

Fabrication of Crowns Under Existing RPDs

April 18th, 2017

Treatment Sequence

- Survey and design of Diagnostic casts
- Surveyed crowns are designed with ideal contours and design parameters for the RPD fabrication
- Fabrication of surveyed crown and verification of design parameters
- Delivery of surveyed crown
- Fabrication of RPD framework

Ideally Surveyed crowns should be fabricated first!



However !!!

- If an abutment tooth requires a crown underneath an otherwise acceptable and serviceable RPD, the abutment surveyed crown will be fabricated to fit inside the clasp assembly of the existing RPD.

Fabrication techniques

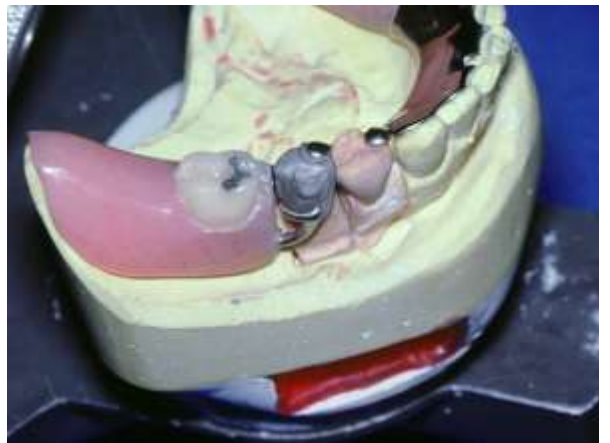
- Indirect: without the patient
- Direct: Principally intraoral (intraoral fabrication of a crown pattern)
- Combination ;Direct-indirect or indirect-direct: intermediate intraoral steps

Indirect technique

- Impression of the prepared tooth with simultaneous pick up impression of the RPD
- RPD is incorporated in the master cast
- The crown is waxed on the die and within the clasp assembly of the RPD framework
- Disadvantage: Patient will be without the RPD while surveyed crown is being fabricated









Direct technique

- Acrylic resin and inlay wax are used intraorally to adapt and form a crown pattern directly to the tooth preparation
- The pattern is cast and the restoration is cemented after ensuring an intimate fit to the RPD frame work
- Patient is allowed to keep the RPD while the crown is being casted and finished



Combination techniques

A. Direct- indirect method

- After tooth preparation impression is made without RPD in place
- Resin coping is made intraorally and fit within the clasp assembly
- Resin coping is transferred to master cast and final contours and margins are finished on master die in the lab





B. Indirect- Direct method

- Resin coping is made on the die in the laboratory
- Coping is transferred to the mouth and refined intraorally and later finalized on the die
- Most widely used since setting reaction of acrylic resin is exothermic
- Takes one more clinical step since die has to be fabricated first











