

WEAKENING VERSUS STRENGTHENING EFFECTS OF COMPROMISED MARGINAL RIDGES AT POSTERIOR TEETH RESTORED WITH AMALGAM OR COMPOSITE RESIN

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Abstract:

One of the common clinical problems faced the clinician during cavity preparation is the presence of undermined marginal ridge composed of healthy, sound enamel either done iatrogenic or present after eradication of the carious lesion. The routine procedure in such case is the removal of undermined enamel and extension of the occlusal cavity into the proximal surface. The present investigation was undertaken to test and compare the fracture load values of the marginal ridges of restored mandibular molar teeth that received different preparations (Class I with undermined marginal ridge and class II preparations) and different restorations (amalgam and composite resin). Sound teeth were used as a control group for comparison. The results of this study indicted that the marginal ridges of the sound teeth (group V) showed the highest resistance to fracture. Regarding the restored groups, teeth with class I cavities restored with composite resin (group I) showed the highest resistance to fracture followed by class II cavities restored with amalgam (group IV). However, class I cavities restored with amalgam (group II) resulted in the least resistance to fracture. The ANOVA test indicated a significant difference (at $P < 0.05$) between the mean load values of the different test groups. It was concluded that, herein a treatment modality for dealing with undermined marginal ridge during cavity preparation other than its routine removal and extension of the cavity into the corresponding proximal surfaces was presented.