THREE-DIMENSIONAL ASSESSMENT OF THE POSTERIOR AIRWAY SPACE IN SUBJECTS WITH CLEFT LIP/PALATE AND MAXILLOMANDIBULAR DISCREPANCY: PRELIMINARY RESULTS

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PURPOSE: Patients with repaired cleft lip and palate usually develop a characteristic concave profile due to retroposition of the atresic maxilla resulting from maxillary growth restriction caused by primary plastic surgeries. These anatomical changes frequently reduce internal nasal dimension, increase nasal patency and may result in oral breathing in a significant number of patients. Reduced posterior airway space (PAS) and reduced nasal dimensions are characteristics also observed in patients with maxillomandibular discrepancy, even without cleft. Therefore, respiratory complaints are frequently observed and, in severe cases, the obstructive sleep apnea syndrome can be present as a result of reduced PAS. As part of a larger project, this study aimed at assessing the PAS of subjects with Angle class III malocclusion + cleft lip/palate, as compared to subjects with Angle class III malocclusion and without cleft lip/palate. **METHODS:** Cone beam computed tomography images of 4 subjects with class III malocclusion, divided into 2 groups, were retrospectively evaluated: G1-cleft lip/palate, and G2-without cleft. PAS volume (mm3) and minimum cross-sectional area (mm2) and were assessed in tomographic images by means of Dolphin Imaging 11.0 software. **RESULTS:** The mean volume and minimum cross-sectional area of G1 corresponded to 12970mm3 and 96mm2, respectively. In G2, these values were slightly higher and corresponded to 13642mm3 and 107mm2. **CONCLUSIONS:** These data point out to a possible reduction of PAS in subjects with cleft lip and palate. However, these results are preliminary and a larger study is being conducted at the Laboratory of Physiology/HRAC-USP, in order to assess a more representative sample.

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