·基础与临床研究·

切牙切角缺损大小对其贴面修复后抗折性能的影响

覃小凤1 姚颖冰2 许 胜1 苏晓晖1

(1. 广西医科大学附属口腔医院; 2. 广西中医药大学附属医院, 南宁 530021)

【摘要】目的 研究切牙切角缺损大小对其贴面修复后抗折性能的影响。方法 收集离体上颌中切牙 42 颗,随机均分为 6 组(1A、2A、3A、1B、2B、3B 组),每组 7 颗,其中 1、2、3 代表缺损等级,A、B 分别代表 IPS e.max 铸瓷贴面和 GC 硬质树脂贴面。每组按不同缺损大小预备牙体,并在唇侧缺损边缘制备宽 1 mm,深度为 0.5 mm 浅凹形微创边缘。然后分别按照标准工艺程序完成微创 IPS e.max Press 铸瓷贴面和 GC.GRADIA 硬质树脂贴面。各组均用 3M RelyX Veneer 树脂粘接套装粘固于离体牙上,用万能测力机测试抗折力,体视显微镜观察断裂模式。结果 微创铸瓷贴面修复的抗折力与缺损大小有关。1A 组与 2A、3A 组之间差异有统计学意义(P<0.05),2A 组与 3A 组差异无统计学意义(P>0.05),微创瓷贴面复合体主要的破坏模式为粘接面脱落(占 71.43%);微创树脂贴面修复的抗折力与缺损大小无明显关系,3 组间抗折力差异无统计学意义(P>0.05),微创树脂贴面复合体的破坏模式为树脂贴面崩折(100%)。抗折力 2A 组 >2B 组、3A 组 >3B 组,其差异都有统计学意义(P<0.05)。结论 在本实验条件下,缺损等级缺损时微创瓷贴面修复后抗折力越大;而缺损等级大小对微创树脂贴面修复抗折力影响较小,在 2、3 级缺损时微创瓷贴面的抗折力都大于微创树脂贴面,提示当前牙咬殆力较大,缺损等级增大时,应尽可能选择抗折力较大的微创瓷贴面修复。

【关键词】 微创贴面 抗折力 切角缺损 折裂模式 铸瓷 硬质树脂

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The effect of the size of incisor angle defects on the flexural performance of the veneer after repair

Qin Xiaofeng Yao Yingbing Xu Sheng Su Xiaohui*

(Department of Prosthodontics, College of Stomatology, Guangxi Medical University, Nanning 530021)

(Abstract) Objective To compare the flexural strength of maxillary middle incisors repaired by minimally invasive veneer with different defect sizes and repair materials. Methods 42 extracted human maxillary central incisors were divided into 6 groups (group 1A, 2A, 3A, 1B, 2B, 3B) (*N*=7 for each group), Defects were defined as grade 1, 2, or 3 according to the defect involving 1, 2, 3 regions. A and B respresent IPS e-max porcelain veneer and GC resin veneer, respectively. Grade 1, 2, and 3 defects were made for group 1A and 1B, 2A and 2B, and 3A and 3B, respectively. Overall the preparations were 1 mm in width and 0.5 mm in depth with a chamfer margin in each group. Minimally invasive e-max porcelain veneer restorations and minimally invasive resin veneer restorations were completed in the mechanic center. The universal testing machine was used to measure the flexural strength after restoration and bonding with resin cement (Rely-X Veneer), and failure

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