

Frequency and costs of technical failures of clasp- and double crown-retained removable partial dentures.

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OBJECTIVES: The aim of this study was to evaluate the frequency of technical failure rates and the maintenance costs of clasp- or double crown-retained removable partial dentures (RPDs) (parallel-sided and conical double crowns). **MATERIAL AND METHODS:** According to three different retainer systems used between January 1992 to December 1998, three subgroups were randomly assigned from a group of 181 patients consisting of forty cases each. The average observation time was 4.2+/-1.7 years, with a minimum of 1.0 years and a maximum of 6.9 years. Technical complications such as fractures of the artificial teeth, loss of cementation, loss of facings as well as fractures of the metal framework and the soldering were recorded due to the medical reports. **RESULTS:** Twenty percent of all clasp-retained dentures showed technical complications during the observation period, whereas 50% of conical crown-retained (CC) and 32.5% of the parallel-sided retained dentures (PS) required repair. Most often reported was loss of cementation for double crowns (n=13, 32.5% PS; n=8, 20% CC) and fractures of the clasps (n=5). Although clasp-retained dentures had a markedly lower frequency of failures (n=8) than double crown systems (n=31), the calculated repair costs per event during the observation time were more than twice as high for clasp-retained dentures (172.5 Euro) than for double crown systems (8-78 Euro). The hypothesis that the maintenance costs of the more sophisticated double crown system are higher must be rejected.

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