Table 1 Means (SDs) of the Initial and Final Fracture Loads

	CAD-C	Po-C	CAD-FRC	Po-FRC
IF load	22.2 (3.9)*	44.9 (4.1)**	76.4 (19.5)*	48.4 (14.7)***
FF load	22.2 (3.9)#	44.9 (4.1)#	142.0 (22.1)##	185.0 (25.2)###

SD= standard deviation; IF = initial fracture; FF = final fracture.
Mean values with different superscript symbols indicate that there was a statistically significant difference between the values in each of the IF and FF groups ($P < .05$).

CAD/CAM blocks contained fiberglass throughout their volume, the composite of the occlusal surface was filled with the fiberglass. This could create a higher initial fracture resistance for the CAD-FRC dentures compared with Po-FRC.

The lower mean FF load for the CAD-FRC dentures in comparison with that of the Po-FRC might be attributable to fiberglass intermission occurring at the stress-susceptible region of the denture. The bulk of the composite was solidly packed with fiber bundles for the Po-FRC dentures that could be manufactured without damaging the fiberglass. The fiberglass bundles bonded with composite were resistant enough to prevent the crack from spreading to the medial area.

Conclusion

The findings suggest that CAD/CAM dentures using a composite block of uniformly embedded fiberglass yield a higher resistance to initial fracture, while the polymerized composite dentures reinforced with conventional piled-up fiberglass can reduce the risk of catastrophic failure.

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Literature Abstract

The prevalence of dentin hypersensitivity in general dental practices

This cross-sectional study aimed to investigate the prevalence of dentin hypersensitivity in general dental practices as well as the associated risk factors. A total of 787 adult patients from 37 general dental practices within the Northwest Practice-based Research Collaborative in Evidence-basedDENTistry (PRECEDENT) were asked to complete a survey in which hypersensitivity was diagnosed through a question about the presence of pain in the teeth and gingiva. The investigators did a clinical examination to exclude other sources of pain. A visual analog scale and the Seattle Scales in response to a one-second air blast were both used to rate the pain level. Generalized estimating equation log-linear models were used to estimate the prevalence and prevalence ratios. The prevalence of dentine hypersensitivity was found to be 12.3 percent and those with hypersensitivity had an average of 3.5 hypersensitive teeth. There was increased prevalence of dentine hypersensitivity in 18 to 44 year olds, women, patients with gingival recession, and those who have done at-home tooth whitening. No association was found between dentine hypersensitivity and obvious occlusal trauma, noncarious cervical lesions, nor aggressive toothbrushing habits.

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