

EVALUATION OF NASOLABIAL ANGLE IN SOUTHERN PUNJAB AND ITS RELATION TO FACIAL AND NASAL MOLDING

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ABSTRACT

Head and facial molding has been carried out as a cultural practice in southern Punjab to enhance facial features. This molding can affect the nasolabial angle which is an important parameter for diagnosis and treatment planning of orthodontic patients. The purpose of our study is to evaluate the nasolabial angle of southern Punjab belt. Nasolabial angle was evaluated from the cephalometric radiographs of 60 patients. Mean and standard deviation were calculated and had the following results, (104.27±10.84 in males and 100.30±12.19 in females). Our value is in accordance with other Asian countries where facial and nasal molding is practiced.

Keywords: Bone molding, facial molding, nasolabial angle.

INTRODUCTION

Infant bone molding practice is very common in Asian countries like Pakistan¹, particularly in southern Punjab. The elderly and care givers apply pressure on the head, forehead, nose and maxilla of the newborns with objective of beautifying features, like, head being round, forehead not so prominent, and nose being thin and upright and flat philtrum. This practice affects appearance to some extent because the newborn's bones are yet to complete their ossification²⁻³. External pressure applied by flat hard board under baby's head, continuous pressure massage on forehead and philtrum during breast feeding and squeezing the nose⁴, all mold the cartilage and bone. This molding can affect the nasolabial angle which is an important parameter in diagnosis and treatment planning of different malocclusions. Many studies have been done on nasolabial angle in different ethnic groups in the world, for example Caucasians, Indians, Saudis, Brazilians⁵⁻⁷, etc., but very few studies have been done in different regions of Pakistan regarding this parameter. The purpose of our study is to determine the value of nasolabial angle in southern Punjab as this belt has the cultural trait of facial molding and how much do these values differ from the standard norms.

METHODOLOGY

The study was conducted on lateral cephalometric radiographs of 60 patients (30 male and 30 Female) coming to Orthodontic Department, Nishtar Institute of Dentistry, Multan from December 2016 to August 2018. The participants aged between 16-25 years. Skeletal class 2 and 3 were excluded. All patients were of skeletal class 1 with pleasing profiles, Lateral cephalograms were traced on 0.003 inch matte cellulose acetate tracing paper sheet. ANB angle was recoded to classify skeletal class 1. Nasolabial angle was measured by drawing a line tangent to the base of the nose and a line tangent to the upper lip. SPSS 22 was used for statistical analysis.

STATISTICAL ANALYSIS

The Statistical Package for Social Sciences (SPSS) software version 20 was used for data evaluation and analysis. All the cephalometric measurements from the 60 samples were recorded in a tabulated form. The mean, range and standard deviation were calculated and normal value was established.

RESULTS

Report

Sex		Age	Nasolabial Angle
F	Mean	18.10	100.30
	N	30	30
	Std. Deviation	2.482	12.191
	Mean	18.70	104.27
M	N	30	30
	Std. Deviation	3.030	10.840
	Mean	18.40	102.28
Total	N	60	60
	Std. Deviation	2.763	11.611

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age	60	9	16	25	18.40	2.763
Nasolabial Angle	60	43	80	123	102.28	11.611
Valid N (listwise)	60					

DISCUSSIONS

Nasolabial angle is an important diagnostic tool for any type of orthodontic treatment and this angle can be affected by facial and nasal bone molding. Facial molding has been done all over the world like south Asia, middle-east and north-America. The value of different parameters of the face varies for different ethnic groups⁸⁻¹⁰. The southern Punjab belt of Pakistan has this trait of head and facial molding, so the nasolabial angle could be different from the standard norms for better or worse. When compared to the Caucasians values given by Dr. Jay P Fitzgerald¹¹ (114 ± 10) our study reported, 104.27 ± 10.84 in males and 100.30 ± 12.19 in females, which is less than Caucasians. The nasolabial angle according to our study goes with other Asian countries like Japanese¹² (102.34 ± 11.02) and Indians¹³ (101.73 ± 12.57). This can be explained by the fact that facial and nasal bone molding is also practiced in these countries. Our mean value is almost the same as the value given by McNamara¹⁴ (102 ± 8)

CONCLUSION

The cephalometric study of 60 samples for nasolabial angle was evaluated as 104.27 ± 10.84 in males and 100.30 ± 12.19 in females with a total value of 102.28 ± 11.61 which is in accordance with the nasolabial angle of other Asian population where facial and nasal bone molding is practiced. Also our mean value is almost the same as the value given by McNamara (102 ± 8). Therefore, it is safe to say that nasal facial bone molding should be encouraged.

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