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Think, Treat & Teach

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Predictors of respiratory dysfunction in Pierre Robin sequence patients: the role of mandible shape

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Aims & Objectives:

The aim of this study is to evaluate the predictors of respiratory dysfunction in Pierre Robin sequence patients focusing on mandible shape.

Material & Methods:

We performed a review on 39 Pierre Robin patients (age 20) considering mandible shape (ramus vertical height, horizontal body length and gonial angle) controlling for sex, presence of cleft palate and other superior airway comorbidities for the outcome AIH.

Results:

The majority of patients were males, 17,9% had cleft palate, 23,1% were syndromic and 17,9% had other superior airway anomalies. After controlling for sex, presence of cleft palate and other airway anomalies, only the body size was significantly associated with more severe AHI (>20) (p

Discussion & Summary:

Few studies had addressed mandible shape in PRS patients. Liu et al. compared isolated PRS patients, Treacher Collins patients and normal patients showing that PRS had shorter mandible body whereas Treacher Collins patients had shorter ramus comparing to normal patients. Our data showed that syndromic patients did not differ from isolated PRS patients concerning mandible shape and the regression analysis demonstrated that body size is the most important component affecting respiratory function. Unfortunately, we cannot compare our data with the literature because there is no data for normal patients mandible shape under age of 90 days. This draws attention to the necessity of studies to establish normal parameters values of mandible shape in normal infants and neonates.

Disclosure

None. This work has not been published previously and is not under consideration for publication elsewhere. We had no financial support of any source for this work.

Evaluation of dental arches relationship of patients with bilateral cleft lip and palate applying Bilateral Yardstick

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Aims & Objectives:

This study aimed to analyse the applicability and to verify the reliability of the bilateral occlusal yardstick on the evaluation of dental arches relationship of patients with bilateral cleft lip and palate on 3D virtual casts

Material & Methods:

additionally to describe the frequency of the scores and to compare the means of the variables age, age of cheiloplasty and age of palatoplasty between the patients classified as having a good occlusal relationship (score 1) and those classified on the other scores. Therefore, 112 patients of the Hospital for Rehabilitation of Craniofacial Anomalies of the São Paulo University aging 6 to 12 years had their plaster dental casts obtained and scanned on a 3Shape R700 3D scanner into tridimensional digital images that were operated virtually on the Orthoanalyzer, a software specifically designed for tridimensional images reading.

Results:

For the evaluation of dental arches relationship, the bilateral occlusal yardstick was applied to the digital images by three calibrated examiners. Data analysis comprised the description of the frequencies, the comparison of the means by the t test and the verification of intra and interexaminer agreement through weighted kappa test. The findings allowed to conclude that the bilateral occlusal yardstick is applicable to 3D digital casts with satisfactory reliability, identified by intraexaminer kappa values higher than 0.93 (CI 0.88-0.98) and interexaminers agreement higher than 0.78 (CI 0.69-0.87).

Discussion & Summary:

Bilateral Yardstick proved to be effective, but experience and good calibration are required to ensure that the results are reproducible and reliable.