HUGE

Clinical Case Collection

Chairside Clinical Solutions for Everyday Dentistry

Direct Restorations

Posterior Caries Restorations

Class I Cavities →

Class II Cavities →

Anterior Aesthetic Restorations

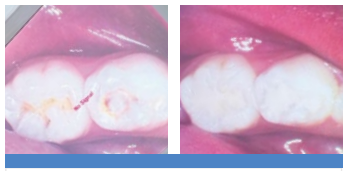
Class III Cavities →

Diastema Closure →

Class IV Cavities →

Class IV Cavities →

Pediatric Minimally Invasive Restorations



GIC Restorations →

DIRECT RESTORATIONS →

INDIRECT RESTORATIONS →

PREVENTIVE DENTISTRY & CARIES MANAGEMENT →

Conservative Posterior Restoration on Tooth #36 in a Patient Under Orthodontic Treatment

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 35-year-old male patient undergoing orthodontic treatment reported cold and sweet sensitivity in the lower left first molar (#36). Clinical examination revealed occlusal caries extending into dentin, with the tooth remaining vital. Plaque retention from the orthodontic appliance contributed to lesion progression.

The carious tissue was conservatively removed, preserving sound structure. A self-etch bonding procedure was performed using HugeBond Universal FliPro Light-Cure Dental Adhesive (HUGE). The tooth was then restored with TrusFIL Flow Composite, Shade A2 (HUGE), achieving precise fissure adaptation and natural shade integration. Finishing and polishing resulted in a smooth surface suitable for maintaining hygiene during orthodontic treatment.

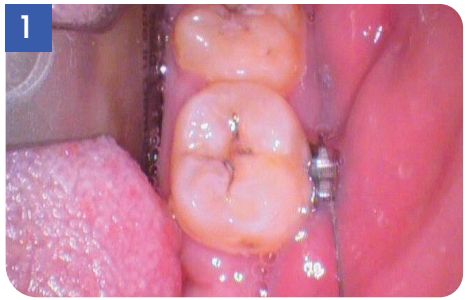
Initial situation

Final situation

DIRECT RESTORATIONS

Conservative Posterior Restoration on Tooth #36 in a Patient Under Orthodontic Treatment

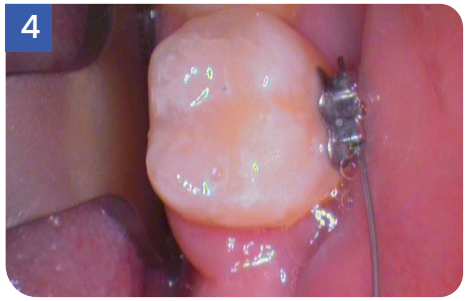
Clinical case by
Dr. Cindy Annisa Melati, Indonesia



Pre-operative View
Initial clinical presentation of occlusal caries on tooth #36.

Tooth Preparation
Caries excavation performed using a round bur, removing infected dentin while preserving sound tooth structure.

Adhesive Application
Self-etch bonding performed with HugeBond Universal FliPro, air-thinned and light-cured.



Restoration
Cavity filled with flowable composite and light-cured, followed by finishing and polishing.

Direct Class II Composite Restoration of Endodontically Treated Tooth #36

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 31-year-old male patient presented with a fractured restoration on tooth #36, previously treated endodontically and currently asymptomatic. Adequate coronal dentin remained to support a direct restoration. The clinical objective was to re-establish the proximal wall, restore occlusal anatomy, and ensure a reliable marginal seal.

The restorative procedure involved selective enamel etching with P-Etchant Phosphoric Acid Etching Gel (HUGE), followed by universal adhesive application using HugeBond Universal FliPro Light-Cure Dental Adhesive (HUGE). Composite reconstruction was completed using TrusFIL Flow Composite and TrusFIL Universal Composite (HUGE), allowing precise adaptation and anatomical layering.

Initial situation

Final situation

DIRECT RESTORATIONS

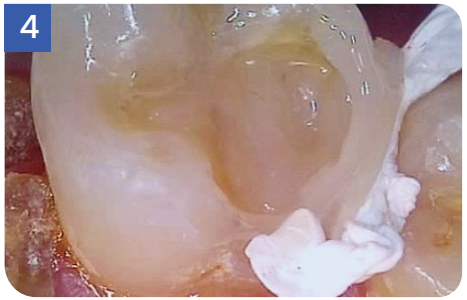
Direct Class II Composite Restoration of Endodontically Treated Tooth #36

Clinical case by
Dr. Cindy Annisa Melati, Indonesia

Tooth Preparation
Defective restoration and caries removed; margins refined and slight bevel created using fissure and round burs.

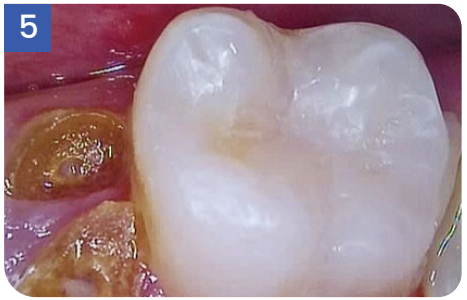
Selective Etching
Enamel selectively etched with P-Etchant for 20–30 seconds, rinsed and gently dried.

Adhesive Application
HugeBond Universal FliPro applied with active scrubbing, air-thinned, and light-cured.



Composite Build-Up

- Distal wall formed with TrusFIL Flow A2 and TrusFIL Universal A2, then cured.
- Dentin layer rebuilt using TrusFIL Universal A3, cured.
- Enamel and cusp anatomy shaped using TrusFIL Universal A1, incrementally cured.



Finishing and Polishing
Occlusal anatomy refined with a superfine bur; final gloss achieved using a two-step polishing system.

Diastema and Discoloration Correction of Maxillary Central Incisors (#11–#21)

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 27-year-old female patient complained of spacing and visible discoloration between the maxillary central incisors. The patient requested an aesthetic restoration using direct composite.

Initial situation

Final situation

DIRECT RESTORATIONS

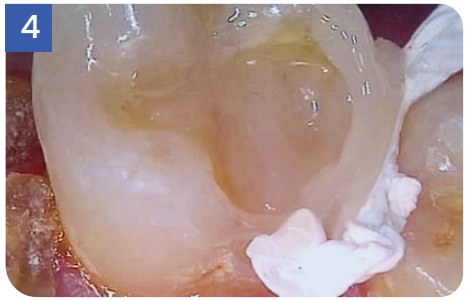
Diastema and Discoloration Correction of Maxillary Central Incisors (#11–#21)

Clinical case by
Dr. Cindy Annisa Melati, Indonesia

Tooth Preparation
Minimal removal of defective enamel margins and smoothing of edges.

Etching
Enamel etching for 20–30s, dentin etching for 15s using P-Etchant.

Adhesive Application
Apply HugeBond Universal FliPro, scrub 20 s, air-thin, light cure.



Dentin Layer Placement
Rebuild internal chroma and basic contour using TrusFIL(A3).

Enamel Layer Placement
Apply TrusFIL X-Blend to restore surface translucency and final facial form.

Finishing & Polishing
Contour with fine burs; final gloss with 2-step polishing system.

Closure of Midline Diastema (#11–#21) with Direct Composite

Clinical case by Dr. Pradeep Shetty, India

An 18-year-old male patient presented with spacing between the maxillary central incisors, primarily concerning the midline esthetics. Clinical examination revealed a midline diastema accompanied by mild anterior crowding and generalized mild gingivitis, for which routine scaling was advised. The patient exhibited a Class I molar relationship with no functional abnormalities. To address the esthetic concern, a direct composite restoration was planned to close the midline space by reshaping the mesial surfaces of the central incisors from both buccal and palatal aspects, completed under rubber dam isolation to ensure moisture control and restoration accuracy.

Initial situation

Final situation

DIRECT RESTORATIONS

Closure of Midline Diastema (#11–#21) with Direct Composite

Clinical case by
Dr. Pradeep Shetty, India

Isolation & Preparation
Rubber dam isolation. Minimal enamel margin refinement on buccal and palatal surfaces to establish clean bonding margins.

Etching
Selective enamel etching with P-Etchant: enamel 20–30s, rinse thoroughly, gently air dry without desiccation.

Adhesive Application
Apply HugeBond Universal FliPro with active scrubbing motion for 20 s; air-thin to evaporate solvent; light cure.

Composite Placement
Re-establish proximal contact and midline contour using transparent matrices.
Internal body built with TrusFIL Universal Composite A2; enamel layer shaped with TrusFIL Universal Composite A1.
Flowable A1 used for internal angle adaptation. Incremental curing.

Finishing & Polishing
Refine morphology with fine diamond burs; achieve surface gloss with multi-step disc and rubber polishing system

Fractured Maxillary Central Incisor – Composite Restoration Using Double Bevel Technique

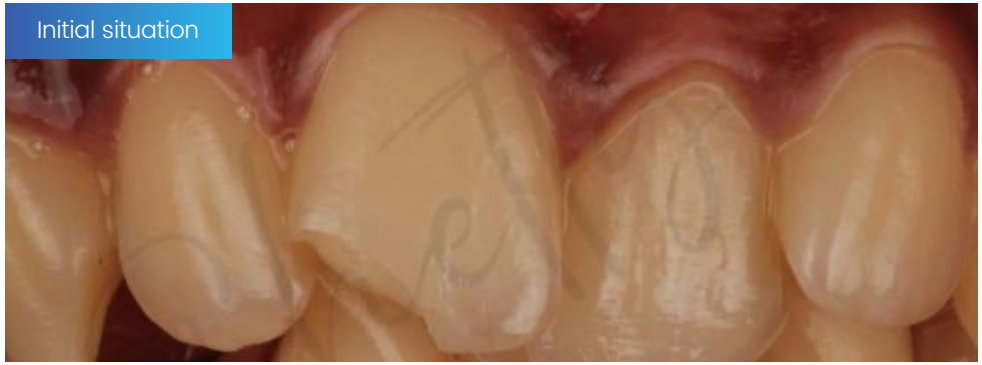
Clinical case by Dr. Pradeep Shetty, India

A 20-year-old male patient presented with a fractured maxillary right central incisor (#11) following minor trauma. Clinical examination revealed enamel and dentin involvement without pulp exposure, consistent with an Ellis Class II fracture. The tooth was vital and asymptomatic.

A conservative composite restoration using the Double Bevel Technique was planned to restore natural form and aesthetics. After rubber dam isolation, the tooth was etched, bonded, and restored with TrusFIL Universal Composite (shades A1 and A2) using an incremental layering approach.

Postoperative evaluation showed excellent shade matching, surface gloss, and marginal adaptation, achieving a highly aesthetic and functional result.

Initial situation



Final situation

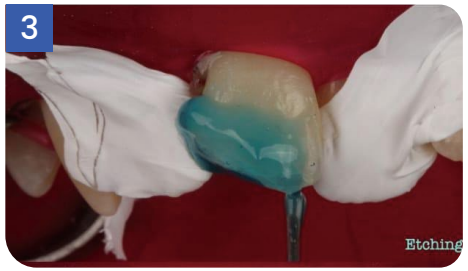
DIRECT RESTORATIONS

Fractured Maxillary Central Incisor – Composite Restoration Using Double Bevel Technique

Clinical case by
Dr. Pradeep Shetty, India

Tooth Preparation
Double-bevel preparation performed to create clean margins and support optimal bonding.

Shade Selection （A1&A2）
A1 and A2 shades selected under natural light for a layered esthetic outcome.



Etching
Enamel and dentin etched to increase surface energy and micromechanical retention.

Adhesive Application
Adhesive applied and cured to form a stable hybrid layer for strong adhesion.

Incremental Application with TrusFIL Universal Composite
Composite placed in controlled increments to reduce shrinkage and build internal anatomy.

Gross Finishing
Restoration shaped and refined with burs and discs to achieve accurate contours.

Final Finishing & Polishing
Final high-gloss polish completed to enhance enamel-like smoothness and longevity.

Restoration of Recurrent Fracture on Maxillary Central Incisors (#11–#21)

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 29-year-old male patient presented with a recurrent fracture of a previous composite restoration on the maxillary central incisors (#11 and #21). The existing restoration exhibited marginal degradation and chipping, indicating the need for replacement. Clinical evaluation revealed no signs of pulpal involvement or pathology, and the case was diagnosed as a failed anterior composite restoration affecting both esthetics and tooth integrity.
The treatment plan involved removal of the old restoration, creation of a controlled long-bevel preparation, adhesive application using a self-etch protocol, and a multilayer composite build-up employing the Snow Plow technique. This approach allowed improved marginal adaptation, internal anatomy replication, and natural esthetic integration. The final outcome demonstrated stable function, seamless shade blending, and a highly polished enamel-like surface.

Initial situation

Final situation

DIRECT RESTORATIONS

Restoration of Recurrent Fracture on Maxillary Central Incisors (#11–#21)

Clinical case by
Dr. Cindy Annisa Melati, Indonesia

Pre-Preparation
Old composite on #11–#21 will be removed, and a long labial bevel was created to improve enamel bonding and achieve smooth shade transition. A putty index was used to guide palatal anatomy.

Adhesive Application (Self-Etch)
HugeBond Universal FliPro was applied using the self-etch technique, scrubbed for 20 seconds, then gently air-thinned for 5–10 seconds.

Adhesive Light Curing
The adhesive layer was light-cured for 10–20 seconds to form a uniform hybrid layer for reliable bonding.

Layered Composite Restoration
The Snow Plow technique was used: a thin uncured layer of TrusFIL Flow A2 improved adaptation. TrusFIL Universal A3 was placed as the dentin layer, followed by TrusFIL Universal A2 and TrusFIL X-Blend as enamel layers. Each increment was light-cured for 20 seconds.

Finishing and Polishing
Final contouring was performed with a superfine bur, and a two-step polishing system was used to achieve a smooth, high-gloss enamel-like surface.

Restoration of Occlusal Caries on #74 & #75 Using GIC in a 4-Year-Old Patient

Clinical case by Dr. Astri Maria Harahap, Indonesia

A 4-year-old girl was brought to the clinic by her parents for a routine dental checkup. She reported mild discomfort when eating sweets and drinking cold beverages. Her parents were concerned about early cavities because she enjoys sugary snacks. Clinical examination revealed carious lesions on tooth 75, appearing as dark fissures on the occlusal surface. Tooth 74 had a previous glass ionomer restoration placed one year earlier, now showing marginal cracking. The diagnosis was occlusal caries on tooth 75 and failed restoration on tooth 74. The treatment plan was conservative removal of carious tissue and replacement of both restorations using a high-fluoride glass ionomer cement suitable for pediatric patients.

After removing the stained fissures on tooth 75 and the defective GIC on tooth 74 using a small round bur, both teeth were conditioned with dentin conditioner and rinsed thoroughly. HUGE Glass Ionomer Filling I was mixed in a 1:1 powder–liquid ratio to achieve a smooth, uniform paste and placed sequentially on teeth 75 and 74. The working time allowed careful placement and occlusal sculpting before the material began to set. Cocoa butter was applied to protect the surface during final setting, and occlusion was checked. The patient was advised to avoid chewing hard foods on the left side for three days.

Initial situation

Final situation

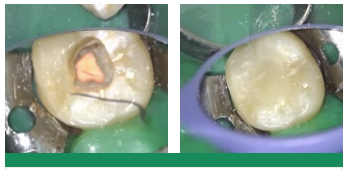
Indirect Restorations

Crowns and Bridges

Singe Crown Restoration →

Crown & Bridge Restoration →

Core Build-Up & Post Systems



Core Build-Up →

Denture Impressions

Hybrid Denture Impressions →

Hybrid Denture Impressions →

Hybrid Denture Impressions →

DIRECT RESTORATIONS →

INDIRECT RESTORATIONS →

PREVENTIVE DENTISTRY & CARIES MANAGEMENT →

Impression and Bonding of Single Crown in Indirect Restoration

Clinical Case by Dr. Tanapon Sornsuwan, Thailand

The patient presented with a compromised upper right second premolar (#15) requiring full-coverage indirect restoration. A full zirconia crown was selected for its strength, biocompatibility, and shade stability. The clinical workflow incorporated our impression materials (PERFIT Putty & Light Body), adhesive system (P-Etchant & HugeBond), and a dual-cure resin cement (TopCEM DCRC) for final cementation.

Initial situation

Final situation

INDIRECT RESTORATIONS

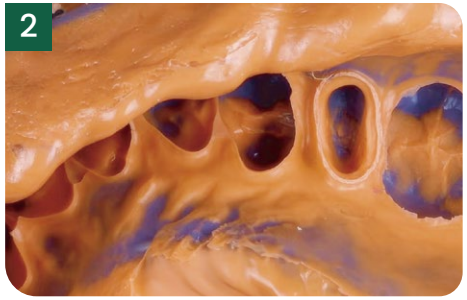
Impression and Bonding of Single Crown in Indirect Restoration

Clinical Case by
Dr. Tanapon Sornsuwan, Thailand

1

Tooth Preparation
The tooth was prepared for a full zirconia crown with proper occlusal and axial reduction. A clean, continuous finish line was created to support accurate seating and margin quality.

2



Final Impression
One-step impression technique was performed using PERFIT Putty and PERFIT Light Body simultaneously. The putty provided the bulk and stability, while the light body captured detailed margins and surface texture in a single impression, ensuring high accuracy for the zirconia crown fabrication.

3

Self-Etch Bonding & Cementation
HugeBond Universal FliPro was applied using the self-etch technique, allowing the adhesive to condition and infiltrate the tooth surface without separate phosphoric acid etching. After uniform application and light curing, the zirconia crown was cemented using TopCEM DCRC dual-cure resin cement to achieve strong retention and complete polymerization.

Esthetic Crown Restoration on a Discolored Endodontically Treated Anterior Tooth

Clinical case by Dr. Y.M., New Jersey, United States

A female patient presented for esthetic restoration of tooth #21, which had previously undergone root canal treatment and showed noticeable discoloration and darkening of the stump. The adjacent tooth had also been prepared for a crown but remained vital, creating difficulty in achieving an ideal shade match because of the different underlying tooth structures.

The case involved a darkened endodontically treated stump and a shade discrepancy risk between the two prepared teeth. A full-coverage esthetic restoration was indicated to re-establish natural appearance and shade harmony.

An indirect crown was planned, with emphasis on bonding strength and shade masking to manage the dark underlying structure. The workflow included customized try-in shading, adhesive application, and the use of a dual-cure resin cement with strong masking capability to ensure predictable esthetic results.

Initial situation

Final situation

INDIRECT RESTORATIONS

Esthetic Crown Restoration on a Discolored Endodontically Treated Anterior Tooth

Clinical case by
Dr. Y.M., New Jersey, United States

1

Tooth Preparation & Etching
The prepared tooth surfaces were etched with P-Etchant to prepare an optimal bonding substrate.

2

Try-In Shade Adjustment
A custom try-in shade was created by mixing two-thirds TopCEM DCRC A2 with one-third TopCEM DCRC A3 to evaluate the color match and achieve a natural transition with the adjacent tooth.

3

Cleaning and Adhesive Application
After the try-in, the restoration was removed and cleaned. HugeBond Universal FliPro adhesive was applied to the tooth to promote reliable bonding.

4

Cementation and Shade Masking
TopCEM DCRC (White Opaque) was applied selectively to mask the dark stump and maintain consistent final color.
Final cementation was then performed using the previously adjusted A2/A3 cement, which was placed on both the tooth and the internal surface of the crown before accurate seating.

5

Finish and Polish
A brief tack cure allowed removal of excess cement, followed by light-curing from each side for 20 seconds to complete polymerization. After curing was completed, the margins were refined and the restoration was polished for a smooth, natural finish.

Tooth #37 – Core Build-Up After Root Canal Treatment

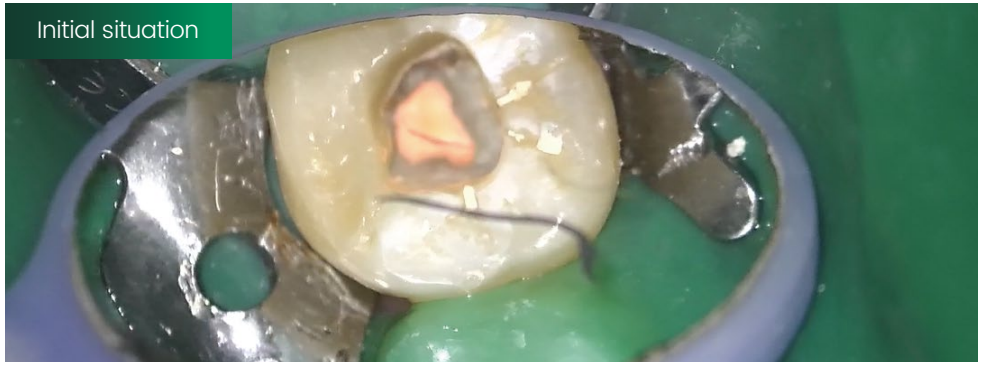
Clinical case by Dr. Punyawee Werasopon, Thailand

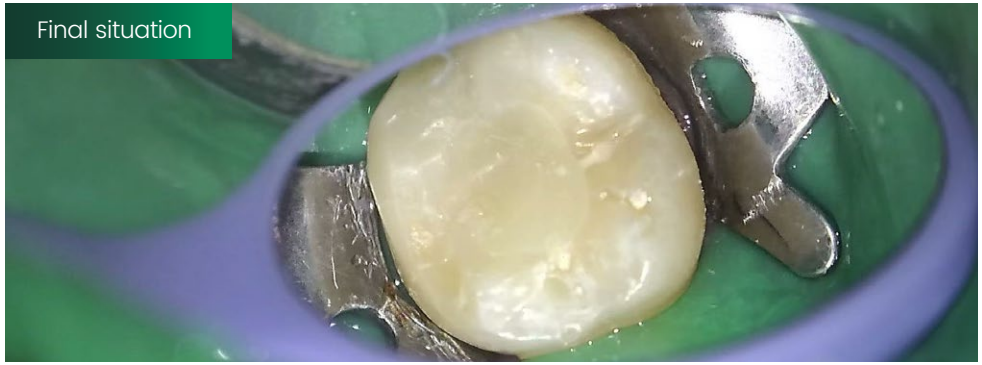
A 30-year-old male patient came for restorative treatment after completing root canal therapy on tooth #37. The tooth had minimal structural loss, and the remaining dentin walls provided adequate retention for core build-up material.

Because of the limited loss of tooth structure — and considering the C-shaped canal anatomy — placing a post was unnecessary and would have carried additional risk. The existing dentin walls were sufficient to support a reliable adhesive core restoration.

An adhesive core build-up was performed using phosphoric acid etch and rinse, followed by light-cured universal bonding and a dual-cured resin core material.

The tooth is now ready for a cuspal-coverage restoration as the next step to restore full function and long-term durability.



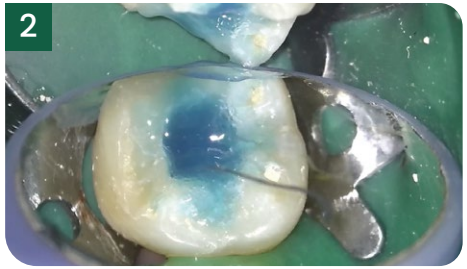


INDIRECT RESTORATIONS

Tooth #37 – Core Build-Up After Root Canal Treatment

Clinical case by
Dr. Punyawee Werasopon, Thailand

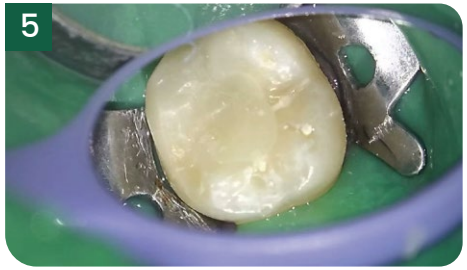
Isolation and Access Refinement
Rubber dam isolation was applied for moisture control. The access cavity was cleaned to remove residual debris and expose sound dentin surfaces for adhesive procedures.



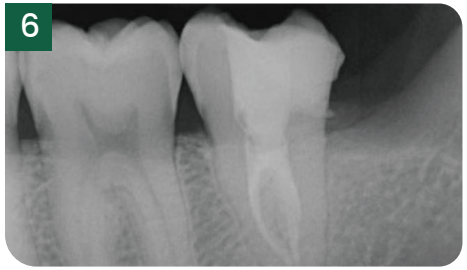
Etching
P-Etchant was applied to enamel and dentin. The surface was thoroughly rinsed and dried to prepare it for bonding.

Adhesive Application
HugeBond Universal FliPro was applied to the cavity walls, evenly dispersed with gentle air, and then light-cured to achieve reliable bonding.

Core Build-Up
A dual-cure core build-up material UltraCore (HUGE) was injected and shaped anatomically. The dual-curing mechanism ensured complete polymerization throughout the core.



Finishing and Final Appearance
Core material was fully cured and then refined to re-establish proper anatomical contours. The restored surface showed smooth integration with the surrounding tooth structure, and the overall appearance was natural and consistent with adjacent dentition.



Post-Operative
A postoperative periapical radiograph was taken to evaluate the core build-up. The UltraCore material exhibited excellent radiopacity, allowing clear visualization of its margins within the access cavity.

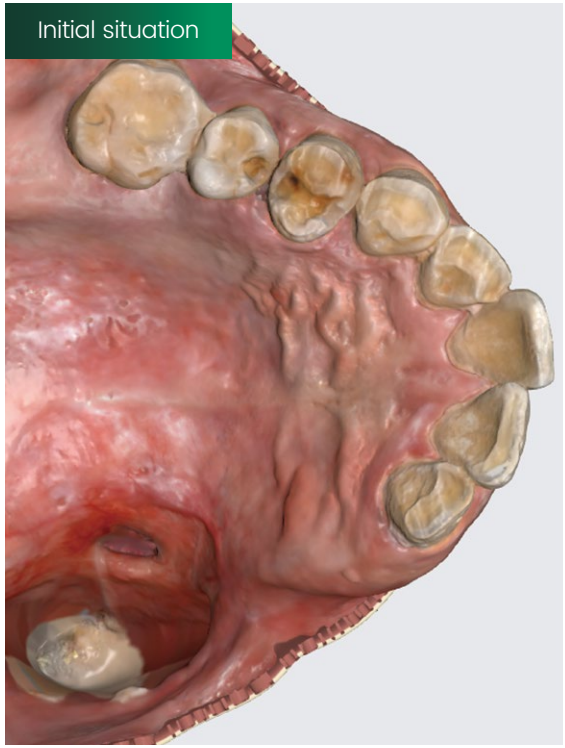
The tooth is now ready for a cuspal-coverage restoration as the next step to restore full function and long-term durability.

Hybrid Obturator Rehabilitation After Left Hemimaxillectomy Due to Squamous Cell Carcinoma

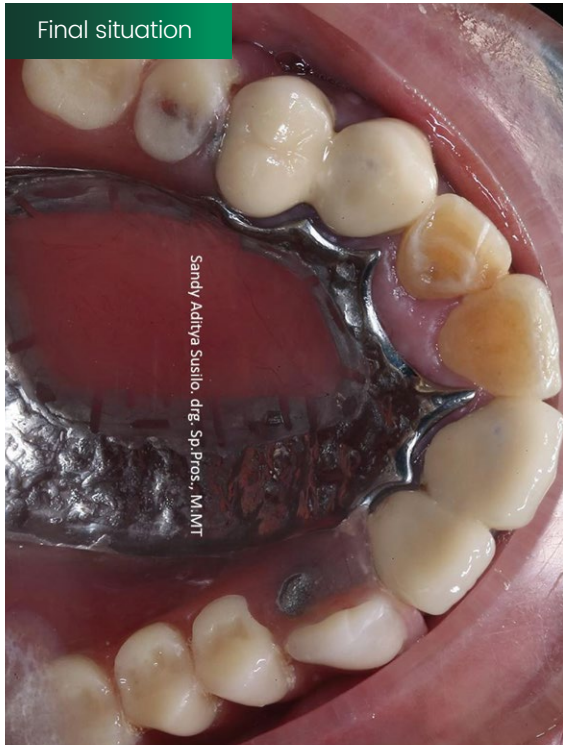
Clinical case by Dr. Sandy Aditya Susilo, Indonesia

A 52-year-old male, 15 years post–left hemimaxillectomy for squamous cell carcinoma, presented with an old metal-frame obturator supported by 16, 15, 14, and 22. Severe mobility and bone loss on 16 and 15 caused clasp instability and posterior air leakage. A new removable hybrid obturator was planned, combining PFM splints with male attachments and a metal-frame obturator. Silicone impression using HUGE PERFIT was essential for accurately capturing the post-extraction defect and attachment positions, enabling immediate functional rehabilitation with optimized sealing.

Initial situation



Final situation



INDIRECT RESTORATIONS

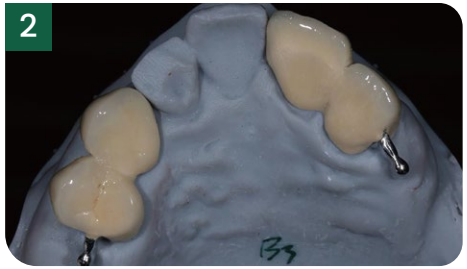
Hybrid Obturator Rehabilitation After Left Hemimaxillectomy Due to Squamous Cell Carcinoma

Clinical case by
Dr. Sandy Aditya Susilo, Indonesia

1

Intraoral Scan & Digital Planning
Intraoral scanning was performed. Teeth 16 and 15 were digitally removed and a 3D model was printed to simulate the post-extraction condition.

2

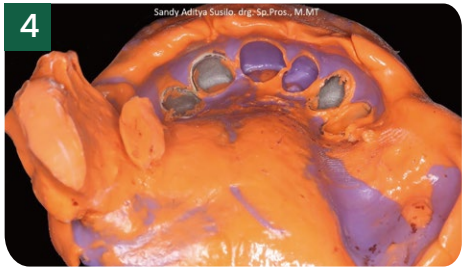


PFM Splints & Male Attachments
PFM splints for 14,13 | 21,22 were fabricated, and male attachments were placed on distal 14 and 22.

3

Try-in & Extraction
The PFM splints were tried-in, followed by extraction of 16 and 15.

4



Pick-Up Impression with HUGE PERFIT
Two weeks later, an individual tray was used to take a Pick-Up Impression with HUGE PERFIT one-step putty-wash silicone. This accurately captured the attachments and defect margins for the metal-frame obturator.

5

Framework Design & Obturator Fabrication
Denture borders were outlined, ensuring peripheral and palatal seal. The removable metal framework and acrylic teeth were fabricated based on the silicone impression.

Hybrid Denture Post Hemimaxillectomy Anterior for Ameloblastoma

Clinical case by Dr. Sandy Aditya Susilo, Indonesia

A 47-year-old female patient, an entrepreneur and professional singer, underwent anterior hemi-maxillectomy due to ameloblastoma 2 years ago. She initially received an immediate removable obturator, but it became unstable 4 months post-surgery due to bone loss and space between the acrylic base and bone defect, causing difficulty with “S” sounds. Patient requested an esthetic and functionally stable prosthesis.

Initial situation

Final situation

INDIRECT RESTORATIONS

Hybrid Denture Post Hemimaxillectomy Anterior for Ameloblastoma

Clinical case by
Dr. Sandy Aditya Susilo, Indonesia

1

Tooth Preparation & Intraoral Scan
Tooth preparation and intraoral scanning were completed for teeth 13 and 12.

2

Restoration Fabrication & Cast Verification
The monolithic zirconia fixed splint with a male attachment on distal 12 was fabricated and positioned on the cast to verify fit, contour, and attachment orientation before intraoral try-in.

3

Pick-Up Impression
One-step putty wash silicone impression taken to capture prepared teeth and surrounding tissues for removable denture fabrication.

4

Removable Denture Fabrication
Removable metal framework and acrylic teeth fabricated based on the silicone impression.

5

Hybrid Denture Insertion
The fixed splint on 13 and 12 integrates seamlessly with the removable denture featuring a thermosens clasp, achieving a natural and harmonious appearance.

Hybrid Denture on Upper and Lower Jaw with Curve of Spee and Curve of Monson Correction

Clinical case by Dr. Sandy Aditya Susilo, Indonesia

A 60-year-old female doctor presented with multiple endodontically treated teeth, an old fixed–fixed bridge from 23–27, and functional–esthetic concerns. She required full-arch rehabilitation for both jaws. Teeth 23, 25, and 27 showed periapical lesions, and the patient reported difficulty cleaning under the bridge and unpleasant odor during speech. Tooth 13 was discolored and requested for aesthetic correction. Clinical findings included a suprapositioned 25, inadequate interocclusal space on the lower left, and a rotated tooth interfering with the occlusal plane.
The patient refused implants and requested solitary zirconia crowns for selected teeth and removable hybrid dentures for missing areas to ensure easier cleaning and long-term stability. Both upper and lower arches required hybrid denture design with proper occlusal curve correction.

INDIRECT RESTORATIONS

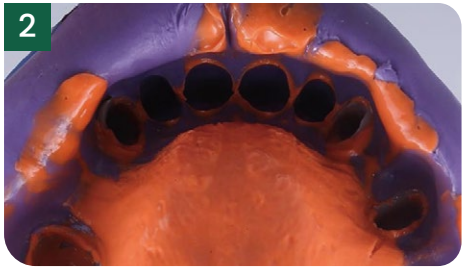
Hybrid Denture on Upper and Lower Jaw with Curve of Spee and Curve of Monson Correction

Clinical case by
Dr. Sandy Aditya Susilo, Indonesia

1

Clinical Stabilization
Root canal retreatment was performed on all infected teeth, followed by core reconstruction to provide sufficient stability before definitive prosthetics.

2



Upper Arch Preparation & Crowns
Prepare teeth 16, 13 | 23, 25, 27 for individual zirconia crowns. Take the first final impression (two step putty wash technique); after try-in, take a pickup impression to fabricate the upper hybrid denture metal framework.

3

Lower Arch Fixed Splint + Attachment
Prepare 45, 44 | 33, 34 for fixed splint with distal male attachments. First final impression; after try-in, take a pickup impression for the lower hybrid denture metal framework.

4

Insertion
Deliver upper and lower hybrid dentures with corrected Curve of Spee and Curve of Monson.

Preventive Dentistry & Caries Management

Fissure Sealants


Fissure Sealants →


Fissure Sealants →

DIRECT RESTORATIONS →

INDIRECT RESTORATIONS →

PREVENTIVE DENTISTRY & CARIES MANAGEMENT →

Pit and Fissure Sealant Application on Teeth #35, #36, and #37

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 27-year-old male patient attended the clinic for a routine check-up and scaling. Clinical examination revealed brown discolorations and deep fissures on the mandibular left molars (#35, #36, #37), placing the teeth at increased caries risk. To prevent pit and fissure caries, fissure sealant treatment was recommended.

The planned treatment involved complete cleaning of the occlusal surfaces, phosphoric acid etching of the enamel, and application of a flowable resin-based sealant designed for deep fissure penetration. The objective was to achieve an effective barrier against caries by ensuring strong enamel bonding and thorough sealing of the pits and fissures.

Surface conditioning was performed using P-Etchant Phosphoric Acid Etching Gel (HUGE Dental). The fissure sealant applied was Proseal F Enamel Coating Resin, a low-viscosity, pink-tinted resin that enhances visibility during placement and provides reliable penetration and sealing.

Initial situation

Final situation

PREVENTIVE DENTISTRY & CARIES MANAGEMENT

Pit and Fissure Sealant Application on Teeth #35, #36, and #37

Clinical case by
Dr. Cindy Annisa Melati, Indonesia

1

Tooth Preparation
The occlusal surfaces were polished with a brush and paste, followed by stain removal using a dental air polisher to ensure the fissures were completely clean.

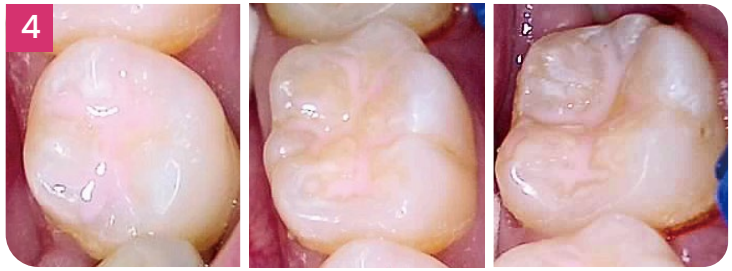
2

Etching
P-Etchant was applied for 30 seconds to condition the enamel.

3

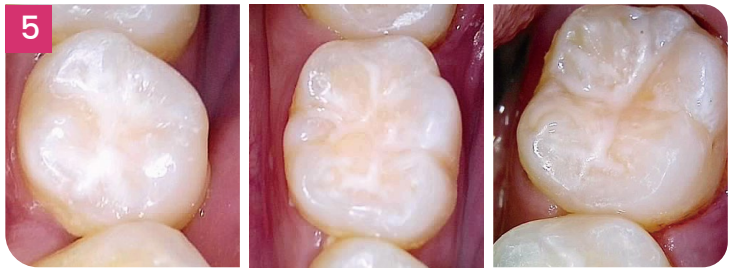
Post-etch Appearance
After rinsing and drying, the enamel surface appeared uniformly chalky white, indicating adequate etching for optimal resin bonding.

4



Sealant Application
Proseal F was applied over the etched fissures. Its low viscosity allowed deep penetration, and the pink color improved visibility. The material was gently spread to avoid bubbles, then light-cured for 15 seconds per tooth.

5



Occlusion & Polishing
Occlusion was checked; no high spots were detected. Final polishing was performed, ensuring a smooth sealed surface with no undercuts.

Pit and Fissure Sealant Application on Teeth #34, #35, #44, and #45

Clinical case by Dr. Cindy Annisa Melati, Indonesia

A 35-year-old male patient presented with complaints of cavities in both upper and lower posterior teeth, with sensitivity triggered by cold or sweet food and drinks. The patient is undergoing orthodontic treatment, and intraoral hygiene is fair. Clinical evaluation revealed deep pits and fissures on premolars #34, #35, #44, and #45, placing these teeth at high caries risk during orthodontic treatment. Fissure sealant therapy was recommended to protect susceptible surfaces and reduce hypersensitivity.

The plan included professional cleaning of the occlusal surfaces, enamel etching with phosphoric acid, and application of a flowable pink-tinted resin sealant for deep fissure penetration and visual control during placement.

Acid etching was performed with P-Etchant Phosphoric Acid Etching Gel (HUGE Dental). The fissure sealant used was Proseal F Enamel Coating Resin, chosen for its low viscosity, excellent flow, and color contrast.

Initial situation

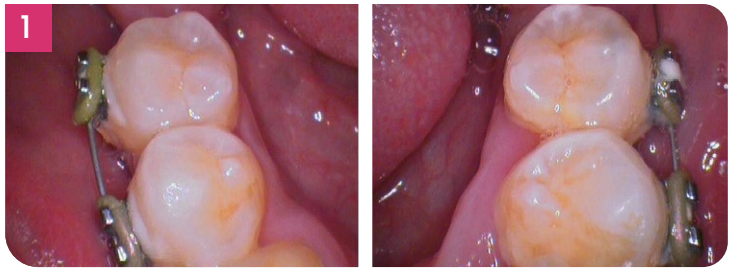
Final situation

PREVENTIVE DENTISTRY & CARIES MANAGEMENT

Pit and Fissure Sealant Application on Teeth #34, #35, #44, and #45

Clinical case by
Dr. Cindy Annisa Melati, Indonesia

1



Tooth Preparation
The occlusal surfaces were polished using a brush and polishing paste. Additional stain removal was performed with a dental air polisher to ensure the pits and fissures were thoroughly clean.

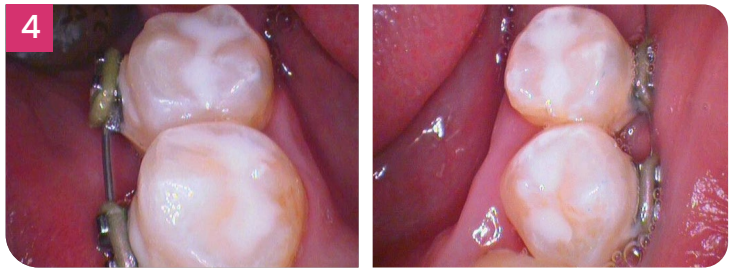
2

Etching
P-Etchant was applied for 30 seconds with good handling control. After rinsing and drying, the enamel showed a uniform chalky-white appearance, indicating proper etching for resin bonding.

3

Sealant Application
Proseal F was applied into the etched fissures. Its low viscosity allowed deep penetration, while the pink color enhanced visual control. The material was spread evenly using a composite instrument to avoid bubbles and undercuts, then light-cured for 15 seconds per tooth.

4



Occlusion & Polishing
After confirming there were no occlusal interferences, final polishing was performed using a composite polisher to smooth the sealant surface. A final check ensured there were no undercuts.

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