A Relationship between Nasolabial Appearance and Self-esteem in Adolescent with Repaired Cleft Lip and Cleft Palate at Khon Kaen University Cleft Center

Niramol Patjanasoontorn MD*, Kusalaporn Wongniyom MD*, Suteera Pradubwong MSN**, Navanant Piyavhakul MD*, Bowornsilp Chowchuen MD***

* Department of Psychiatry, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand
** Division of Nursing, Srinagarind Hospital, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand
*** Department of Surgery, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

Objective: To examine levels of self-esteem of adolescents with repaired cleft lip and cleft palate at Khon Kaen University Cleft Center and its correlation with nasolabial appearance.

Material and Method: Across-sectional survey of 93 adolescents with repaired cleft lip and palate.

Results: A total nasolabial appearance score was 2.8±0.36 (fair to good). The mean of the total self-esteem score for all respondents was 20.11±3.27 (maximum 30). There was no significant correlation between nasolabial appearance and self esteem (Pearson product-moment correlation co efficiency (r) = 0.18, p = 0.08. The self-esteem scores of good, fair and poor appearance were 20.5±0.98, 19.8±0.32, 19±2.09 respectively.

Conclusion: The nasolabial appearance of repaired cleft lip and palate not be the only factor but other psychosocial factors also may play a role in their self-esteem. The analysis of this study found no relationship between self-esteem and appearance.

Keywords: Self esteem, Adolescents with cleft lip and cleft palate, Appearance and aesthetic level

J Med Assoc Thai 2014; 97 (Suppl. 10): S49-S52

Full text. e-Journal: http://www.jmatonline.com

The incidence of cleft lip and palate in Thailand is 1 in every 600 live births. According to Khon Kaen University cleft center or Tawanchai cleft center, the incidence of cleft lip and palate in Northeastern Thailand is 2.5 in every 1,000 live births. Tawanchai cleft center has developed guidelines for cheiloplasty and palatoplasty and surgical specialists correct the defects including half of the cases which were partly corrected by surgeons from other centers and hospitals in this region. Adolescents with cleft lip and palate need long-term care and multiple surgeries following the initial corrective procedure.

These congenital facial deformities have strong impact to child and the family especially on appearance even after surgical correction. Kramer FJ et al 2008 study found out that children with cleft lip and palate have low self-esteem and poor quality of life. Andrade D et al, 2001 reported low self-esteem among adolescents with cleft lip and palate compared with normal group. However, further studies are required to explore the impact of nasolabial appearance and self-esteem.

Objective

To examine levels of self-esteem of adolescents with repaired cleft lip and cleft palate at Khon Kaen University Cleft Center and its correlation with nasolabial appearance.

Material and Method

A cross-sectional study was conducted at Srinagarind Hospital, Khon Kaen University cleft center (Tawanchai cleft center). A total number of 93 adolescents, regardless of gender (males 49 and females 44) with repaired cleft lip and palate aged between 12-19 were recruited. This study was conducted for 13 months from February 2012 to February 2013. The subjects were asked to answer Rosenberg’s self-esteem scale questionnaire (had 10 items) that measures global self worth by using 4 point Likert scale format of strongly agree, agree, disagree and strongly disagree.
The correlations of the scale is 0.82-0.88 and Cronbach’s alpha is 0.77-0.88 (Blascovich and Tomaka, 1993). Total score of Rosenberg’s self-esteem is 30. There is no discrete cut off points to delineate high and low self-esteem.

The adolescents were taken photographs of their nasolabial appearance after the corrective procedures. The photographs were cropped to have only nose, nasolabial area and chin. The components of nasolabial appearance to be rated were nasal form, nasal symmetry, mucocutaneous junction and profile view(10-13). Trained staffs with a 5 grade esthetic index rated the nasolabial appearance from very good, good, fair, poor and very poor (very good-1, very poor -5).

Statistical analysis
Descriptive statistics were performed on demographic data. Levels of self-esteem and nasolabial appearance were reported in mean and standard deviation (SD). The relationship between nasolabial appearance and Rosenberg’s self-esteem was investigated using Pearson product-moment correlation coefficient, in which p-value of 0.05 was considered statistically significant. Data were analysed using MedCalc Statistical Software version 13.3.3 (Medcalc Software bvba, Ostend, Belgium; http://www.medcalc.org; 2014).

Results
All respondents are living in Northeastern Thailand. The response, summarized in Table 1, indicates that there were more male respondents than females with mean ages 14.6±2.1 years. They were 63 respondents with unilateral cleft lip and palate and 28 with bilateral cleft lip and palate. The subjects underwent cheiloplasty or palatoplasty before the age of ten (Cheiloplasty was performed for 43 cases at Srinagarind hospital and 50 cases by other hospital; 51 respondents underwent palatoplasty at Srinagarind hospital and 42 of them from other hospitals). The average family income of the respondents was 14,122 baht per month. The nasolabial appearance mean score was 2.8±0.36 (very good = 1 to very poor = 5). 72 respondents (77.4%) were scored for good, 5 for poor and none received a score of very poor. The inter rater agreement; Kappa coefficient of raters in nasolabial appearance score was 0.44.

The mean of total Rosenberg self-esteem score for all respondents (n = 93) was 20.11±3.27 (maximum 30, no cut-off point). Respondents with a good nasolabial-appearance score (n = 16, 17.2%) had Rosenberg’s self-esteem mean score of 20.5±0.98; a fair nasolabial-appearance score (n = 72, 77.4%) had Rosenberg self-esteem score of 19.8±0.32; and poor nasolabial-appearance score (n = 5, 5.3%) had Rosenberg’s self-esteem score of 19±2.09. There was no significant correlation between nasolabial appearance and self-esteem, r = -0.1813, p = 0.08 (Fig. 1).

Discussion
In the present study, a total number of 93 adolescents with repaired cleft lip and cleft palate were treated at the Tawanchai cleft center, Srinagarind Hospital, Khon Kaen University, Thailand. Despite these patients have been cared following the cleft care

Table 1. Demographic data

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Average (year)</th>
<th>No. of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (n = 93)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Male</td>
<td>-</td>
<td>49 (52.7%)</td>
</tr>
<tr>
<td>Female</td>
<td>-</td>
<td>44 (47.3%)</td>
</tr>
<tr>
<td>Unilateral CLCP</td>
<td>-</td>
<td>64 (68.8%)</td>
</tr>
<tr>
<td>Bilateral CLCP</td>
<td>-</td>
<td>29 (31.2%)</td>
</tr>
<tr>
<td>Family income per month</td>
<td>14,122 baht (470 USD)</td>
<td>-</td>
</tr>
<tr>
<td>Nasolabial appearance score (n = 93)</td>
<td>2.8±0.36</td>
<td>16 (17.2%)</td>
</tr>
<tr>
<td>Good appearance</td>
<td>Score (1.1-2.5)</td>
<td>72 (77.4%)</td>
</tr>
<tr>
<td>Fair appearance</td>
<td>Score (2.6-3.5)</td>
<td>5 (5.3%)</td>
</tr>
<tr>
<td>Poor appearance</td>
<td>Score (3.6-4.5)</td>
<td>-</td>
</tr>
<tr>
<td>Total self esteem score (n = 93)</td>
<td>20.11±3.27</td>
<td>Correlation coefficient , r = -0.1813</td>
</tr>
<tr>
<td>Good appearance</td>
<td>20.5±0.98</td>
<td>p = 0.08</td>
</tr>
<tr>
<td>Fair appearance</td>
<td>19.8±0.32</td>
<td>95% confidence interval of r</td>
</tr>
<tr>
<td>Poor appearance</td>
<td>19±2.09</td>
<td>= -0.37-0.023</td>
</tr>
</tbody>
</table>
guidelines in surgical and dental procedures since they were children, some disfigures could not be repaired and reconstructed to normal levels. Our study measured patient’s nasolabial appearance using five raters (three physicians, one nurse and one research assistant). Photograph’s ratings have been used in measuring aesthetic outcome of facial appearance.

Rosenberg stated that there was no cut off point. The score may vary in specific groups. A study by Kanthawong et al conducted in southern Thailand with adolescent with repaired CLCP and found there were small numbers of low self-esteem. There is no evidence to support our study that patient that has good nasolabial appearance have higher scores in self-esteem than poor nasolabial appearance ($p = 0.08$). The self-esteem may not relate to nasolabial appearance. This is similar to the study of Roberts. The psychosocial support and social engagement, fear, anxiety and/or life stresses may be other important factors that may affect self-esteem. This study highlights a comprehensive cleft care involving reconstruction, psychosocial support, social engagement and family support.

**Conclusion**

The analysis of this study found no evidence to support the relationship between self-esteem and appearance.

**Acknowledgement**

The authors gratefully acknowledge the funding from the Faculty of Medicine, Khon Kaen University (Funding ID 1-54304) and supports from Tawanchai Cleft Center, patients and caregivers who participate in this study.

**Potential conflicts of interest**

None.

**References**

12. Sharma VP, Bella H, Cadier MM, Pigott RW,


ประเทศไทย ผลการศึกษาที่มีความสัมพันธ์กับการผลิตพันธุ์เชื้อแผลหลังการผ่าตัด พบว่าการผลิตพันธุ์เชื้อแผลหลังการผ่าตัดเกิดขึ้นในผู้ที่ได้รับการผ่าตัดต่อเนื่อง แต่ไม่พบการผลิตพันธุ์เชื้อแผลหลังการผ่าตัดต่อเนื่องในผู้ที่ได้รับการผ่าตัดครั้งเดียว

สูตร: ความสัมพันธ์ภายใต้การตรวจสอบแบบที่ถูกต้อง คุณสมบัติของการผลิตพันธุ์เชื้อแผลหลังการผ่าตัดต่อเนื่องจะมีปัจจัยอื่น ๆ รวมถึง เข้า การขอให้เกิดการตัดสินและดูแลรักษาต่อเนื่อง