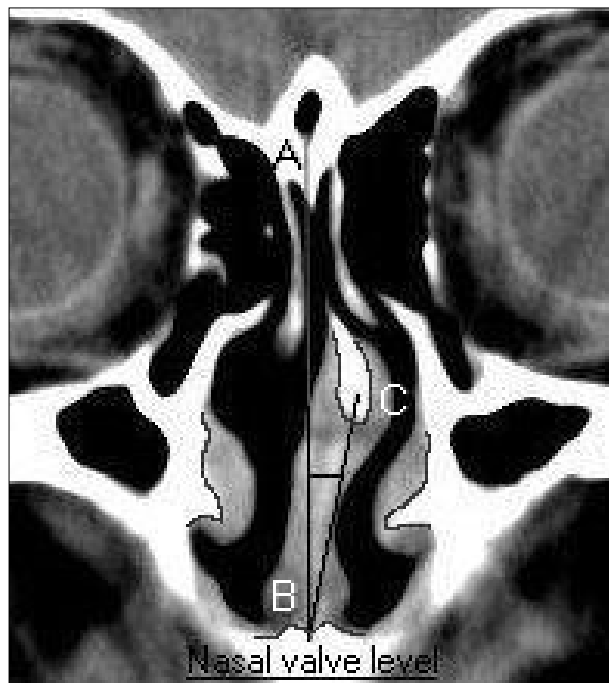


Fig. 1. Measurement of nasal septal deviation angle ($\angle ABC$) at nasal valve level (window setting W250, L50)-point A is presenting crista galli, B is anterior nasal spine and C is most deviated point of nasal septum.

가
(crista galli)
(anterior nasal spine)
(Fig. 1).
가 가
가
(Fig. 2).⁵⁾
가
(Fig. 3).
0
5 1 , 5 15 2 , 15
3
가
PACS window
setting (W250, L50)
SPSS version 11.0 paired
t - test Pearson correlation test 95%



Fig. 2. Measurement of nasal septal deviation angle ($\angle abc$) at OMU level (window setting W250, L50)-point a is presenting crista galli, b is anterior nasal spine and c is most deviated point of nasal septum.

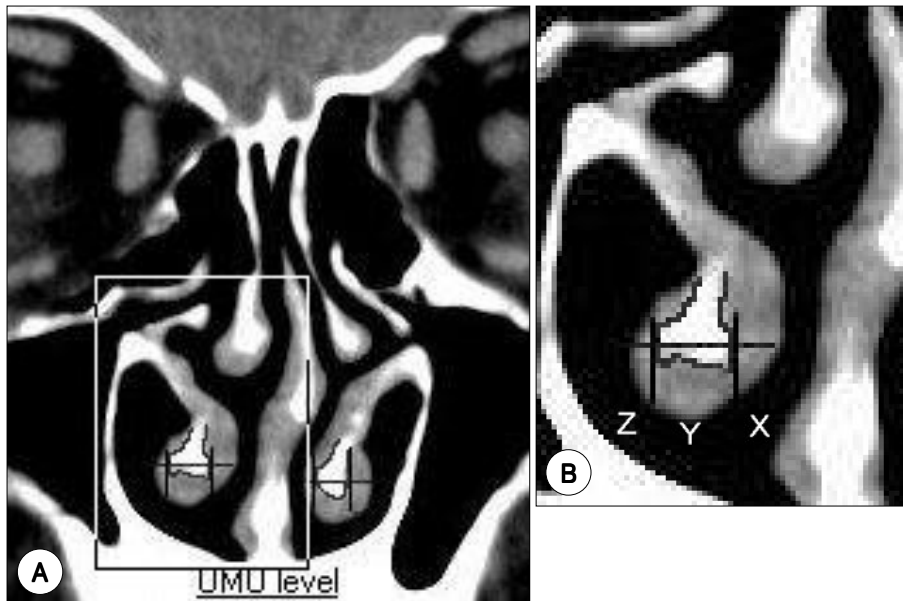


Fig. 3. Measurement of medial mucosa (X), conchal bone (Y) and lateral mucosa (Z) of inferior turbinate at OMU level (window setting W250, L50)-A is original view and B is magnified view.

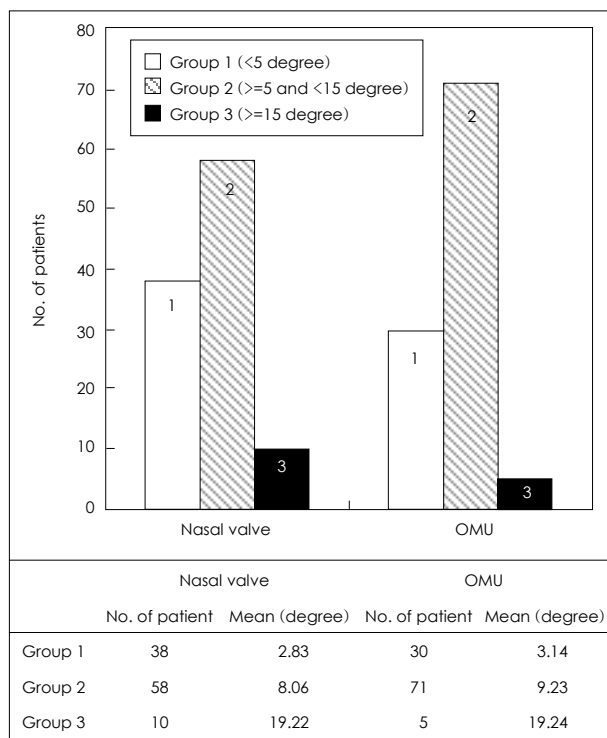


Fig. 4. Distribution of nasal septal deviation angle at nasal valve and OMU level.

Table 2. Comparison of each compartment width according to concave and convex side of inferior turbinate

	Dimensions (mm)			
	Total width	Medial mucosa	Conchal bone	Lateral mucosa
Concave side	8.73 ± 2.8	2.69 ± 1.6	4.44 ± 1.5	1.58 ± 1.6
Covex side	7.62 ± 2.6	2.22 ± 1.4	4.11 ± 1.2	1.30 ± 1.7
p value	.000*	.002*	.012*	.161

*Statistically significant

Table 3. Comparison of each compartment width of inferior turbinate according to nasal septal deviation measurement site

Inferior turbinate		Septal deviation angle measurement site	
		Nasal valve	OMU
Total width	Pearson correlation	.009	.061
	p value	.930	.537
Medial flap	Pearson correlation	.149	.088
	p value	.127	.370
Conchal bone	Pearson correlation	.065	.069
	p value	.509	.481
Lateral flap	Pearson correlation	.054	.025
	p value	.582	.800

7.24 ± 5.0 ° 7.98 ± 4.4 °
2 가 (Fig. 4).

8.73 ± 2.8 mm)가 (7.62 ± 2.6 mm)
가 (p<0.05).
(4.44 ± 1.5 mm)가
(4.11 ± 1.2 mm) 가 (p<0.05),
(2.69 ± 1.6
mm) (2.22 ± 1.4 mm) 가
(p<0.05).

(1.58 ± 1.6 mm)
가

(1.30 ± 1.7 mm)
(Table 2).

가 (Table 3).

가
가

가 가
가

) (³⁾

가 가
Berger

가
가

⁴⁾

가 가
가 ⁴⁾

, 가
⁶⁾ Graamans⁷⁾

63
(wholebody plethysmograph)

, , ,

Hilberg ⁸⁾
(acoustic rhinometry)

Grymer ⁹⁾

가
가

5 가
(anterior tur-

가

binoplasty)

. Berger ⁴⁾

가 가

(nasal cycle)

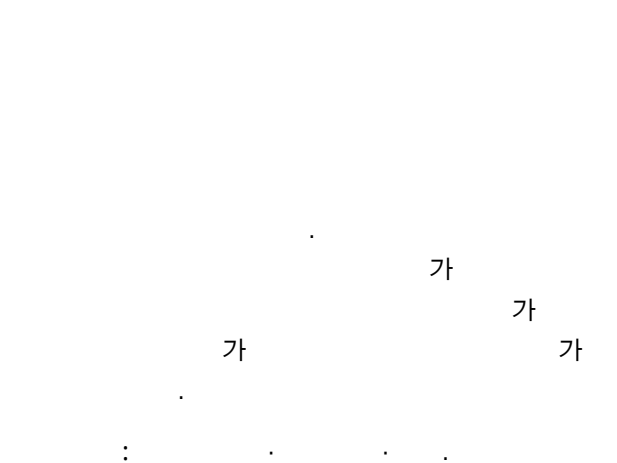
(veneous sinus)
가

가 40

가

가

가



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