

LuxaCrown pediatric case documentation

Dr. Richard Bernstein

Synopsis:

On many occasions, children have been known to get into various accidents while playing or horsing around resulting in injuries to the oral cavity. Some can be as minor as a slight chip or something as catastrophic as an avulsed permanent tooth. Many can be treated with a composite filling. In the event of the child needing something more invasive such as endodontic treatment and/or a permanent restoration such as a porcelain crown, treatment can be expensive and will have to be replaced within a few years as the child matures into adulthood. These cases are difficult and treatment can vary from extractions, forced eruptions, flippers, with anticipation of future growth and maturity of the child. With the development of a long term provisional material called LuxaCrown, there is now a low cost treatment that could bridge this gap.

A ten year girl was referred to my office from a local Pediatric dentist. The girl presented with an extensive fracture of the left central incisor, 21. Part of the fracture extended down the lingual subgingival to bone level and the pulpal chamber was exposed. Consulting with the endodontist and the parents, it was decided to save the tooth with root canal treatment followed by a crown build-up. The child had much spacing and would need orthodontic treatment in the future. The introduction of LuxaCrown made this treatment more "doable" for the parents, child and restoring dentist.

Synopsis of the step-by-step procedure.

- Consulted with the endodontist first step was to treat with an RCT.
- Impression made for lab fabrication of all porcelain post/core (empress)
- Build-up or mock-up of 21 as a mirror image of 11 on the hard model
- Bonded the post/core into the root of 21 using LuxaCore Z
- Prepped existing tooth to gingival level with chamfer finish line

With polyvinyl matrix (Honigum) used for the mock-up, LuxaCrown material (shade A1) applied to the impression, and then placed in the mouth over the dentition for one minute. It was then removed and the LuxaCrown was trimmed, and polished. Used various ET burs, polishing discs and rubber points. Same procedure as if it were a composite restoration.

The LuxaCrown was bonded over the tooth with Theracem (Bisco). The margins were finished, trimmed and smoothed and given a final polish. Luxaglaze was placed and then light cured.

At the one month follow up the LuxaCrown showed good performance in fit, durability and esthetics.

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Fig. 1: Fractured left maxillary central incisor (21) on a ten year old girl.



Fig. 2: Ideal mock-up of left central incisor (mirror image of 11).

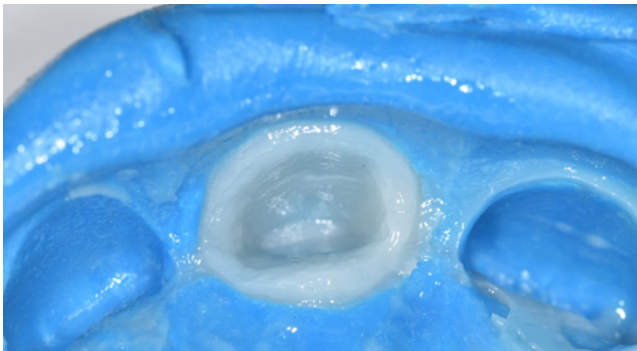


Fig. 3: Luxacrown fabrication using polyvinyl impression of mock-up. (Honigum).



Fig. 4: Prepped tooth after all-porcelain post/core was bonded into post hole.



Fig. 5: LuxaCrown bonded in place, margins finished and given a final polish and glaze.



Fig. 6: One month follow-up.