

## DOES THE METHOD OF EVALUATION OF THE VELUM LENGTH AND THE PHARYNGEAL DEPTH INFLUENCE ON CLINICAL OUTCOMES?

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**Objective:** This study aimed to analyze if the landmark used to measure velum length(VL) and pharyngeal depth(PD) in individuals with cleft palate(CP) may influence the final measurements, and to verify if the results may imply in different clinical interpretations.**Methods:** Cone beam computed tomography images of 54 patients with CP, both genders, aged 18 to 37( $24.1 \pm 4.5$ ) years were analyzed using Amira Software version 5.6. Measurements of VL and PD, and the ratio PD/VL were obtained for each image based on the PNS, represented by the most posterior point of the hard palate(G1) and on Pterygomaxillary fissure(G2). Reliability was calculated after reanalyzes of 100% of the images by using Interclass Correlation Coefficient (ICC). Correlation between measurements for both groups was determined using a Pearson product-moment correlation. Differences between the methods of analysis were obtained by one-sample t-test(95%).**Results:** The ICC obtained for VL, PD, and ratio ranged from .845 to .921 for G1(good-excellent), and from .952 to .986 for G2(excellent). The means of VL, PD, and ratio PD/VL were  $27.78(\pm 3.75)$ mm,  $27.28(\pm 4.57)$ mm, and  $0.99(\pm 0.17)$  for G1, and  $21.64(\pm 4.38)$ mm,  $21.21(\pm 3.56)$ mm, and  $1.02(\pm 0.28)$  for G2. Correlation between groups was moderate for VL( $r=0.58$ ) and PD( $r=0.66$ ), and strong for ratio PD/VL( $r=0.73$ ). Differences between G1 and G2 were statistically significant( $p<0.001$ ).**Conclusion:** Although there is a moderate-strong correlation for the methods of analysis, using different landmarks may influence the final VL, PD, and ratio PD/VL measures, leading to different interpretations on clinical practice, as a deep/narrow nasopharynx, or a long/short VL. Thus, overestimating or underestimating the velopharyngeal mechanism.