CAD/CAM 全瓷高嵌体与全瓷冠抗折性能的比较

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【摘要】 目的　比较第一恒磨牙 CAD/CAM 全瓷高嵌体与 CAD/CAM 全瓷冠修复体的抗折裂强度。**方法**　30 颗上颌第一恒磨牙随机分为 3 组，每组 10 颗：其中 A 组为 CAD/CAM 高嵌体组，B 组为 CAD/CAM 全冠组，C 组为 10 颗天然第一恒磨牙对照组。在 LLOYD 万能试验机上进行抗折裂载荷实验，采用方差分析进行统计学处理。**结果**　A 组、B 组和 C 组的抗折裂载荷值分别是（1 623.00±431.86）N、（1 351.00±474.02）N 和（2 280.3±914.19）N，第一恒磨牙利用 CAD/CAM 制作高嵌体修复体与全瓷冠修复体的抗折裂能力均低于天然牙，经方差分析，C 组抗折裂值最大（P<0.05），A 组和 B 组间差异无统计学意义（P>0.05）。**结论**　用 CAD/CAM 制作高嵌体修复体与全瓷冠修复体的抗折强度相当，提示在临床上可以考虑采用更加微创的牙体预备方法来修复牙体缺损。

【关键词】 CAD/CAM　高嵌体　全瓷冠　抗折裂

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Comparison of the fracture strength of CAD/CAM ceramic onlays vs. crowns

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【Abstract】 Object　To compare the fracture resistance of first permanent molars restored with CAD/CAM onlays vs. crowns. **Methods**　30 human mandibular first permanent molars were randomly divided into three groups. Each group consisted of ten teeth and teeth were treated as follows: A, tooth preparations for CAD/CAM onlays; B, tooth preparations for CAD/CAM crowns; and C, natural molars as the control. The fracture resistance of teeth was measured by LLOYD universal testing machine, and data were statistically analyzed with one-way ANOVA. **Results**　The fracture resistance of A, B and C groups was 1 623.00±431.86, 1 351.00±474.02 and 2 280.3±914.19, respectively. The statistical analysis revealed no significant difference between A and B groups. There was no significant difference in tooth shape measurement between three groups and teeth in the group C has the highest fracture resistance (P<0.05). **Conclusions**　The fracture resistance of tooth preparations for CAD/CAM onlays or crowns was lower than that of natural teeth. However, CAD/CAM onlays and crowns showed no significant difference in fracture resistance. Our data suggest that a less invasive method for dental preparation could be used for clinically repairing dental defects.

【Keywords】 CAD/CAM　Onlays　Ceramic crowns　Fracture resistance

随着 CAD/CAM 技术的普及，全瓷嵌体修复技术凭借美观、备牙量小以及强度高等特点在口

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