A Note on Shovel-shaped Incisor, Instanding Lateral Incisor and Occlusal Type of Incisors in Koreans

Shin Yo Chang, M.D. Myung Kook Kim, D.D.S.

Department of Anatomy

College of Medicine, Seoul National University

(Director: Prof. Sae Jin Rha)

Hrdlicka1) reported that the shovel-shaped incisors were rare in whites and negros in contrast to the frequent occurrences in mongoloid populations, i.e., Chinese, Japanese, Mongolian, Eskimo and American Indian. Since his publication there have been a number of reports on the incidence of shovel-shaped incisors by various investigators. On the other hand, it has been reported that the Carabelli cusp and the third molars were rare in mongoloid populations and that the mandibular torus and the edge occlusion of the incisors occurred more frequently in the same races. Recently Oschinsky and Smithurst²⁾, and Oschinsky³⁾ reported that the instanding lateral incisors were limited to the Eskimo area and Japan and suggested that there seemed to be similar frequency in other mongoloid populations in Asia.

The present authors studied the shovel-shaped incisors, instanding lateral incisors and occlusal types of incisors in Korea. The study was made on Korean university students, 494 males and 466 females, ranging from 16 to 31 years of age. In describing the types of incisors, the present authors adapted the classification by Hrdlicka: marked shovel, semi-shovel, trace shovel and no shovel. Instanding lateral incisors were classified into those of the right, left and both sides. Occlusal types were classified into 3, i.e., labidodont, overbite and protrusive.

As shown in Table 1, the shovel-shaped incisors, inclusive of the marked shovel and semi-shovel, were observed in 95.5% of males and 87.1% of females. The incidence in males was higher than that in females. Comparing these figures with those of whites and negros, one finds that the incidence is much higher among Koreans as it is in the Eskimo, American Indians, Chinese and Mongolians.

Table 2 shows that the incidence of instanding

Table 1. Frequency of Shovel-shaped Incisors

Extent of shovel	Male	Female	Total
Marked shovel	76.3%	60.7	68.8
Semi-shovel	19.2	26.4	22.9
Trace shovel	2.0	10.3	6.0
No shovel	2.4	2.6	2.5

lateral incisors is greater in females, 21.9%, than in males, 14.2%. It is interesting that the incidence for the right side is greater than that for the left side in both sexes. Average for both sexes, 17.9%, is lower than that in Eskimo, 33%, but higher than that in Japanese, 5 to 10%.

Table 2. Frequency of Instanding Lateral Incisors

Sides	Male	Female	Total
Right	10.9%	15.9	13.3
Left	0.6	1.3	0.9
Both	2.6	4.7	3.6
Total	14.2	21.9	17.9

As shown in Table 3, there was no noticeable sexual difference in the occlusal type. The labidodont type occurred in 4.4%, the highest incidence as in Eskimo, the overbite type occurred in 0.9% and the protrusive type, 0.5%, and these two figures are slightly higher than that in Eskimo.

Table 3. Frequency of Occlusal Types

Occlusal types	Male	Female	Total
Labidodont	3.8%	4.9	4.4
Overbite	1.4	0.4	0.9
Protrusive	0.8	0.2	0.5
Normal	94.0	95.5	94.2

Summary

The study was made on shovel-shaped incisors, instanding lateral incisors and the occlusal types of

incisors in 960 Koreans and the following conclusions were drawn.

- 1) The incidence of both marked shovel and semi-shovel is greater in males, 95.5%, than that in females, 87.1%.
- 2) The incidence of the instanding lateral incisors is greater in famales, 21.9%, than that in males, 14.2%.
- 3) There appears to be no sexual difference in occlusal types of the incisors. The incidence of the labidodont type is 4.4%, of the overbite is 0.9%, and of the protrusive is 0.5%.

國文抄錄

韓國人의 Shovel 形門齒,內位門齒 및 門齒咬合型의 調査成績

A 含大學校 醫科大學 解剖學教室 <指導 羅 世 振 教授> 張 信 堯・金 明 國

著者들은 韓國人 男女性 960名을 硏究對象으로 shovel

形門齒,內位門齒 및 門齒의 咬合型의 出現頻度를 調査하여 다음과 같은 結論을 얻었다.

- 1. Marked shovel 및 semi-shovel 型門齒의 出現頻度 合計는 男性 95.5%, 女性 87.1%로서 男性이 女性보다 많다.
- 2. 內位門齒의 出現頻度는 男性 14.2%, 女性 21.9%로 서 女性이 男性보다 많다.
- 3. 門齒咬合型의 出現頻度는 切端咬合 4.4%, 被蓋咬合 0.9, 前位咬合 0.5%이며 男女性差는 顯著하지 않다.

REFERENCES

- 1) Hrdlicka, A.: "Shovel-shaped Teeth.", American J. Phys. Anthrop., 3: 429, 1920.
- Oschinsky, L. and Smithurst, R.: On Certain Dental Characters of the Eskimo of the Eastern Candian Arctic., Anthropologica, N.S., 2: 105, 1960.
- 3) Oschinsky, L.: A Short Note on Upper Lateral Incisor Tooth Crowding Among the Eskimos., Anthropologica, N.S., 3:1, 1961.