Facial Survey Among Nepalese Preclinical Students Studying at Kathmandu Medical College Teaching Hospital

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ABSTRACT

Background: The concern about facial esthetics has followed the development of civilizations that have always used the face as the representative ideal of beauty as a reference. The Facial pattern may be classified into Doliofacial (longer and narrower face), Brachyfacial (shorter and wider face), and an intermediriary category, the mesofacial. The facial morphology is early defined and maintained during growth, setting the genetic control on determining the skeletal framework.

Aims and Objective: To perform the facial survey with the profile of the face among Nepalese Preclinical Students at Kathmandu Medical College Teaching Hospital.

Materials and Methods: It was an observational study conducted among 300 individuals (150 Males, 150 Females) from MBBS and BDS first and second year preclinical students studying at Kathmandu Medical College Teaching Hospital (KMCTH), Duwakot. Measurements variables were facial profile with convexity, straight and concavity of face, lips competency with competent and incompetent lips and size of lips in form of thin and average lips.

Results: The convex profile of face was found in 76% (114) of males and 70.66% (106) of females. The straight profile of face was found in 21.33% (32) of males and 28% (42) of females. The concavity of the face with bad esthetic look was limited only to 2.66% (4) males and 1.33% (2) females. The normal competent lips were found in 92% (138) males and 96% (144) of females with no application of force to close the mouth thus the lips. The individuals applying the force to close the lips called incompetent lips were found in 8% (12) of males and 4% (6) of females.

Conclusion: The convex profile with esthetic appearance was greater in both male and female individuals. However the incidence for incompetent lips with difficulty in phonation is of high prevalence among preclinical students studying at Kathmandu Medical College Teaching Hospital (KMCTH).

Keywords: Facial Profile, Competent Lips, Diastema

1. INTRODUCTION

The facial profile with its analysis is a diagnostic tool which provides important and specific information about the facial aesthetics and disharmonies. Facial Harmony involves facial lines, color, shape of teeth, average and thin size of lips as well as gap in upper front teeth called as diastema due to thick frenum etc. The facial profile plays a vital role in the human social interactions. Incompetent lips and proclined premaxilla may be associated with more incidence of dental caries, halitosis (bad breath) and chances of trauma during road traffic accident (RTA).

Facial profile is also crucial for follow up of the patients. Anthropometric measurements especially facial measurements with facial survey as a whole are crucial for determining different face shapes. Facial form is an important consideration in mouth breathers with dry mouth and high incidence of dental caries. [1-3]. It may be an important factor in
increasing susceptibility to obstructive sleep apnea. Facial analysis plays an important role in personal identification. The facial profile analysis is crucial as it can be utilized as basis for fixed orthodontic treatment. It is also helpful in various procedures of maxillofacial surgeries and reconstructions where facial survey with various measurements is used. Facial Profiles with mandibular retrognathism are socially and aesthetically acceptable from an Asian perspective. Yet, the same profile is regarded unattractive by the white race. Thus this study is focused on conducting the facial survey with dominant type of facial profile and competency of lips during closure of mouth among Nepalese Preclinical Students at Kathmandu Medical College Teaching Hospital, Duwakot with the discrimination between male and female.

2. METHODS

The study was conducted from April 2016 to September 2016 after obtaining ethical clearance from Institutional Research Committee (IRC), KMCTH. An observational study was conducted among 300 preclinical students (150 males, 150 female) from MBBS and BDS first and second year students studying at Kathmandu Medical College Teaching Hospital (KMCTH), Duwakot. Data was collected from them by a self designed questionnaire in a written form from the respondents to obtain the necessary socio demographic information on age and gender. An examination was performed to observe facial profile, competency of lips while closing the mouth and size of lips. Measurement was taken at free time of students without hampering the study time. Healthy individual who gave consent were included in the study. Students with chronic and debilitating diseases were excluded from the study. Similarly, individuals who did not give consent and who were foreigners were excluded from the study.

Measurement Variables were facial profile, lips competency, lips size etc. Data collected was compiled in Microsoft Office excel 2007 and further analyzed by SPSS version 20.

3. RESULTS:

The convex profile of face was found in 76% (114) of males and 70.66% (106) of females. The straight profile of face was found in 21.33% (32) of males and 28% (42) of females. The concavity of the face with bad esthetic look was limited only to 2.66% (4) males and 1.33% (2) females. The normal competent lips were found in 92% (138) males and 96% (144) of females with no application of force to close the mouth thus the lips. The individuals applying the force to close the lips (incompetent lips) were found in 8% (12) of males and 4% (6) of females. The individuals with incompetent lips condition reported of difficulty in speech, occasional dry mouth condition and were comfortable with opening the mouth while breathing (mouth breather). The prevalence of convex profile of face in male was greater than female individuals. Incompetent lips were seen in total 6% (18) of study population while others 94% (282) were having normal competent lips. (Figure1) Among the study population, 98% (294) individuals had average size of lips and 2% (6) had thin size of lips (figure 2).
Table 1: Competent & Incompetent Lips in Males & Females.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Male (n=150)</th>
<th>Female (n=150)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competent</td>
<td>92% (138)</td>
<td>96% (144)</td>
<td>94% (282)</td>
</tr>
<tr>
<td>Incompetent</td>
<td>8% (12)</td>
<td>4% (6)</td>
<td>6% (18)</td>
</tr>
</tbody>
</table>

Table 2: Distribution of Facial Profiles in the study population (N=300).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Male (n=150)</th>
<th>Female (n=150)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convex</td>
<td>76% (114)</td>
<td>70.66% (106)</td>
<td>73.33% (220)</td>
</tr>
<tr>
<td>Straight</td>
<td>21.33% (32)</td>
<td>28% (42)</td>
<td>24.66% (74)</td>
</tr>
<tr>
<td>Concave</td>
<td>2.66% (4)</td>
<td>1.33% (2)</td>
<td>2% (6)</td>
</tr>
<tr>
<td>Lips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thin Lips</td>
<td>1.33% (2)</td>
<td>2.66% (4)</td>
<td>2% (6)</td>
</tr>
<tr>
<td>Average Lips</td>
<td>98.66% (148)</td>
<td>97.33% (146)</td>
<td>98% (294)</td>
</tr>
</tbody>
</table>

Figure 1: Distribution of competency of lips among study subjects. (N=300)
Figure 2: Distribution of size of the lips among study subjects. (N=300)

4. DISCUSSION:
The results of the present research showed that the convex facial profile was remarkably prevalent in 73.33% (220) of students among 300 students sample representative of student community at Kathmandu Medical College Teaching Hospital (KMCTH). Similar Result with convex profile was found in 81.5% of population researched by Fadeju et al. The investigations in the present study revealed 24.66% (74) had straight facial profile. Similar results were found by Oliveira Jr, who found 32% of studied population with more straight facial profile. The least attractive concave profile with mandibular protrusion was found only in 2% (6) of study population. Similar results of the least attractive profile was found to be the concave profile with mandibular protrusion as studied by Soh and Reis. The normal competent lips was found in 94% (282) of individuals and 6% (18) had incompetent lips. The average size of the lips was found in 98% of the individuals while 2% (6) had thin lips. These results are not consistent with those of Kaur et al, who analysed facial soft tissues changes including lips with aging and found thinner lips in older people 50% in males and 48% in females. The cause for difference could be due to age related, racial, social, bony pattern, muscle mass of face and ethnical background of the sample size.

5. CONCLUSION:
The facial survey for analysis of facial contour with high incidence of convexity and straight profile and low incidence of concave profile is an important tool for dental, maxillofacial and plastic surgeons as well as anatomists, artists and anthropomologists.

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REFERENCES