

Failure of zirconia-based ceramic restorations [Fracasos de las restauraciones cerámicas en base de circonio]

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Introduction: There are numerous types of failure in zirconia-based ceramic restorations, i.e. ceramic restorations on a zirconia base or core, cracking being one of the most common. **Objective:**

Describe the association between failure in zirconia-core and ceramic-veneered prostheses.

Methods: A bibliographic review was conducted about failure in zirconia-based ceramic restorations and its mechanisms in the databases MEDLINE, PubMed and SciELO. The search was aimed at papers published in any language mainly in the last five years. Papers were searched for which referred to experimental studies in humans, animals and in vitro, and dealt with the topics of failure, longevity of restorations, failure mechanisms, fractures and their types. **Data analysis and**

integration: The topic of failure in zirconia-based ceramic restorations was studied in depth. The leading cause of failure is cracking in its various degrees, which reaches rates of up to 16% at five years, a relevant failure level. No evidence was found of chemical bonding between the zirconia core and the veneering ceramic, which would otherwise explain the genesis of fractures.

Conclusions: The most common complications found in zirconia-core restorations covered with porcelain are associated to cracking of the veneering porcelain, fractures in the zirconia core mainly caused by traumas and parafunctional habits, retention loss and endodontic problems. © 2019,

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Aesthetics

Ceramic

Prosthesis failure

Zirconia