A proper temporary restoration has to fulfill biological, esthetical and mechanical requirements. During the time in service provisional are subjected to functional forces like the occlusal load which the material has to withstand without fracture. Fracture of an interim prosthetic restoration is unsatisfying for the patient as well as the clinician. To avoid repairing or remaking of fractured interim restorations, crown and bridge materials with high mechanical strength are recommended for the fabrication. PreVISION Temp shows high resistance to fracture under flexural loading.
Objective

The objective of this study was the evaluation of different temporary crown and bridge materials under flexural loading conditions.

Materials and Methods

In a semiclinical study set-up teeth 34 and 36 were prepared for a 3-unit bridge on a Typodont model (Columbia, NY). A metal cast duplicate from the model was fabricated after the preparation. Four different temporary crown and bridge materials were used for manufacturing provisional bridge restorations (each n = 10) with modified ridge lap pontic designs for the missing tooth. A preliminary silicone putty impression served as a template. The polished samples were cemented on the metal template with temporary luting cement according to its instructions of use. 3-point bending test was performed using a universal testing machine at a cross-head speed of 1 mm/min and the maximum force of catastrophic failure was recorded. Statistically analysis was conducted on level p < 0.05.

Results and conclusion

PreVISION Temp exhibits high fracture strength

![Graph showing fracture strength comparison](image)

Fig. 1: Mean fracture strength (N) of provisional materials. Same letters indicate no statistical significant differences.

PreVISION Temp demonstrates good mechanical strength, expressed by the high values for fracture strength under flexural loading (Fig. 1). High fracture strength indicates a strong material that provides high resistance to fracture.

Source


The study was abbreviated and summarised and all diagrams and titles have been established by Heraeus Kulzer.

* Testing was performed prior to the naming of the material.