

·基础与临床研究·

不同扫描范围下3种口内扫描系统的咬合匹配精度对比研究

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【摘要】 目的 探究不同颊侧咬合扫描范围下3种口内扫描仪之间咬合匹配精度的差异。方法 采用3种类型的口内扫描仪(Medit i500、iTero element flex、3 Shape Trios3)对安装于半可调颌架上的标准石膏模型进行4种不同范围的颊侧咬合扫描。扫描范围分组为Group1: 双侧1-3牙位、Group2: 双侧4-5牙位、Group3: 双侧4-6牙位、Group4: 双侧4-7牙位, 每组重复扫描10次。对照组采用台式扫描仪获取咬合关系。将实验组与对照组上颌模型进行最佳拟合对齐, 下颌模型通过矩阵变换保持初始咬合位置不变。通过三维偏差分析技术分析不同扫描范围对咬合匹配精度的影响。结果 同一扫描系统下, i500和Trios3前牙组Group1咬合匹配精密度显著低于3个后牙组Group2、Group3、Group4($P<0.05$), 且后牙组两两之间差异无统计学意义; 同一扫描范围内, 咬合匹配正确度在3个口内扫描仪间表现出了相同的趋势: 前牙组Group1显著低于后牙组($P<0.05$), 在后牙组中, 随着扫描范围的增大, 咬合匹配的偏差减小, 正确度提高; 使用iTero进行咬合匹配时整体正确度和精密度均优于i500和Trios3, 且差异具有统计学意义($P<0.05$)。结论 不同扫描范围下3种口内扫描系统均会影响咬合匹配精度; iTero咬合匹配精度优于i500和Trios3。

【关键词】 口内扫描仪 虚拟咬合记录 咬合匹配 精度

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A comparative study on the interocclusal registration accuracy of 3 kinds of intraoral scanning systems at different scanning ranges

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【Abstract】 Objective To investigate the difference in the accuracy of interocclusal registration between 3 kinds of intraoral scanners at different buccal occlusal scanning ranges. **Methods** Buccal virtual interocclusal record was performed on standard plaster models mounted on a semi-adjustable articulator using three types of intraoral scanners (Medit i500, iTero element flex, 3 Shape Trios3) in four different scanning ranges. The scanning range was divided into Group 1: range between bilateral canine teeth, Group 2: bilateral ranges between the first premolar and the second premolar, Group 3: bilateral ranges between the first premolar and the first molar, and Group 4: bilateral ranges between the first premolar and the second molar. The scanning was repeated 10 times in each group. In the control group, the occlusal relationship was obtained by desktop scanner. The maxillary models of the experimental group and the control group were best fitted and aligned, and the mandibular models kept un-

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