RELIABILITY OF THE BILATERAL YARDSTICK ON THE ASSESSMENT OF THE INTERARCH RELATIONSHIP IN PATIENTS WITH BCLP

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OBJECTIVE: to evaluate, on a preliminary study, the reliability of the Bilateral Yardstick on assessment of the interarch relationship of patients with BCLP, using dental casts and 3D virtual casts. METHOD: Dental casts were obtained from 50 individuals and than scanned (3Shape R700 3D scanner) which were read by OrthoAnalyser Software. Interarch relationship was classified using Bilateral Yardstick on both plaster casts and 3D images by 30 examiners from several rehabilitation centers, most of them participating for the first time on a calibration of occlusal indexes. Weighted kappa with 95% confidence interval (CI) was calculated to evaluate the level of agreement between each examiner and a gold standart on plaster cast scores and on 3D images, as well as the intraexaminer agreement when scoring plaster and 3D images. RESULTS: Subjects aged 7.3 (SD 0.76) years. The mean ages of lip repair and palatoplasty were 5.9 (SD 2.2) and 16.9 (SD 3.8) months respectively. Kappa values between plaster cast scores and gold standart varied from 0.193 (CI 0.083-0.356) to 0.597 (CI 0.425-0.769). Kappa values between 3D images scores and gold standart varied from 0.324 (CI 0.148-0.5) to 0.565 (CI 0.387-0.743). Intraexaminer agreement when scoring plaster and 3D images casts ranged from 0.173 (CI 0.001-0.345) to 0.585 (CI 0.414-0.756). CONCLUSION: Weighted Kappa values indicate fair to moderate agreement between examiners scores and gold standards on the classification of the interarch relationships both on plaster casts and 3D images, when using the Bilateral Yardstick. Intraexaminer agreement was also fair to moderate when comparing plaster casts and 3D images. Further studies with better calibration before the application of this yardstick are required for more reliable results.