



Conventional (analog) implant impressions are still a daily reality in many practices and labs. When the steps are followed carefully, analog workflows can deliver predictable, passive-fitting implant restorations. This guide breaks down the typical step-by-step process, with practical tips to reduce remakes and chair time.

STEPS IN CONVENTIONAL DENTAL IMPLANT IMPRESSIONS



NovoLase
Light Inspired!

**The Most Advanced
& Affordable
Dual Wavelength!**

New Generation of
**DUO - 10.2 watts in
Combo Coherence™**

Presenting

DUO 2.0

980 + 650

3 Years Warranty
on Laser Console

Starts @ 2,75,000*



* Without Docking Station

UNIT OF NOVOLASE FOUNDATION
New Hampshire, USA

novolase.us / novolase.in



Scan the QR code or
send us a "Hi" on WhatsApp
to know more.

+91 84318 16572



Rehabilitation of Unfavorable Prosthetic Contours in an **Orthodontic Relapse Case**



Esthetic and functional rehabilitation of anterior teeth becomes challenging when previous restorations present with unfavorable contours & compromised biological dimensions. This case involved an orthodontic relapse patient with existing prostheses in relation to 12, 11, 21, & 22 with unfavorable Contd... (Page 2)

Orthodontic Management of Severe Crowding with Buccally Erupted Canines & Unilateral Posterior Crossbite: **A Clinical Case Report**



A 14-year-old patient presented with a chief complaint of irregularly arranged teeth affecting aesthetics & self-confidence. Clinical examination revealed Angle's Class I malocclusion with severe crowding in both maxillary and mandibular arches. Contd... (Page 3)

Remember to stay tuned for more exciting articles on Dentistry and Beyond Dentistry!

BEFORE YOU START:
what you're trying to capture

An implant impression is not just a copy of soft tissue. It must accurately transfer the 3D position and rotational orientation of the implant (or multi-unit abutment) from the mouth to a working cast.

That means you're aiming to record:

- Implant platform position (x, y, z)
- Implant angulation
- Rotational indexing (for anti-rotational connections)
- Emergence profile and peri-implant soft tissue contours (when needed)

Step 1: confirm the prosthetic plan and components

Before placing any impression coping, verify the prosthetic "target."

What to confirm chairside

- Restorative type: screw-retained vs cement-retained
- Level: implant-level vs abutment-level impression
- Tissue status: healed vs immediate vs provisionalized
- Platform/connection system and diameter
- Coping type: open-tray (pick-up) vs closed-tray (transfer)

Tip: If the case uses multi-unit abutments, you'll usually impress at the multi-unit i.e at the abutment level (not the implant level). That changes which copings and screws you need.

Step 2: select the impression technique (open-tray vs closed-tray)

Both methods are used in analog implant dentistry. The choice depends on access, implant number, angulation, and your accuracy needs.

Scenario	Common choice	Why
Single implant, good access	Closed-tray	Faster, simpler
Multiple implants	Open-tray + splint	More predictable transfer
Significant angulation	Open-tray	Reduced coping displacement risk
Limited mouth opening or posterior access	Closed-tray	Easier tray placement
High accuracy demand (full arch)	Open-tray + splint	Better stability

Before making the impression, gently evaluate the peri-implant tissue:

- Remove provisional restoration if present
- Clear excess cement (if any), plaque, or debris
- Rinse and dry around the platform
- Ensure hemostasis (bleeding can distort material flow and seating)
- If the tissue is thick or mobile, consider whether you need a customized impression coping to capture emergence profile (more on that below).



WHAT IF YOUR FIRST MISTAKE DIDN'T
HAVE TO BE ON A PATIENT?

Harnessing next-generation technology to help dentists practice, repeat, refine and excel - in a safe, controlled environment.

Technology. Precision. Muscle Memory. Confidence.

The way dentistry is learned is evolving.

Are you ready?

Experience the future of Dental Simulation

READY TO MASTER

- IMPLANTOLOGY
- AESTHETIC DENTISTRY

+91 7353335814
+91 8595926808
bd@gsurgicalinstitute.com



Step 3: seat the impression coping correctly

This is one of the most critical steps.

Best-practice seating checklist

1. Place the coping and hand-tighten the coping screw.
2. Confirm full seating (no rocking).

3. Verify orientation (indexed connections must be aligned).

4. Take a periapical radiograph if seating is uncertain, especially subgingivally.

Scan to readmore



Rehabilitation of Unfavorable Prosthetic
Contours in an Orthodontic Relapse Case

Esthetic and functional rehabilitation of anterior teeth becomes challenging when previous restorations present with unfavorable contours and compromised biological dimensions. This case involved an orthodontic relapse patient with existing prostheses in relation to 12, 11, 21, and 22 with unfavorable contours and excessive tooth reduction, requiring a multidisciplinary restorative approach. This includes integrating periodontal surgery and digital prosthodontics.

First Appointment: Diagnosis and Treatment Planning

The patient presented with unfavorable prosthetic contours in relation to 12, 11, 21, and 22. An attempt was made to remove the existing crowns using a back-action crown remover. Following crown removal, short clinical crowns with excessive tooth reduction became evident in relation to all four anterior teeth.

Clinical evaluation revealed compromised retention and esthetics due to inadequate preparation design. Tooth 11 had previously undergone post and core restoration and was retained for rehabilitation.

Diagnostic impressions were made using alginate, and a diagnostic wax-up was performed for 12, 11, 21, and 22 to establish ideal esthetic proportions, emergence profile, and functional contours. The waxed-up cast was then duplicated to facilitate provisional restoration fabrication. Using the duplicated definitive cast, PMMA temporaries were fabricated indirectly to serve as provisional restorations during the treatment phase.

Second Appointment: Crown Lengthening and Final Impression

To improve restorative prognosis, true crown lengthening was performed for all short clinical crowns to increase clinical

crown height and establish favorable preparation geometry.

Following periodontal healing and re-evaluation, tooth preparations were refined into favorable definitive preparations with adequate retention and resistance form.

Retraction cords were placed to achieve proper soft tissue displacement, and a final impression was made using elastomeric impression material to accurately capture preparation margins & surrounding tissues.

Digital Workflow & Prosthesis Fabrication

The duplicated diagnostic cast and the final elastomeric impression were digitally scanned. Both digital files were superimposed to merge the planned esthetic contours from the diagnostic phase with the definitive preparation design.

Using Exocad software, the final prosthetic contours were designed digitally, ensuring improved emergence profile, esthetics, and harmony with surrounding dentition.

Based on the finalized digital design, PMMA milled temporaries were fabricated and clinically tried to verify esthetics, phonetics, marginal adaptation, and patient acceptance.

Definitive Restoration and Outcome

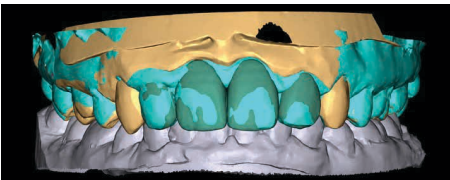
After successful evaluation of the provisional phase, the definitive monolithic zirconia prosthesis was fabricated.

The final restorations were luted using resin cement to achieve durable adhesion and optimal esthetics.

This multidisciplinary approach combining periodontal crown lengthening, conventional impression techniques, digital superimposition, CAD design, and monolithic zirconia rehabilitation resulted in improved crown proportions, favorable contours, enhanced esthetics, and long-term restorative predictability.



Pre-operative clinical image



Superimposition scan file of diagnostic temp impression.



Diagnostic wax-up duplication cast.



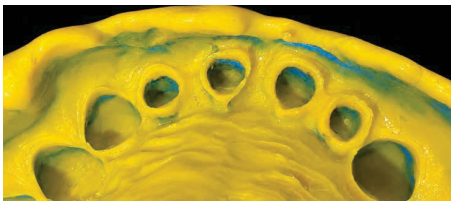
Milled temporary restoration



Crown preparation refined irt 12, 11, 21, 22 (occlusal view)



Crown preparation refined irt 12, 11, 22 (labial view)



Putty impression taken using retraction cords placement



Shade matching for the permanent crown



Final look of permanent crowns



Permanent crown luted irt 12, 11, 21, 22



Dr. Keerthi Vasan, MDS
Assistant Professor

Tagore Dental College & Hospital, Chennai
Proprietor - Vasan'32 Pearl Care, Chennai

Dr. Keerthi Vasan is a **Prosthodontist and Implantologist** with **5 years of academic and clinical experience**. With expertise in prosthetic rehabilitation and implant dentistry, he is dedicated to delivering evidence-based patient care.

Orthodontic Management of Severe Crowding with Buccally Erupted Canines & Unilateral Posterior Crossbite: A Clinical Case Report

PRE OPERATIVE



Maxillary pre op occlusal view

Abstract: A 14-year-old patient presented with a chief complaint of irregularly arranged teeth affecting aesthetics & self-confidence. Clinical examination revealed Angle's Class I malocclusion with severe crowding in both maxillary and mandibular arches. The maxillary and mandibular canines (13, 23, 33, & 43) were buccally erupted, while tooth 12 was palatally positioned. A unilateral posterior crossbite involving tooth 35 was present. Additional findings included generalized calculus and extrinsic stains, buccal pit caries in 36 and 46, proximal caries in 25, a linguo-occlusal carious lesion in 46, and a previously restored 36. Comprehensive treatment commenced with oral prophylaxis, oral hygiene reinforcement, and restorative management of carious lesions. Orthodontic treatment was carried out using fixed pre-adjusted edgewise appliances in a non-extraction approach. Sequential alignment & leveling, correction of displaced teeth, & crossbite correction were achieved through phase-wise mechanotherapy. Treatment resulted in complete resolution of crowding, alignment of ectopically erupted teeth, establishment of functional occlusion, & significant improvement in smile aesthetics. Fixed lingual retainers were provided to maintain treatment stability.

Introduction: Dental crowding is one of the most frequently encountered malocclusions in orthodontic practice. Severe crowding may result in ectopic eruption, compromised aesthetics, difficulties in maintaining oral hygiene, increased plaque accumulation, & a higher risk of caries & periodontal disease.

POST OPERATIVE



Mandibular pre op occlusal view

Buccally erupted canines & palatally displaced incisors further complicate treatment due to the associated arch length discrepancy & biomechanical challenges. Early orthodontic intervention during adolescence can effectively improve dental alignment, occlusal function, and facial aesthetics. This case report describes the successful non-extraction management of severe crowding associated with buccally erupted canines, a palatally positioned lateral incisor, and unilateral posterior crossbite.

Case Presentation: Patient Details

- Age: 14 years
- Chief Complaint: Irregularly arranged teeth and poor smile aesthetics

Clinical Findings

Extraoral Examination

- Facial symmetry – Gross facial symmetry noted
- Competent lips at rest
- Straight facial profile

Intraoral Examination

- Angle's Class I molar relationship
- Severe crowding in maxillary and mandibular arches
- Buccally erupted canines: 13, 23, 33, & 43
- Palatally positioned maxillary right lateral incisor (12)
- Crossbite involving tooth 35
- Compromised arch form and alignment
- Generalized calculus deposits and extrinsic stains
- Buccal pit caries in 36 and 46
- Proximal caries in 25

- Linguo-occlusal carious lesion in 46
- Previously restored 36

Diagnostic Workup

A comprehensive diagnostic assessment was performed, including:

- Clinical examination
- Intraoral and extraoral photographs
- Orthopantomogram (OPG)
- Lateral cephalometric radiograph
- Study models and space analysis

The diagnostic records confirmed significant arch length discrepancy with severe crowding, ectopic eruption of canines, palatal displacement of tooth 12, & unilateral posterior crossbite.

Treatment Objectives

- Improve oral hygiene and eliminate active disease
- Relieve maxillary & mandibular crowding
- Align buccally erupted canines
- Correct the position of palatally displaced tooth 12
- Correct posterior crossbite involving tooth 35
- Establish ideal overjet and overbite
- Achieve functional and stable occlusion
- Improve smile aesthetics and patient confidence
- Maintain long-term treatment stability

Treatment Plan

Phase I: Preventive & Restorative Treatment

- Oral prophylaxis with scaling & polishing
- Oral hygiene instructions and motivation
- Restoration of carious lesions in 25 & 46
- Evaluation and maintenance of the restoration in 36

Phase II: Orthodontic Treatment

- Fixed orthodontic treatment using pre-adjusted edgewise appliances
- Sequential alignment and leveling using nickel-titanium archwires
- Arch development and coordination
- Alignment of buccally erupted canines
- Alignment of palatally positioned tooth 12
- Correction of posterior crossbite involving tooth 35
- Finishing and detailing of occlusion

Treatment Progress

Phase 1: Alignment and Leveling

- Initial bonding of both arches
- Alignment initiated using light nickel-titanium archwires
- Progressive correction of rotations and displacement
- Improvement in arch form and leveling

Phase 2: Correction of Tooth Displacement

- Gradual alignment of buccally erupted canines into the arch
- Correction of palatal displacement of tooth 12

- Continued arch coordination and leveling
- Space redistribution & arch development

Phase 3: Crossbite Correction & Finishing

- Correction of posterior crossbite involving 35
- Establishment of proper overjet & overbite
- Finishing and detailing using rectangular archwires
- Achievement of optimal intercuspation

Results (Post-Treatment)

Intraoral Outcomes

- Complete resolution of crowding
- Successful alignment of 13, 23, 33, & 43
- Correction of palatally displaced 12
- Correction of posterior crossbite
- Improved arch form and symmetry
- Ideal alignment and leveling

- Functional Class I occlusion with satisfactory intercuspation

Oral Health Outcomes

- Improved oral hygiene status
- Reduction in calculus accumulation
- Elimination of active carious lesions
- Improved periodontal health

Extraoral Outcomes

- Enhanced smile aesthetics
- Improved dental appearance
- Increased patient confidence and satisfaction

Retention

To maintain the achieved treatment results:

- Fixed bonded lingual retainers were placed
- Oral hygiene instructions were reinforced
- Regular follow-up visits were scheduled
- Long-term retention protocol was explained to the patient

Discussion

The management of severe crowding associated with ectopically erupted teeth requires meticulous diagnosis and careful biomechanical planning. In the present case, multiple buccally erupted canines, a palatally displaced lateral incisor, and a posterior crossbite presented significant orthodontic challenges. Treatment was preceded by preventive and restorative care to establish a healthy oral environment. A non-extraction treatment approach was selected and successfully executed using fixed orthodontic mechanotherapy. Sequential alignment and arch development allowed correction of crowding and displacement while maintaining a favorable occlusal relationship. Correction of the posterior crossbite further contributed to functional occlusal stability. The successful outcome emphasizes the importance of individualized treatment planning and interdisciplinary management in complex orthodontic cases.

Conclusion

This case demonstrates the successful non-extraction management of Angle's Class I malocclusion with severe crowding, buccally erupted canines, a palatally positioned lateral incisor, & unilateral posterior crossbite in a 14-year-old patient. Comprehensive preventive, restorative, & orthodontic treatment resulted in excellent alignment, improved oral health, functional occlusion, & enhanced smile aesthetics. Careful diagnosis, systematic mechanotherapy, and appropriate retention contributed to a stable and satisfactory treatment outcome.



Dr. Tushar Khanna
General Dental Surgeon
Gold Medalist, Panjab University
Former Dental Surgeon at Gharuan Multi-Specialty Hospital

Chief Dentist at Dr. Khanna's Dental Studio

Dr. Tushar Khanna is a dedicated General Dental Surgeon with extensive experience in comprehensive dental care. He has clinical expertise in orthodontic treatment planning and management, rotary root canal treatment (RCT), restorative dentistry, aesthetic dental procedures, and preventive oral healthcare. He is committed to delivering evidence-based, patient-centered treatment with a focus on functional rehabilitation, long-term oral health, and creating confident smiles.

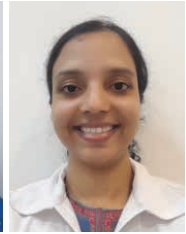


CROSSWORD PUZZLE WINNERS

Congratulations to our winners!



Dr. Rajashree V Desai



Dr. Neha Singh



Dr. Srikrishna Kamath

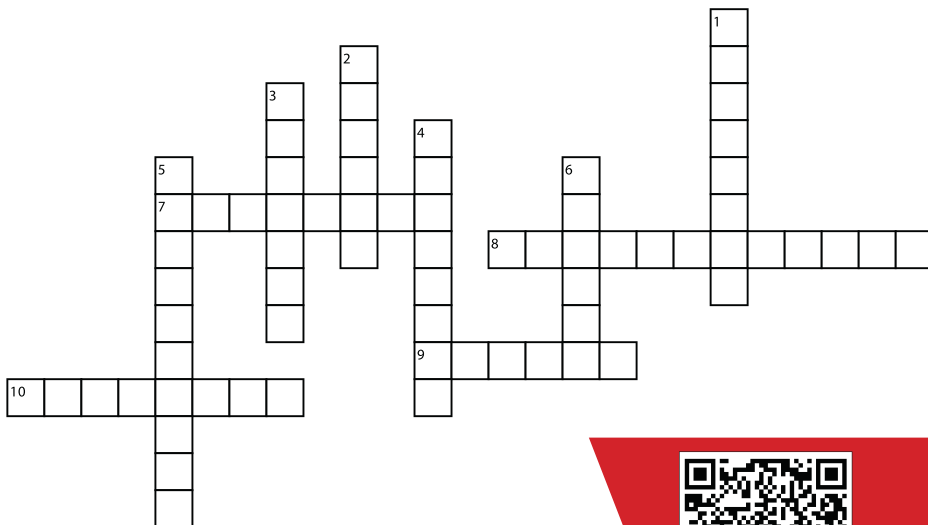


Dr. Manoj Gandhi



Dr. Suraj Sonawane

DENTAL CROSSWORD



Across

7. Attraction between unlike molecules contributing to denture retention.
8. Non-rigid connector commonly indicated adjacent to a pier abutment.
9. Procedure performed to improve the fit of an existing denture.
10. Instrument used to determine the path of insertion of a removable partial denture.

Down

1. Attraction between like molecules contributing to denture retention.
2. Artificial tooth replacing a missing natural tooth in a fixed dental prosthesis.
3. Instrument used to transfer the spatial relationship of the maxilla to an articulator.
4. Pontic design with no tissue contact.
5. Fixed dental prosthesis supported only at one end.
6. Proposed the spherical theory of occlusion.



Scan the QR code to Submit your answers

FIND THE RESTORATION CHALLENGE



1



2



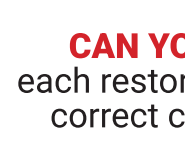
3



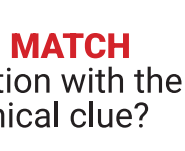
4



10



8



7



5



9



8



7



6

CAN YOU MATCH each restoration with the correct clinical clue?

Look at the 10 images and comment your answers (1-10)!

- A. Used for endodontically treated teeth without post and core _____
- B. Ideal for minimal caries to restore anatomical contour _____
- C. Best for extensive caries involving the marginal wall _____
- D. Tooth-coloured option for large cavities with extensive tooth structure loss _____
- E. Preferred for extensive posterior caries where crown height is minimal and esthetics are less important _____
- F. Chosen for extensive restoration with esthetics at an economical price _____
- G. Commonly used for anterior smile correction _____
- H. Used to replace a single missing tooth without involving adjacent teeth _____
- I. Replace single missing tooth but with adjacent support _____
- J. Replace single missing with a little help of the adjacent tooth. _____



COMPETITION WINNERS

Clinical Discussion Contest Winners



Dr. Mirudhula



Dr. Shweta Sonkusle Mishra



Dr. Tanya Bansal Dongre

Freshclor⁺

For
**PRE & POST
PROCEDURAL
CARE**



SHY-NM

Calcium Sodium Phosphate (3%)
Toothpaste

Shield against
Sensitivity



DentalReach | Making sense of dentistry.

Dr. Rockson Samuel
Community Leader, DentalReach

Dr. Nupur Shirao
Editor-in-Chief, DentalReach

Dr. Zainab Rangwala
Media & PR Head, DentalReach

Dr. Lakshmi Barathi
Coordinator, GroupPharmaceuticals



Like us? Scan this.

DentalReach is a forum 'Of the Dentists, By the Dentists, For the Dentists.' We would like to know from you how you like this edition. Please scan the code and share your feedback. Thanks a ton for keeping us motivated!