



# Coronally Advanced Flap Alone to Manage Multiple Adjacent Combination Recession RT1 & RT2 in the Esthetic Zone, 1-year Clinical Follow-up

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## INTRODUCTION

There are different techniques to treat gingival recession and gain root coverage. Coronally advanced flap alone is a well-established approach to treat gingival recession. Maintaining the integrity of the blood supply to great extent and lack of scarring, tunnel approach has become a favorable approach among periodontal plastic surgery techniques. With adequate band of keratinized gingiva and tissue thickness, coronally advanced flap alone can yield predictable results if the treatment guidelines are applied.

The aim of this case report is to share a step-by-step treatment of multiple adjacent RT1 & RT2 recession in the esthetic zone.

## MATERIALS & METHODS

### CLINICAL PRESENTATION:

A 34- year-old male presented with chief complaint (CC) " I mostly have sensitivity on my upper right." Periodontal evaluation showed pocket depths < 3mm, (+) recession (1-2mm) on teeth # 7,8,9, thick gingival phenotype, a sufficient band of keratinized gingiva, and fair oral hygiene. Generalized erosion with clinical signs of bruxism present. Root coverage was needed prior to restorative treatment.

### DIAGNOSIS:

- Mucogingival deformities and conditions around teeth
  1. Gingival/soft tissue recession
    - a. Facial or lingual surfaces

## MATERIALS & METHODS CONT'D

### SURGICAL INTERVENTION:

Coronally advanced flap alone using tunnel was used to correct the gingival recession on facial surfaces of the affected teeth. 4-0 PTFE sutures were used to coronally advance the flap. Patient was prescribed Amoxicillin 500mg TID for 7 days, Ibuprofen 600mg PRN pain, and Chlorhexidine 0.12% BID for 2 weeks. Healing was uneventful during follow-up visits.

In this study, root coverage was achieved with a CAF alone using tunnel technique. Clinical analysis was performed at 1-year follow-up.

## RESULTS

Patient experienced uneventful healing after the coronally advanced flap. Complete root coverage was achieved and remained clinically stable up to one year post coronally advanced flap alone using tunnel approach.

## DISCUSSION

In this case report a favorable clinical and patient-centered outcome was achieved and maintained utilizing CAF alone with tunnel technique.



Fig 1 Initial presentation

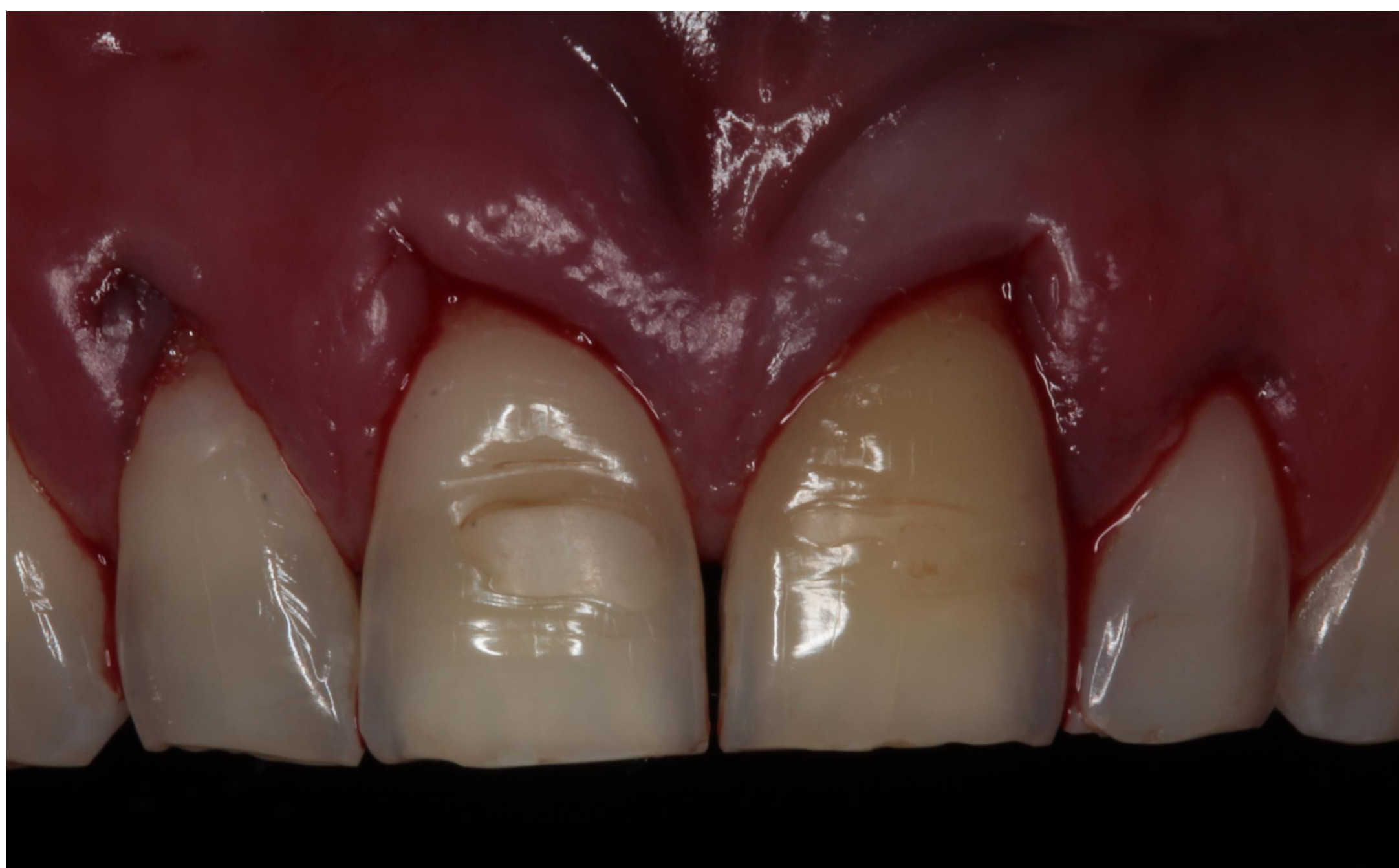


Fig 2 Full release of the mucosa



Fig 3 Immediate closure



Fig 4 2-week post operative visit



Fig 5 6-month post operative visit



Fig 6 1-year post operative visit





# Coronally Advanced Flap to Manage Recession RT2 in the Esthetic Zone in a High-Risk Patient (Smoker/Bruxer), 1-year Clinical Follow-up

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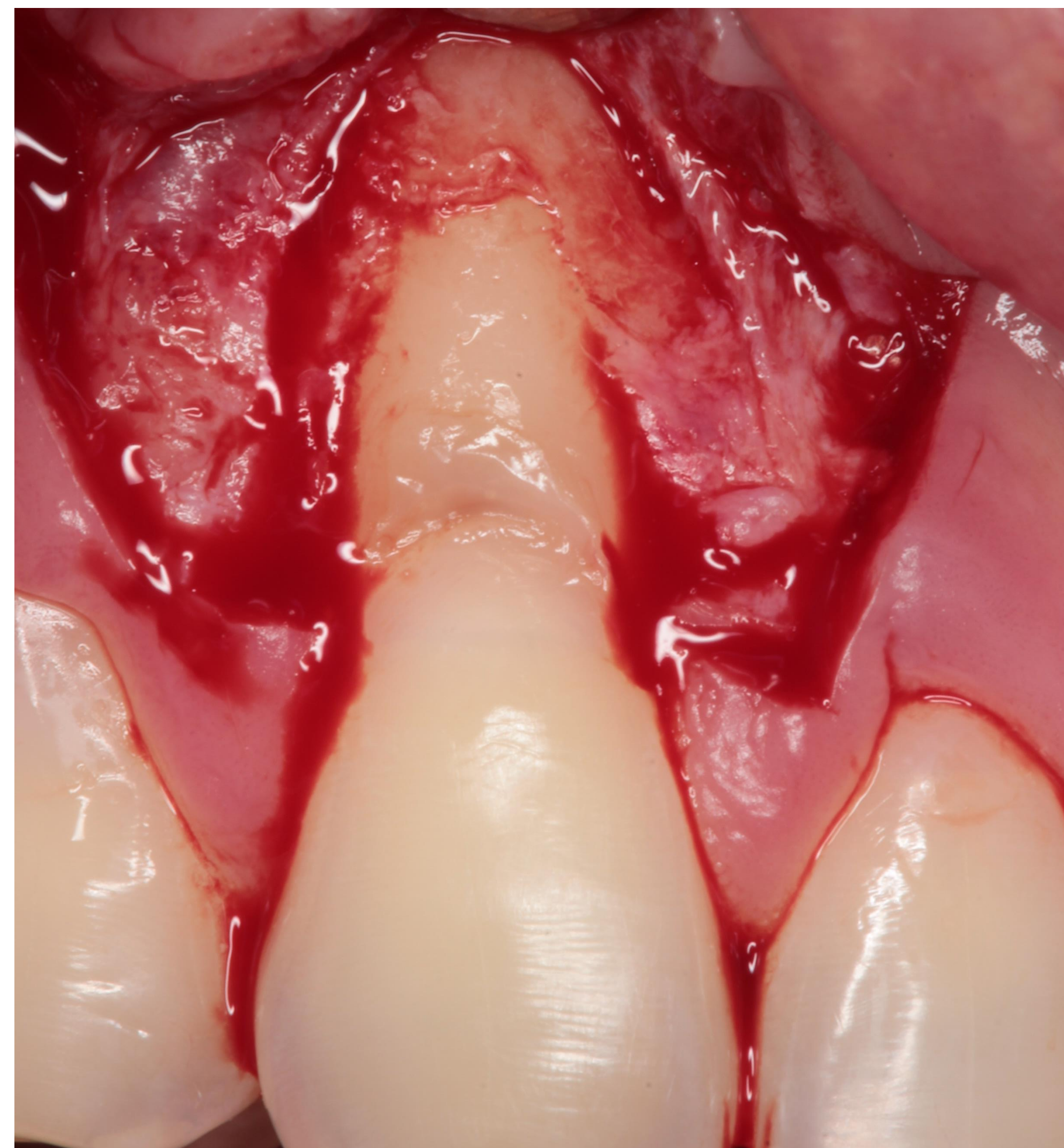
## INTRODUCTION

Periodontal plastic surgery and root coverage procedures are well established and scientifically proven. With the advancement of periodontal plastic surgical techniques, the scope of procedures has expanded, and outcomes can be predictable, if treatment guidelines are followed. However, the results can be less than optimal in high-risk patients. Smoking is considered a significant risk factor and can compromise the predictability and success of the procedure. Bruxism is a parafunctional habit that may have a negative influence on healing as well. Few studies with long term follow-up exist in this regard.

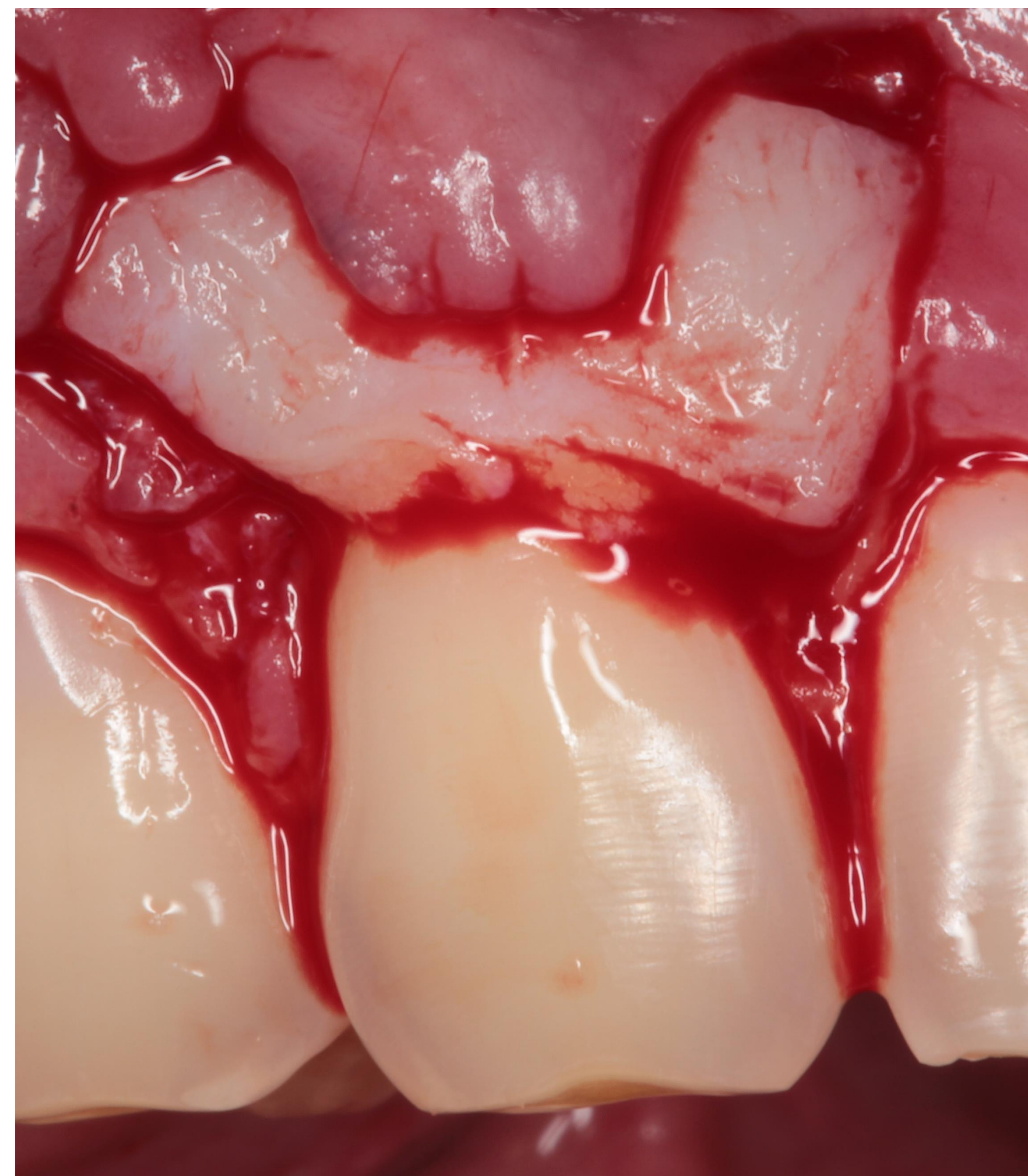
The aim of this case report is to share a step-by-step treatment of RT2 recession in the esthetic zone in a high-risk patient.



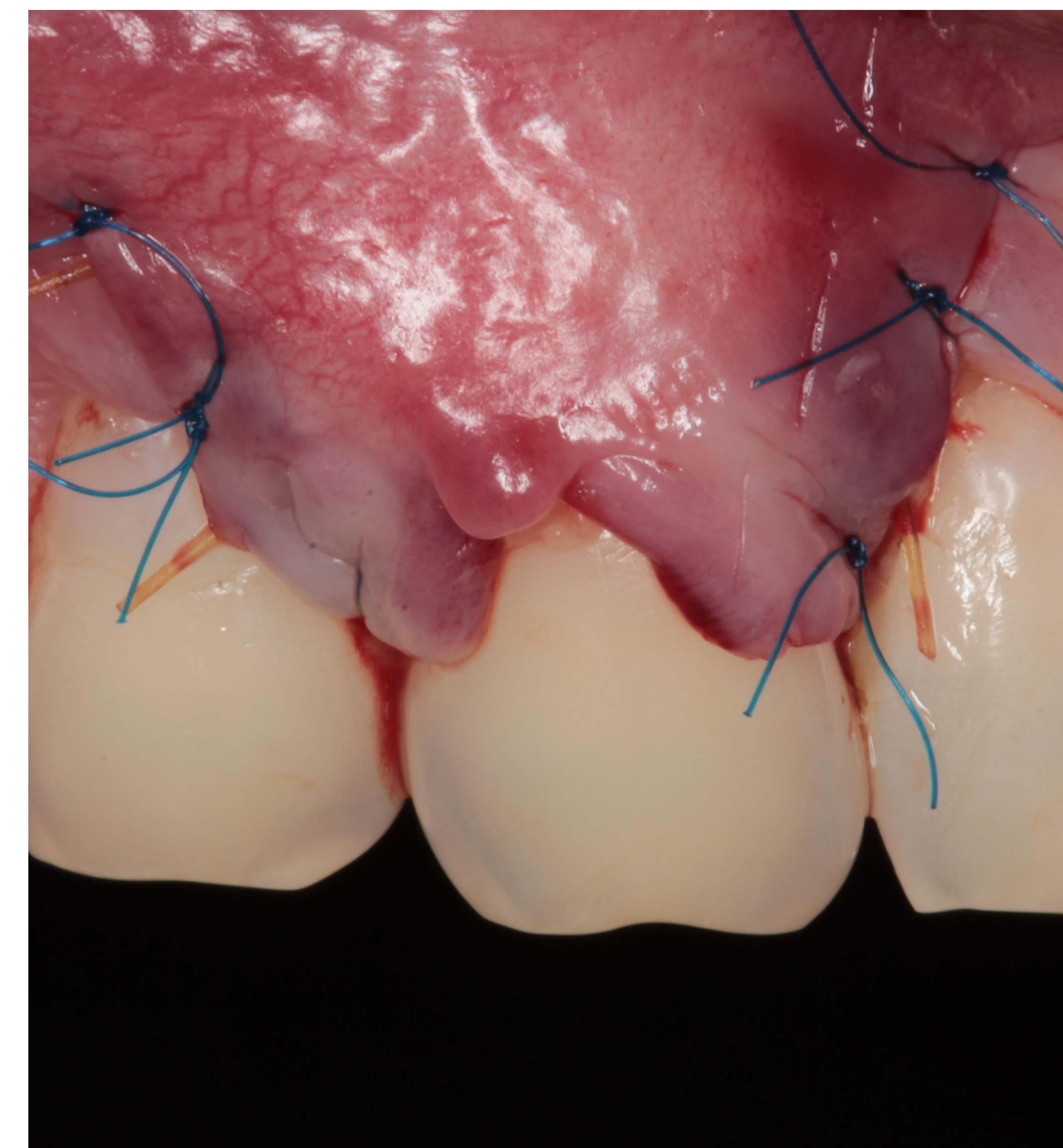
**Fig 1** Initial presentation



**Fig 2** Split thickness flap with releasing incisions



**Fig 3** Placement of CTG over defect



**Fig 4** Immediate closure



**Fig 5** 1- year post operative visit

## METHODS

### CLINICAL PRESENTATION:

A 34- year-old male presented to Graduate Periodontology & Implantology department. Patient's chief complaint was mild sensitivity and "I don't like how this tooth (patient points to #6) looks". Clinical exam reveals previously placed class V composite restoration on #6, notching and no clear demarcation of the CEJ. When these challenges are present the result can be less than optimal. The treatment option presented to the patient was a coronally advanced flap with an autogenous connective tissue graft. In this study, an initial surgery surgery with connective tissue graft via tunnel technique was performed and secondarily a coronally advanced flap with connective tissue graft.

Clinical analysis was performed at 1- year follow-up.

## RESULTS/DISCUSSION

4mm of root coverage was achieved following the initial surgery. Complete root coverage was achieved ten months following the secondary of coronally advanced flap with connective tissue graft.

In this case report a favorable clinical and patient-centered outcome was achieved and maintained in a high-risk patient profile utilizing a combination of bilaminar surgical techniques.





# Single Tooth Replacement in the Severely Compromised Site in the Esthetic Zone, 1-year Clinical and Radiographic Follow-up

Regina Vayner, DMD, MS, MPH

## Introduction

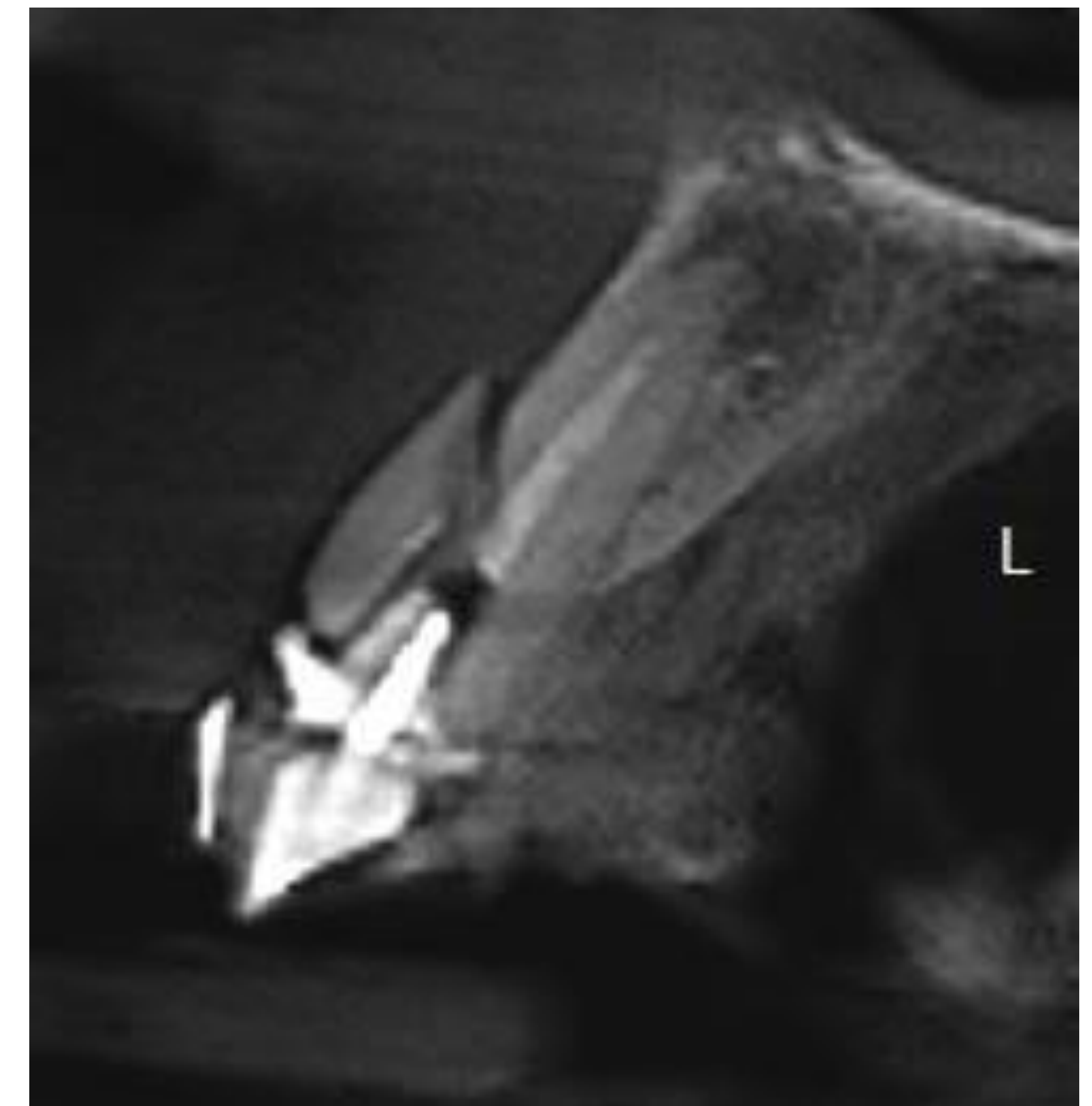
- Implant therapy is a proven and well-established treatment option for restoring the partially and completely edentulous individual. The transition to single tooth replacement brings along with it a set of esthetic demands and soft and hard tissue challenges. Several factors must be carefully evaluated preoperatively including site-specific, patient expectations, dental history and identifying potential obstacles in the achievement of an optimal aesthetic result. Early implant placement has been proposed as an option for the replacement of failing tooth.
- The aim of this case report is to share a step-by-step treatment of early implant placement in the severely compromised site.



Initial presentation- Facial view



Initial presentation- Occlusal view



CBCT cross-section shows root and buccal bone fracture/PAR

## Materials & Methods

### CLINICAL PRESENTATION:

- A partially edentulous, 57- year-old female presented with non restorable maxillary left lateral incisor.

### RADIOGRAPHIC PRESENTATION:

- CBCT analysis revealed a vertical root fracture, lack of buccal plate, attachment loss of the adjacent teeth, and periapical radiolucency.

### DIAGNOSIS:

- #10 Vertical root fracture, non-restorable

### SURGICAL INTERVENTION:

- Early implant placement protocol was followed as described by Buser et al. After tooth extraction and soft tissue closure in 6 weeks, a mid-crestal incision was performed and extended in a sulcular fashion to the adjacent teeth mesially and distally in order to elevate a full thickness facial flap from #'s 8-11. All granulation tissue was removed from the extraction site and the flap was elevated apically to adequately expose the bony defect. Straumann bone level taper kit was used to initiate osteotomy according to manufacturer instructions. A single bone level tapered implant (3.3 x 12 mm) was placed. An initial layer of autogenous bone was placed against the exposed implant surface at the coronal part then a mix of autogenous and xenograft was placed secondarily to ensure buccal contour augmentation. A double collagen membrane technique was used with the initial layer laid across horizontally and a second membrane in a vertical fashion and tucked into the palatal aspect. Cover screw was placed, and tension-free primary closure was achieved. Patient was prescribed Amoxicillin 500mg TID for 7 days, Ibuprofen 600mg PRN pain, and Chlorhexidine 0.12% BID for 2 weeks. Healing was uneventful during follow-up visits.





# Single Tooth Replacement in the Severely Compromised Site in the Esthetic Zone, 1-year Clinical and Radiographic Follow-up

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## Materials & Methods Cont'd

- Second-stage surgery was performed after 4 months of healing. Implant #10 was uncovered and ISQ reading of 73 was obtained. At 2-weeks post uncovering a provisional crown was delivered to help manage the subcritical and critical contours.



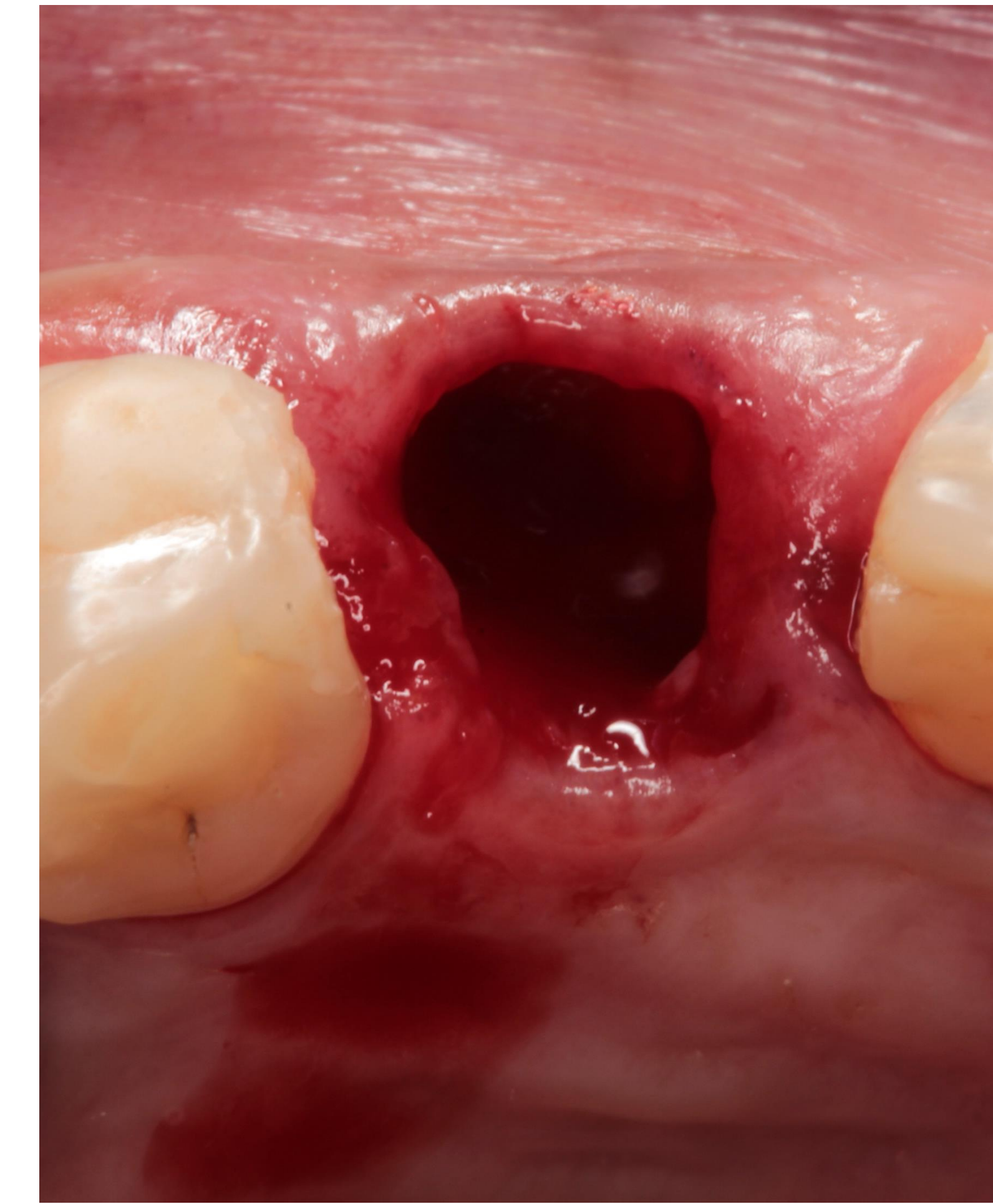
Day of extraction- Occlusal view



Day of extraction- Facial view



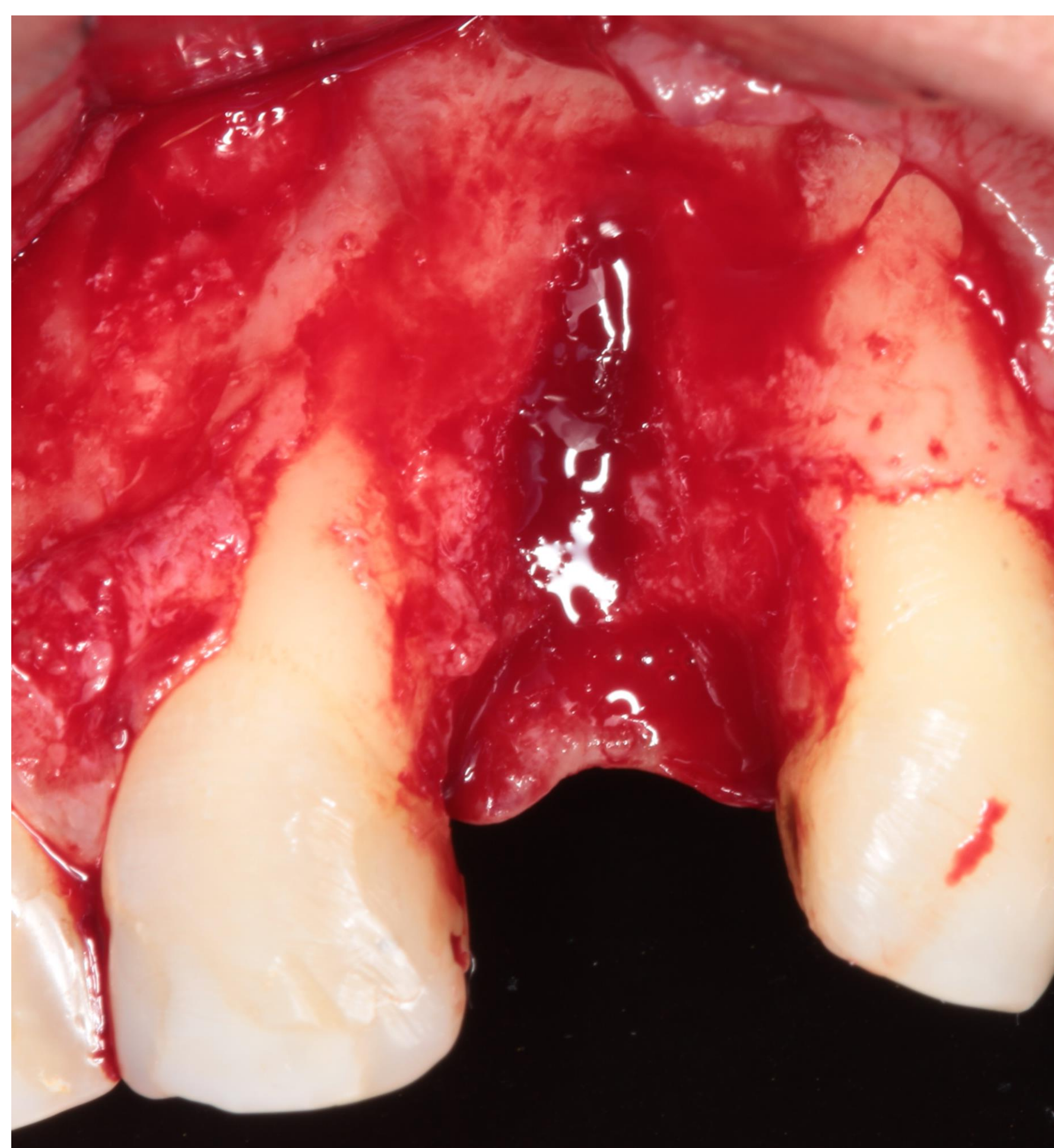
Extraction of #10



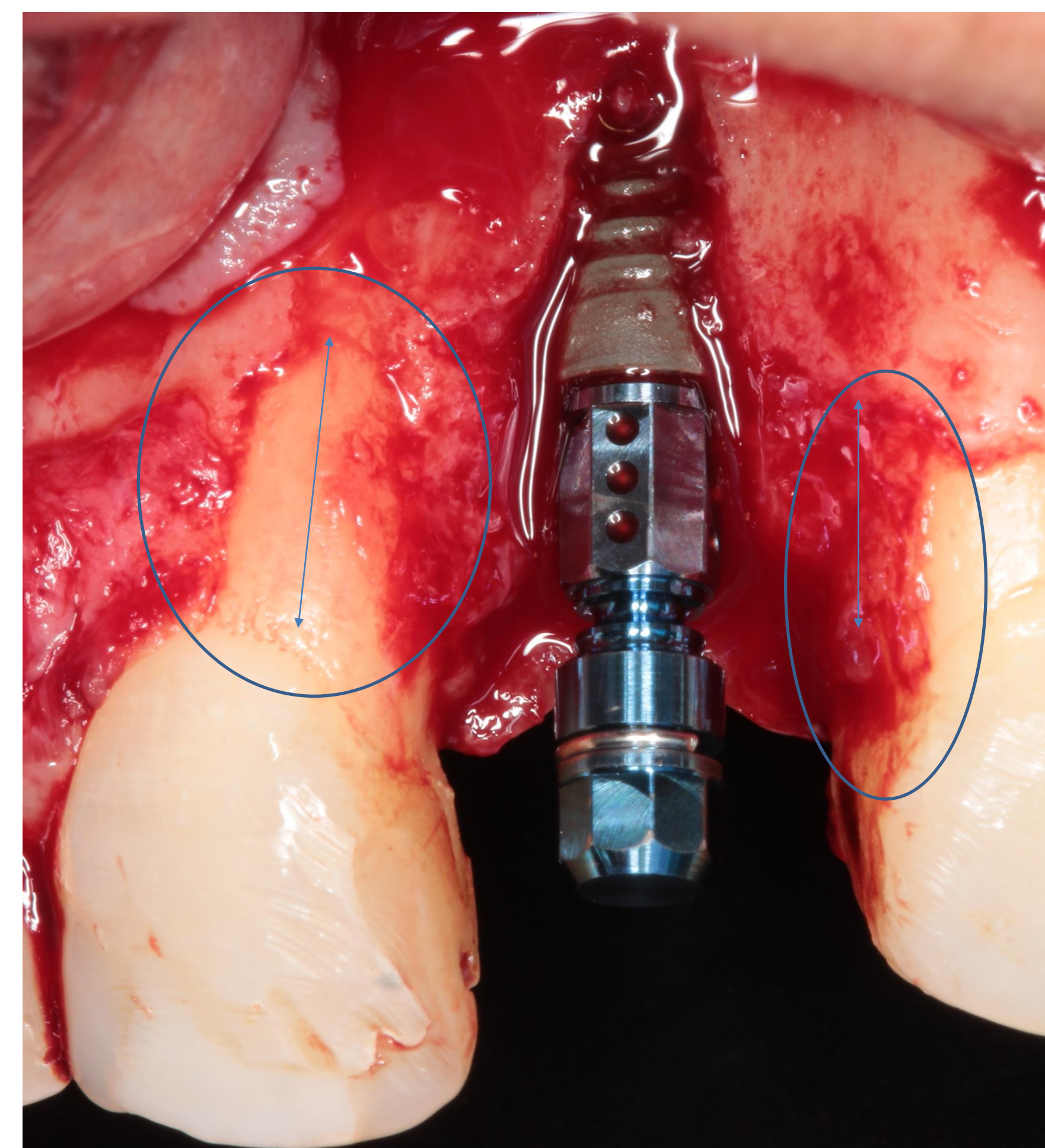
Occlusal view of extraction socket



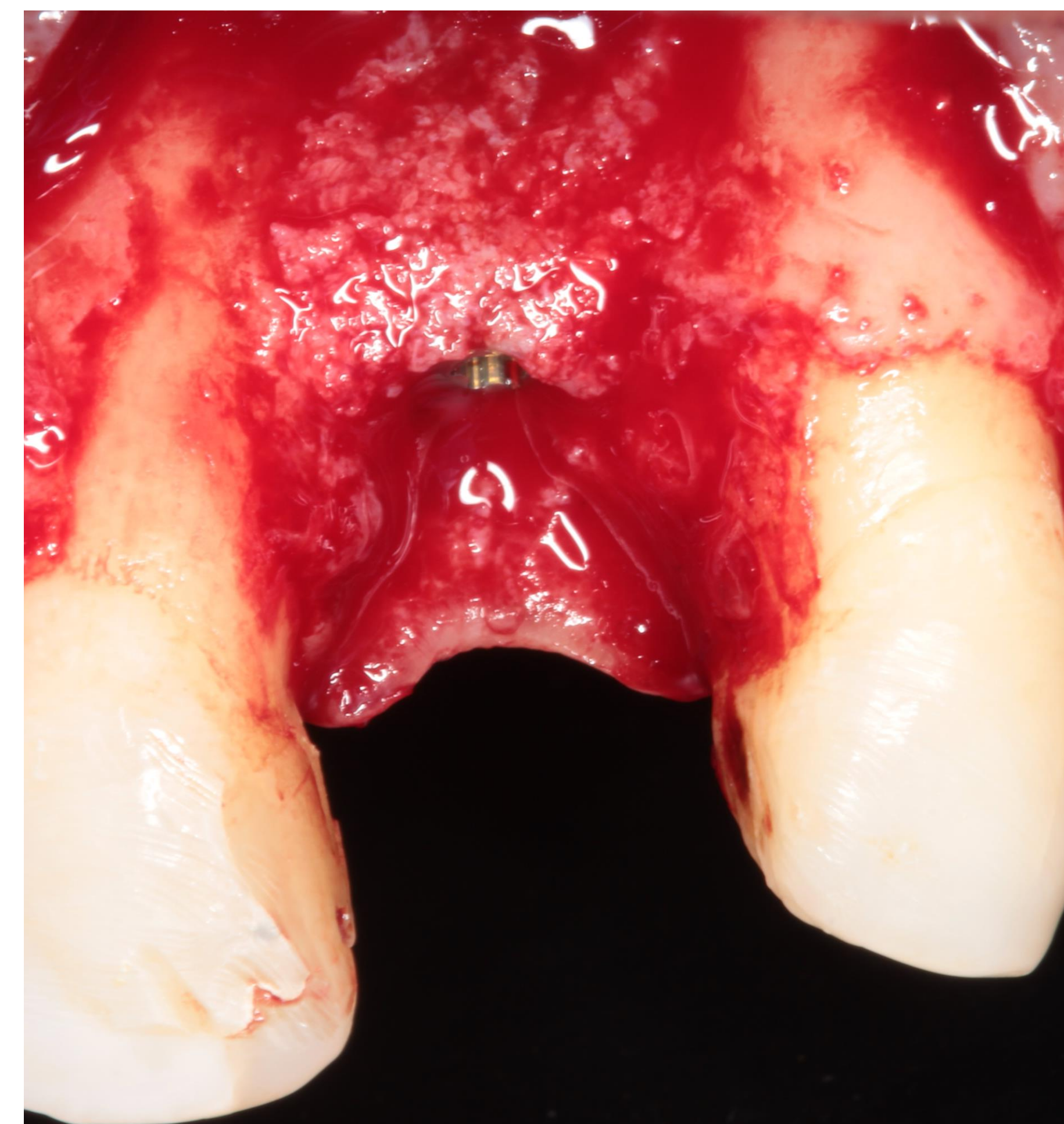
Day of surgery 6- weeks post-extraction- Occlusal view



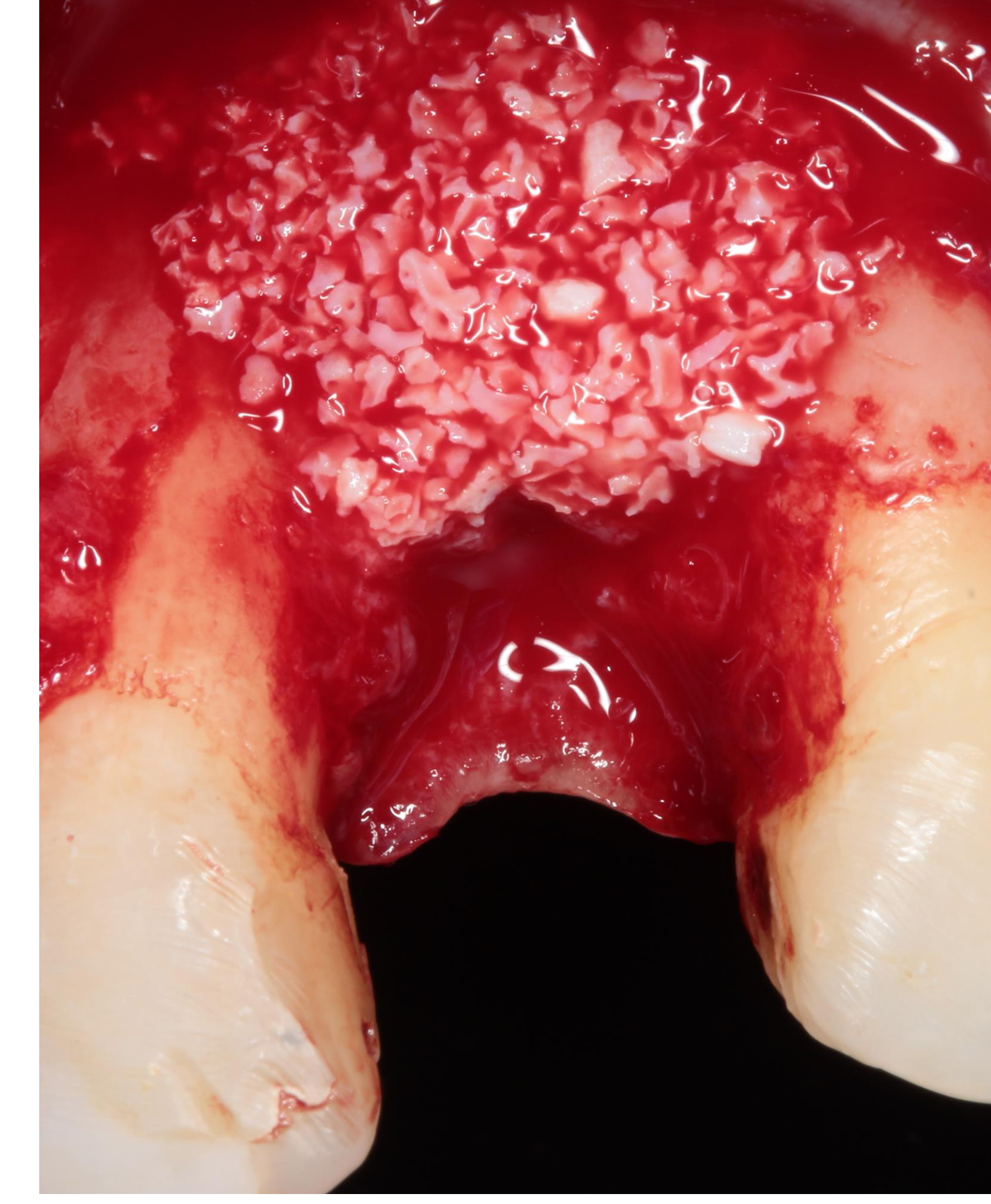
Facial view of bony defect



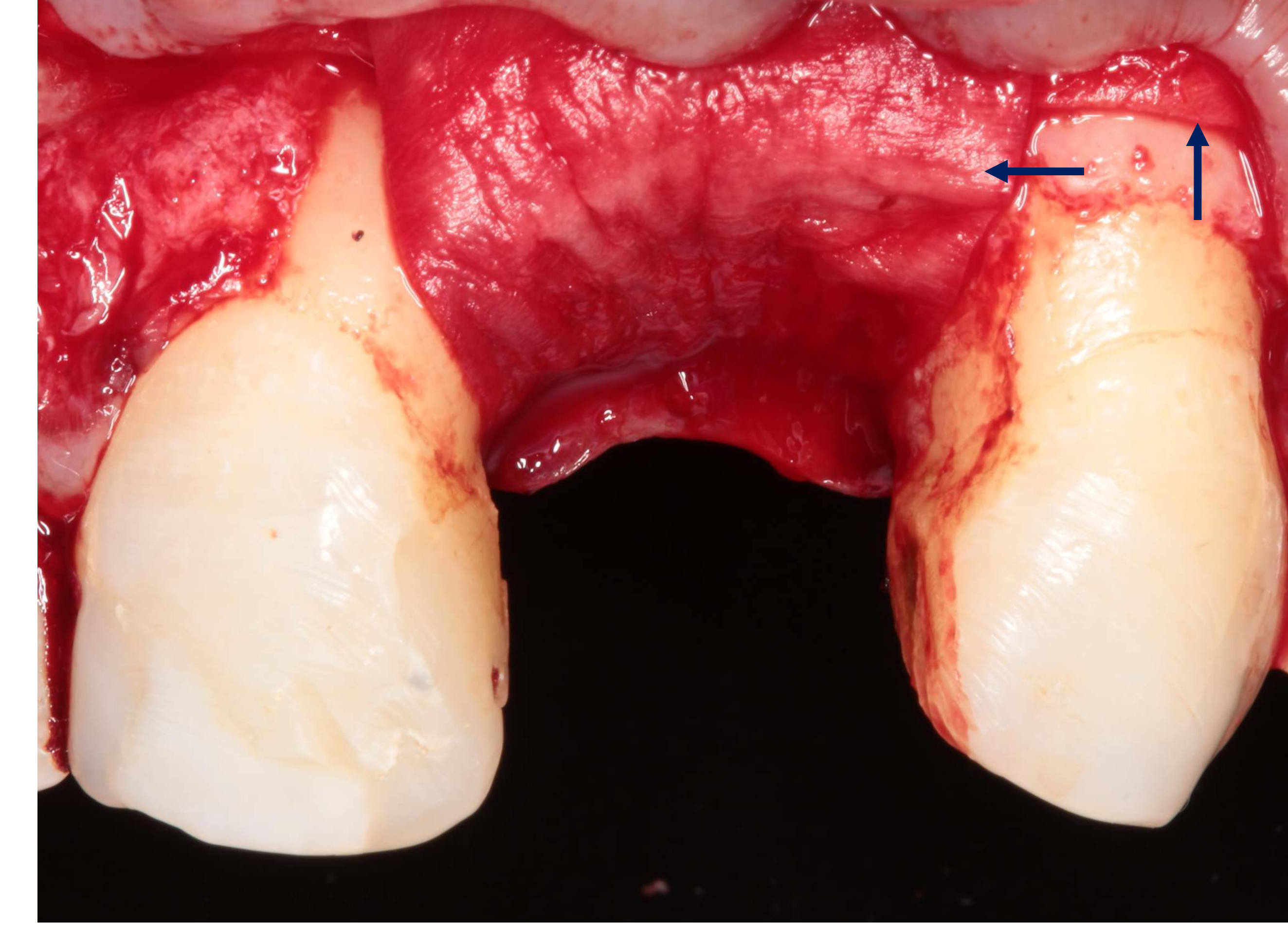
Implant placement  
Attachment loss on the adjacent teeth



First layer of autogenous bone



Second layer of autogenous bone & xenograft



Double membrane laid over particulate graft.





# Single Tooth Replacement in the Severely Compromised Site in the Esthetic Zone, 1-year Clinical and Radiographic Follow-up

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## Results

- Patient experienced uneventful healing after the guided bone regeneration and simultaneous implant placement and second-stage implant surgery. After confirming successful implant osseointegration and managing the soft tissue, final impression and delivery of final prosthesis took place in the pre-doctoral clinic.
- The overall pink esthetic score for this case was 12. Scores: mesial papilla= 1, distal papilla= 2, level of soft-tissue margin= 1, soft-tissue contour= 2, alveolar process= 2, soft-tissue color= 2, soft-tissue texture= 2.



Day of uncover- Facial view



Day of uncover- Occlusal view



Day of uncover- Occlusal view of healing abutment



Day of provisional delivery- Occlusal view



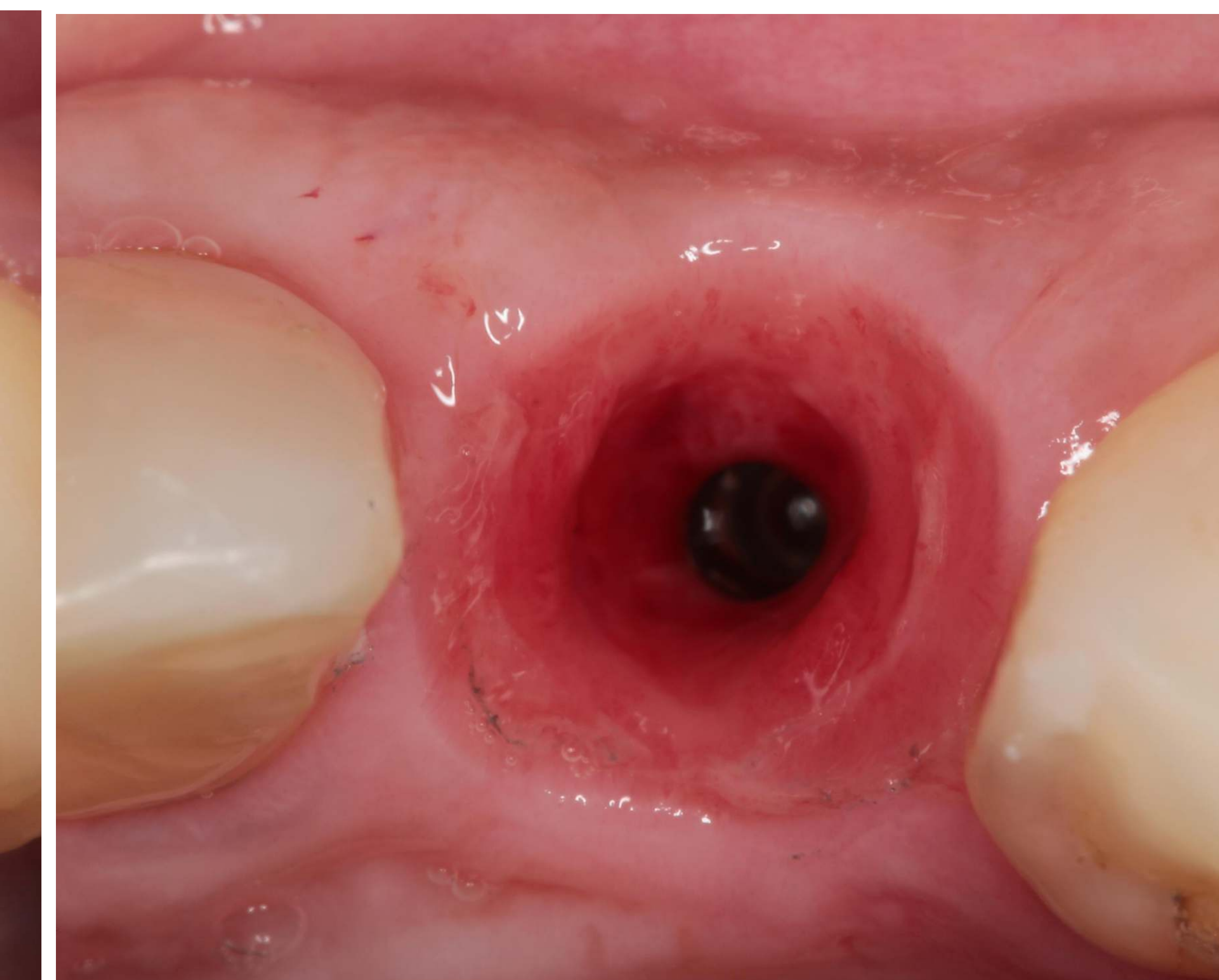
Provisional crown



Delivery of provisional- Facial view



Delivery of provisional- Occlusal view,



Correction of buccal contour following provisionalization.



# Single Tooth Replacement in the Severely Compromised Site in the Esthetic Zone, 1-year Clinical and Radiographic Follow-up

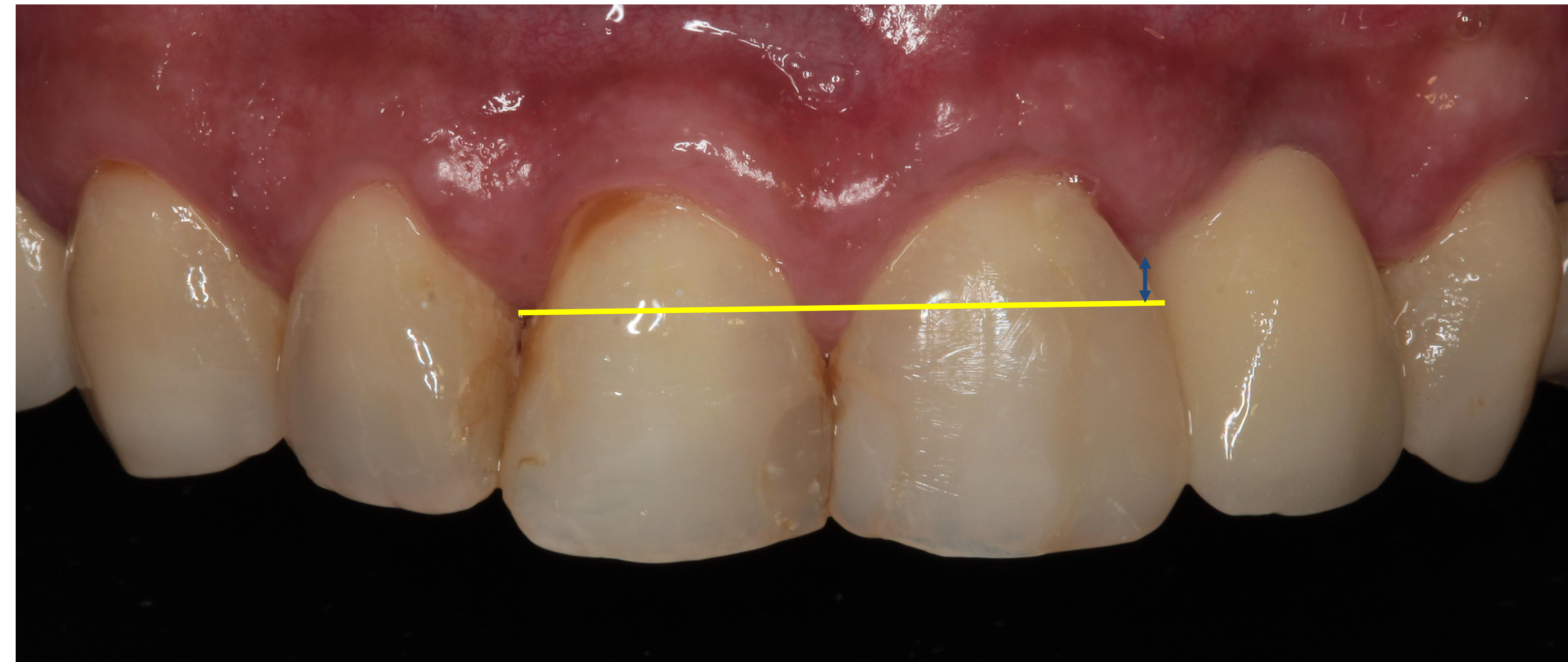
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## Results

Clinical



Contralateral central incisor

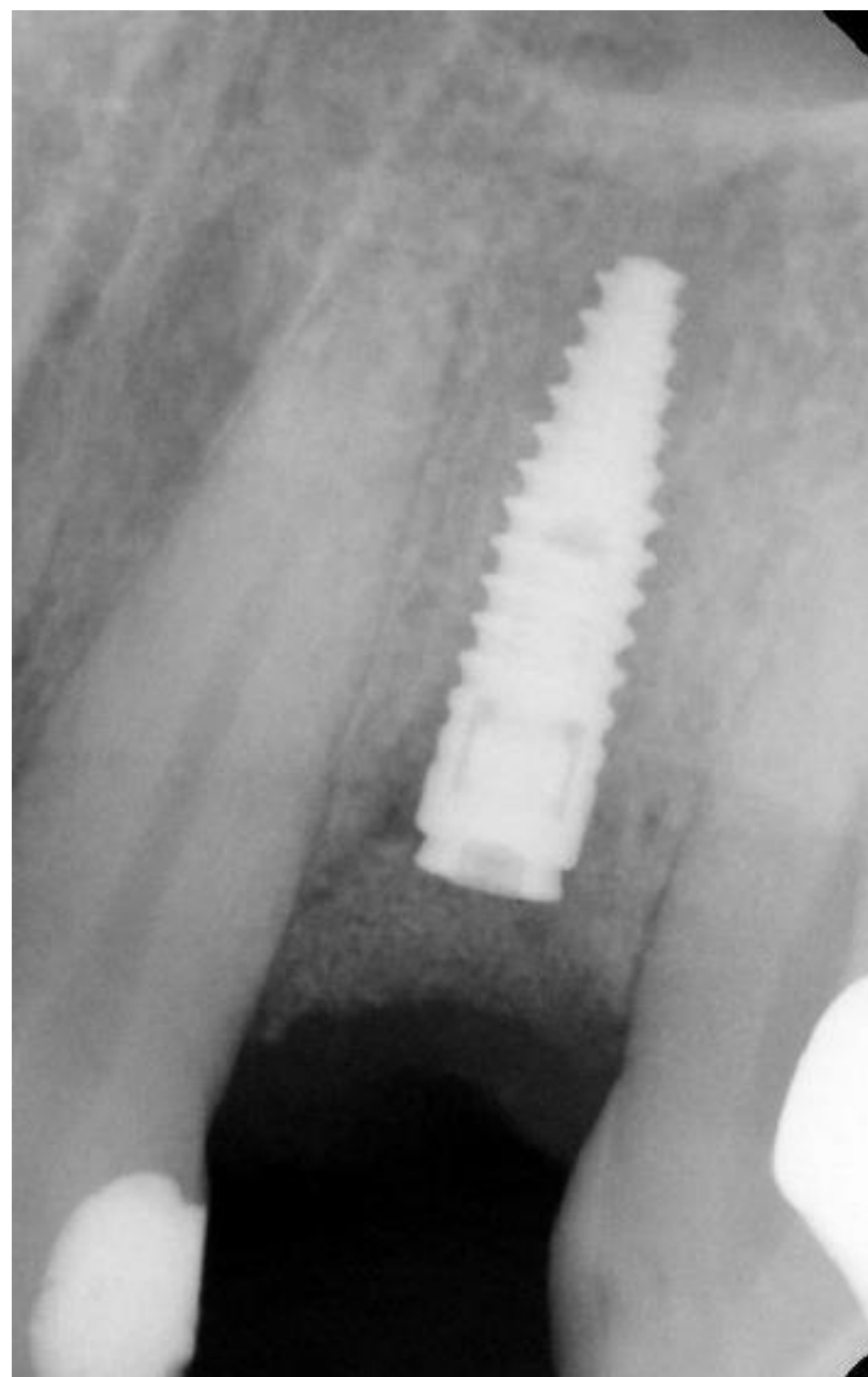


Blue arrow indicating lack of mesial papilla fill compared to the contralateral papilla



Final implant crown on #10.

Radiograph



Day of implant placement



Seating of impression coping



Delivery of provisional



Delivery of final crown (1 year of implant placement)