EFFECT OF TUNNEL PREPARATIONS ON THE MARGINAL RIDGE STRENGTH

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ABSTRACT

This study evaluates two cavity designs of tunnel preparation by measuring its marginal ridge strenagth and deter-miming the effect of different restorative materials (amalgam, composte resin and glass ionomer) when used with these preparations. A total of ninety sound extracted human lower second molar teeth were used The teeth were divided into lour main groups each consisting of twenty teeth, and the remaining ten teeth were used as control)group 1).Group II was restored with amalgam, group III was restored with composite re sin, group IV was re-stored with glass ionomer. and group V was prepared but 1101 restored. Groups II lo V were subdivided into two subgroups of ten teeth each according lo the level of proximal preparation. 2 mm and t mm gingival lo height of the marginal ridge. The results showed that the glass ionomer restoration was the material Or choice in tunnel preparation. The undermined and weakened marginal ridges were reinforced depending on the adhesive preparation. of the restorative materials. Tunnel restorations are more indicated in cases where the carious lesion is located deeper proximally.