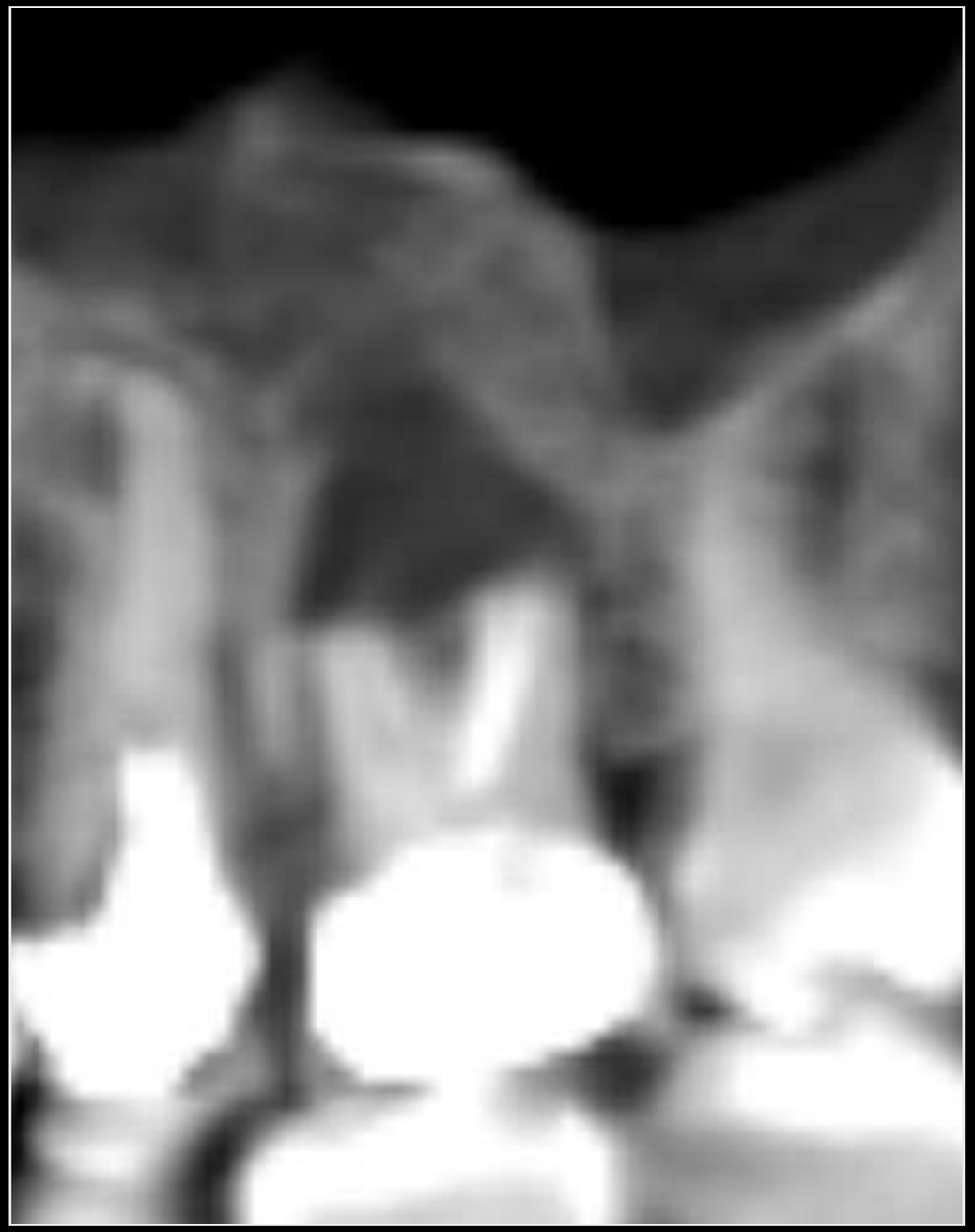
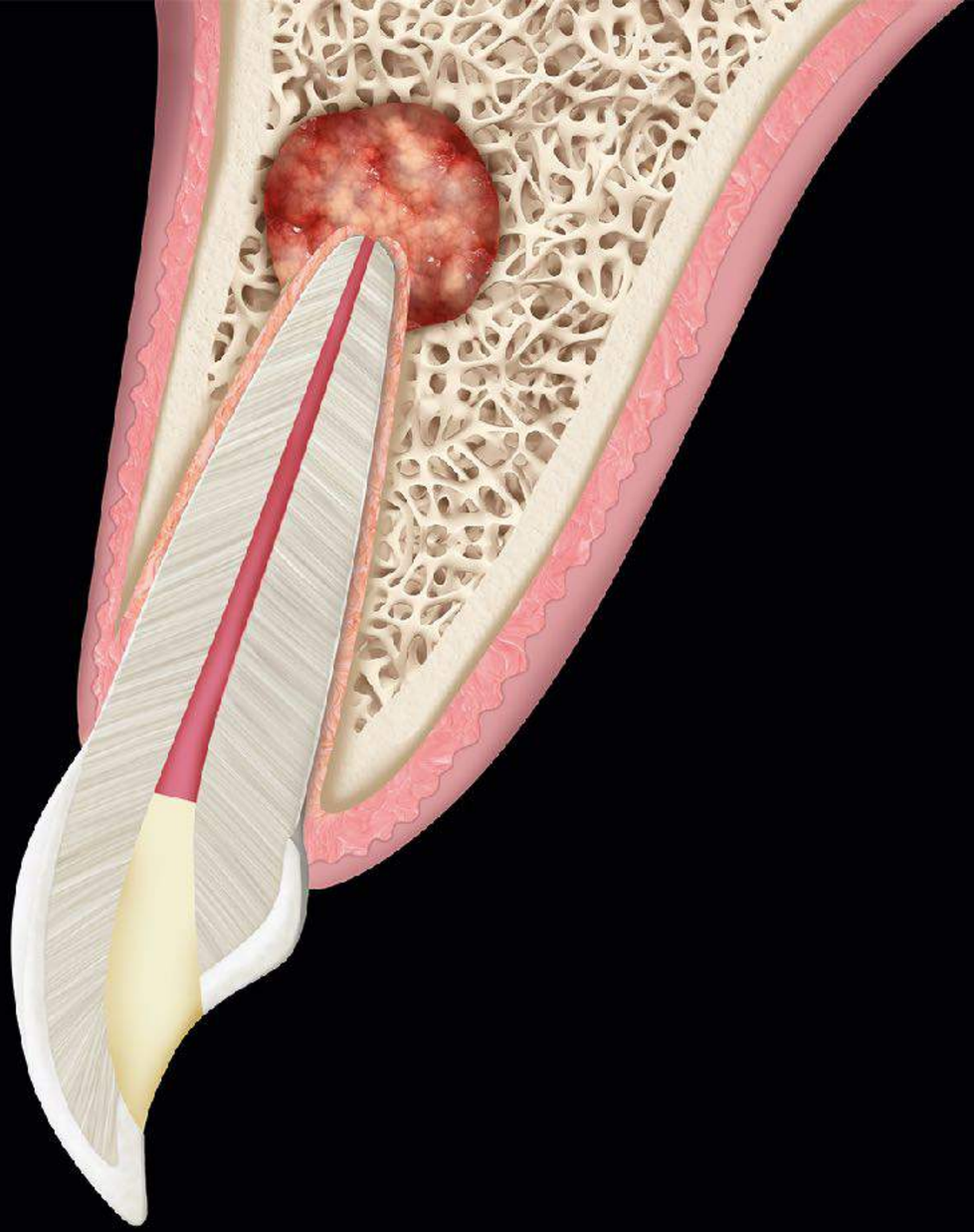
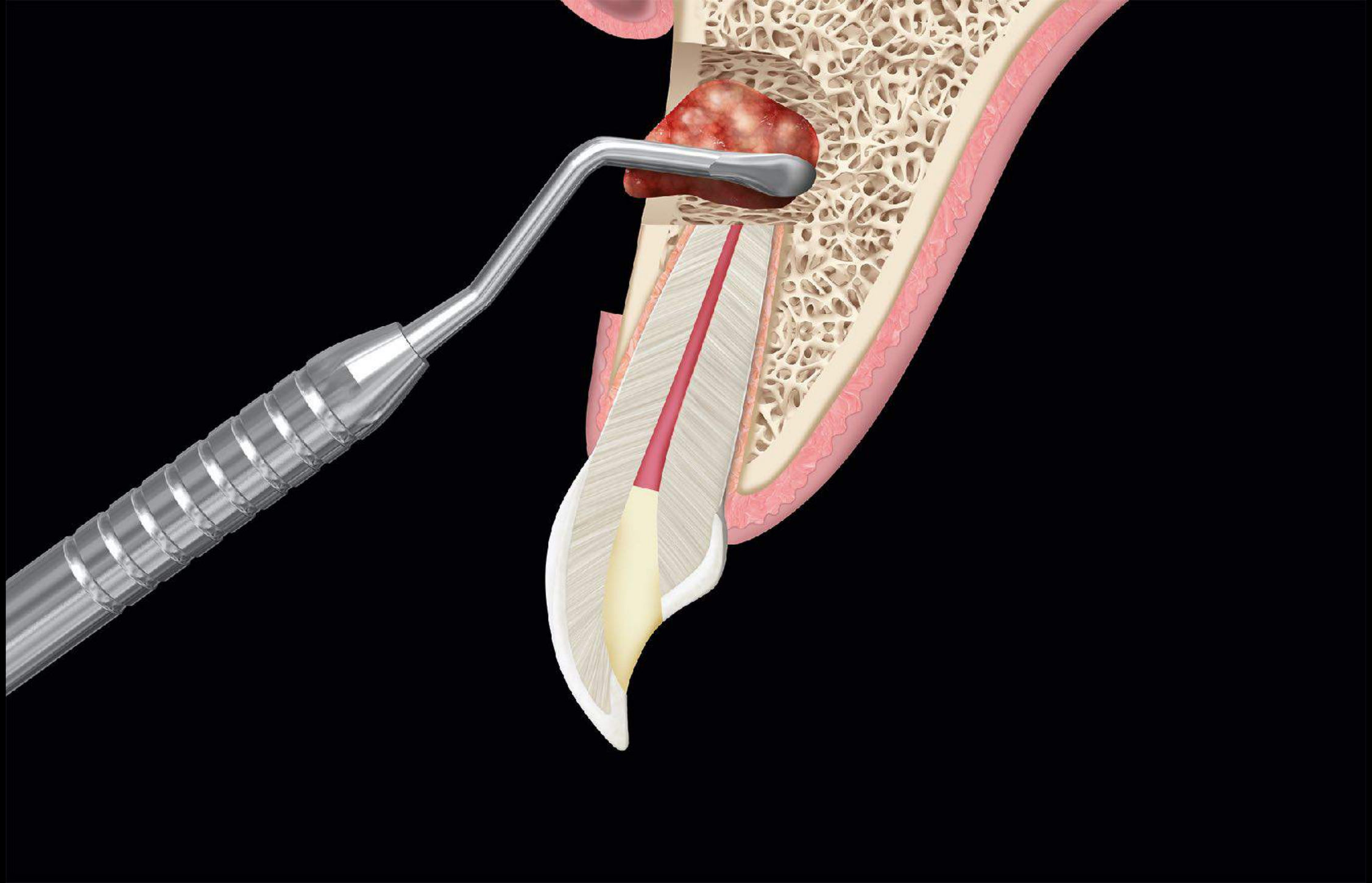
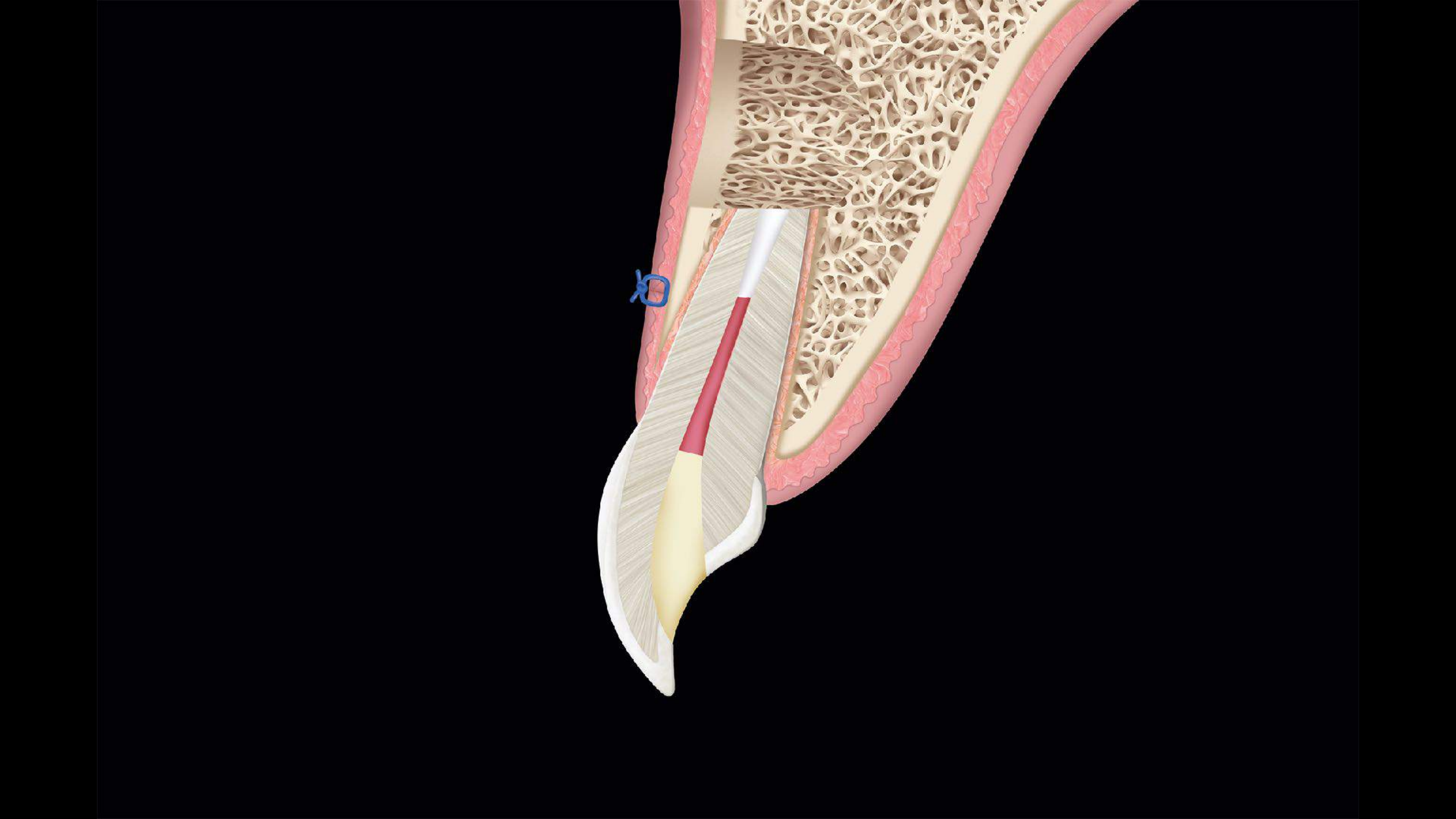
La Chirurgie Endodontique Moderne

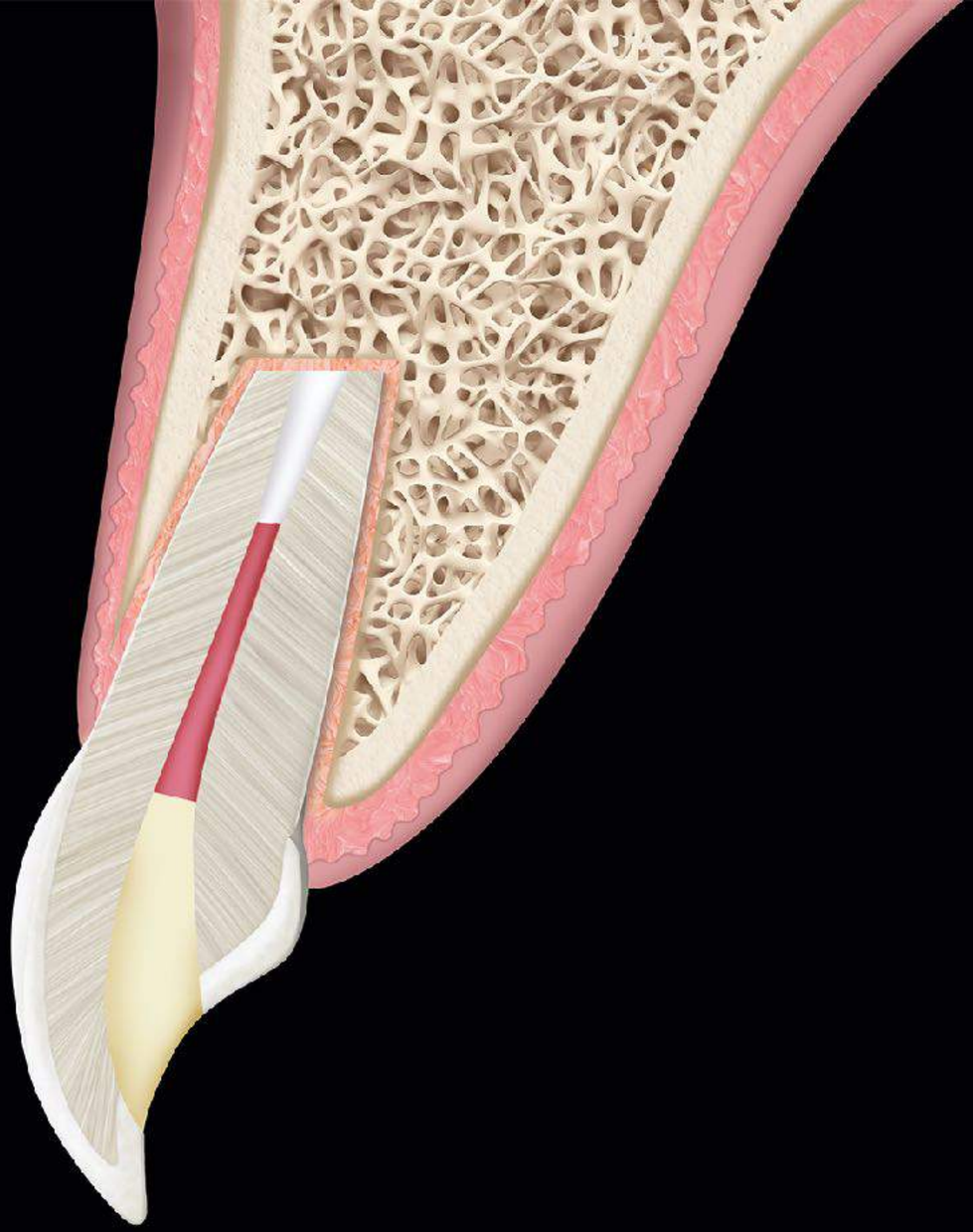
Guillaume Jouanny











Setzer F. et Al.

Outcome of Endodontic Surgery : A Meta-analysis of the Literature – Part 1: Comparison of Traditional Root-End Surgery and Endodontic Microsurgery

Journal of Endodontics 2010; 36(11):1757-1765

Setzer F. et Al.

Techniques traditionnelles

59%

Techniques Microchirurgicales

94%

Journal of Endodontics 2010; 36(11):1757-1765

FEATURE ARTICLE

The Trend of Quality of Publications in Endodontic Surgery: A 10-year Systematic Survey of the Literature

Massimo Del Fabbro[a], Stefano Corbella[b], Igor Tsesis[c], and Silvio Taschieri[a]
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[b]Università degli Studi di Milano, Department of Biomedical, Surgical and Dental Sciences, Oral Implantology Research Centre, IRCCS Istituto Ortopedico Galeazzi, Milan, Italy
[c]Department of Endodontology, Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University, Tel Aviv, Israel

Abstract

Objectives: The aims of the present systematic literature analysis were to evaluate, over a 10-year period, the trend of the proportion of RCT, SR, MA published on endodontic surgery, and to investigate if the impact factor (IF) of the main endodontic journals correlates with the proportion of RCT, SR, MA they publish.
Methods: An electronic search of the RCT, SR and MA published on the topic "endodontic surgery" from 2001 to 2010 was performed on Medline and Cochrane CENTRAL database using specific search terms combined with Boolean operators. Endodontic Journals impact factor was retrieved by the Thomson Scientific database. The proportion of each study type over the total number of articles on endodontic surgery published per year was estimated. The correlation between the number of high-evidence level studies published on the main endodontic Journals and the IF of such Journals per year was estimated.
Results: From a total of 900 articles published in 2001–2010 on endodontic surgery, there were 114 studies of high evidence level. A significant increase of the proportion of either RCT, SR and MA over the years was found. A modest to unclear correlation was found between the Journal IF and the number of high-evidence articles published.
Conclusions: There is a positive trend over the years among researchers in performing studies of good quality in endodontic surgery. The impact factor of endodontic Journals is not consistently influenced by publication of high-evidence level articles.

Keywords: Endodontics, Evidence-based dentistry, Journal impact factor.

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J Evid Base Dent Pract 2015;15:2-7
1532 3382/$36.00

http://dx.doi.org/10.1016/j.jebdp.2014.09.002

INTRODUCTION

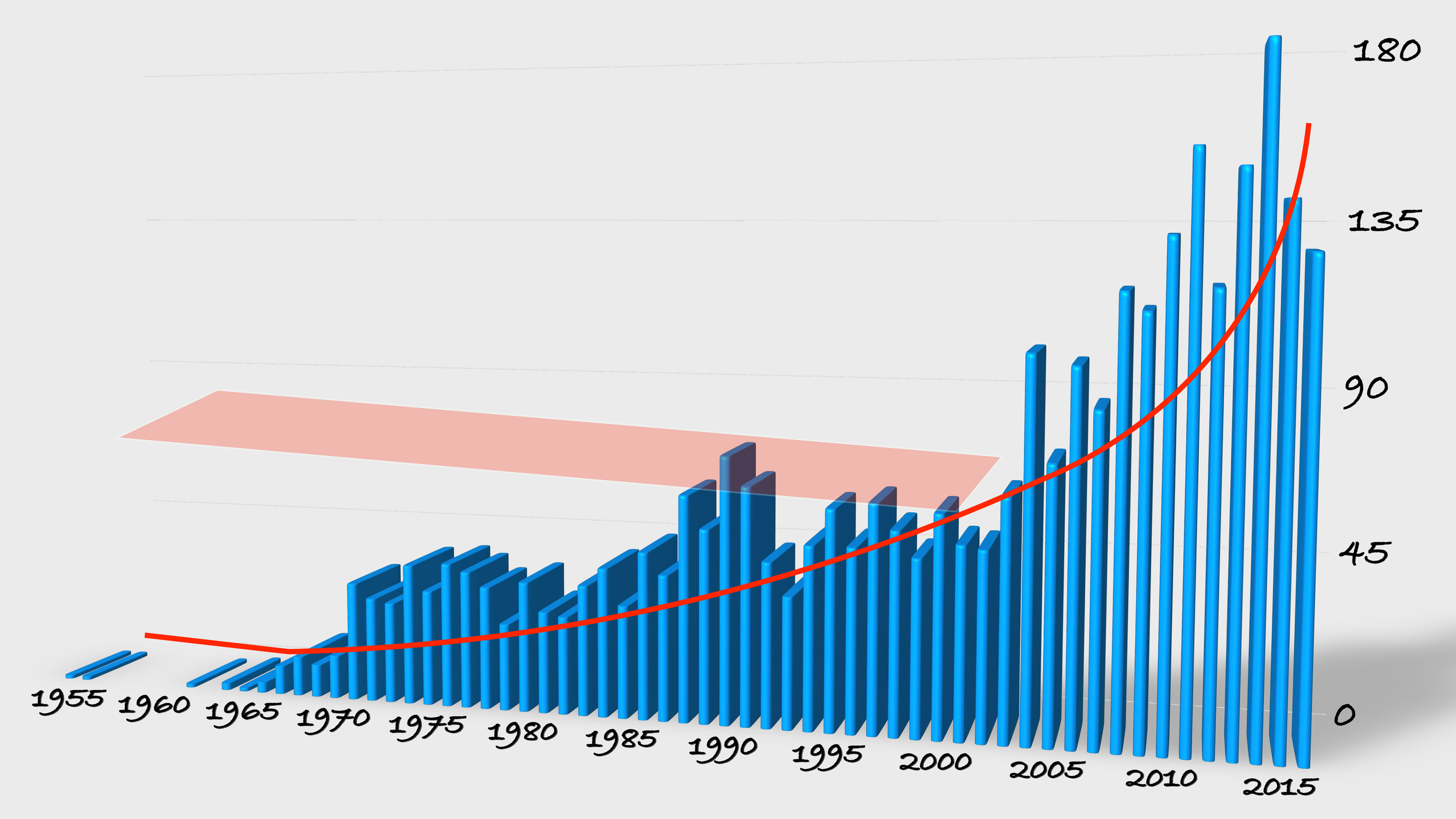
The development of new techniques, instrumentation and biomaterials used in endodontic surgery has made possible the extension of its clinical indications. However, with the increase of health care costs, there has been a paradigm shift in health care toward evidence-based research.

The trend of Quality of Publications in Endodontic Surgery: A 10-year Systematic Survey of the Literature

900 études

114 études de haut niveau

J Evid Base Dent Pract 2015;15:2-7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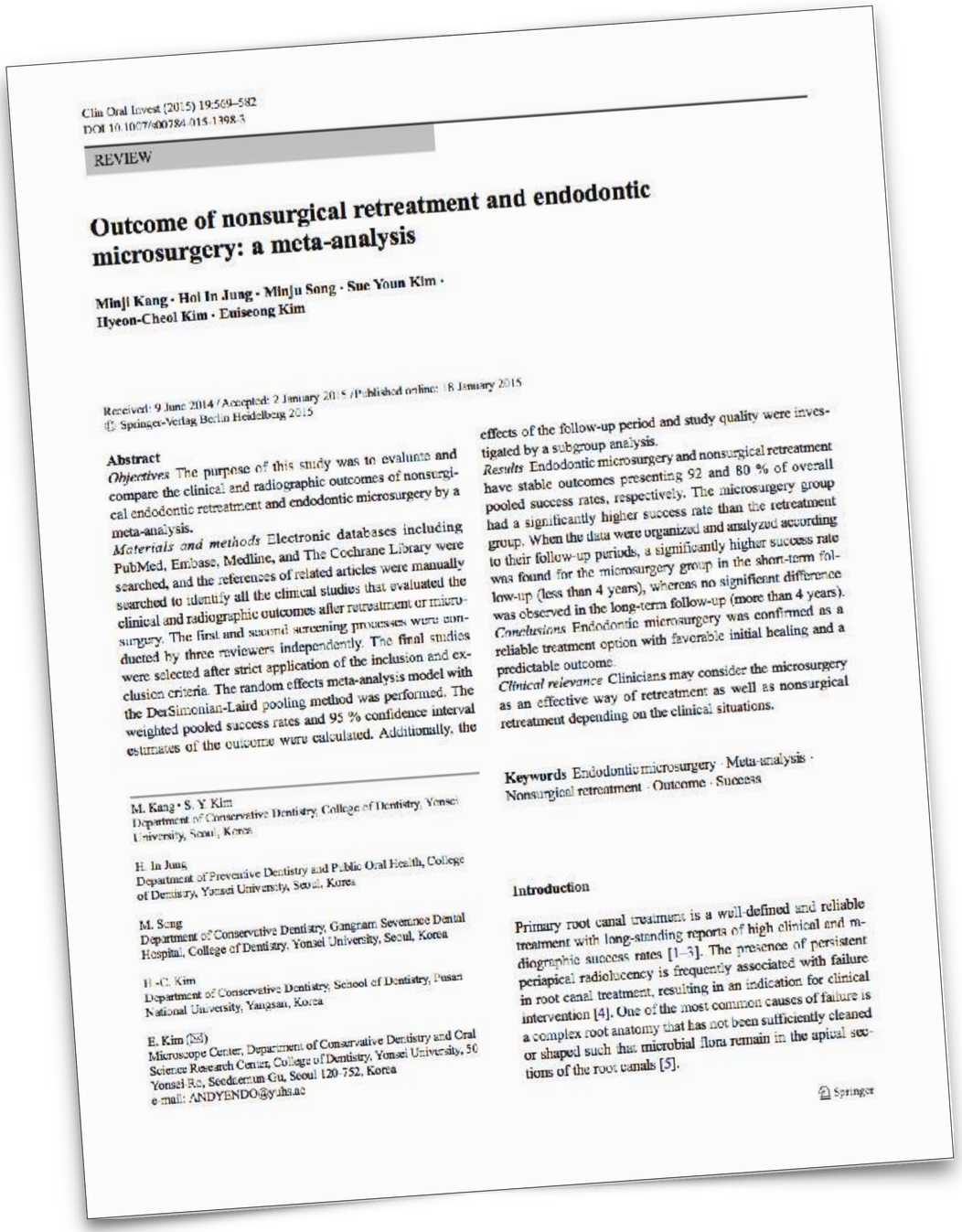

Clin Oral Invest (2015) 19:569–582
DOI 10.1007/s00784-015-1398-3

REVIEW

Outcome of nonsurgical retreatment and endodontic microsurgery: a meta-analysis

Minji Kang · Hoi In Jung · Minju Song · Sue Youn Kim · Hyeon-Cheol Kim · Euiseong Kim

Received: 9 June 2014 / Accepted: 2 January 2015 / Published online: 18 January 2015

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Results Endodontic microsurgery and nonsurgical retreatment have stable outcomes presenting 92 and 80 % of overall pooled success rates, respectively. The microsurgery group had a significantly higher success rate than the retreatment group. When the data were organized and analyzed according to their follow-up periods, a significantly higher success rate was found for the microsurgery group in the short-term follow-up (less than 4 years), whereas no significant difference was observed in the long-term follow-up (more than 4 years).
Conclusions Endodontic microsurgery was confirmed as a reliable treatment option with favorable initial healing and a predictable outcome.
Clinical relevance Clinicians may consider the microsurgery as an effective way of retreatment as well as nonsurgical retreatment depending on the clinical situations.

Keywords Endodontic microsurgery · Meta-analysis · Nonsurgical retreatment · Outcome · Success

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Introduction

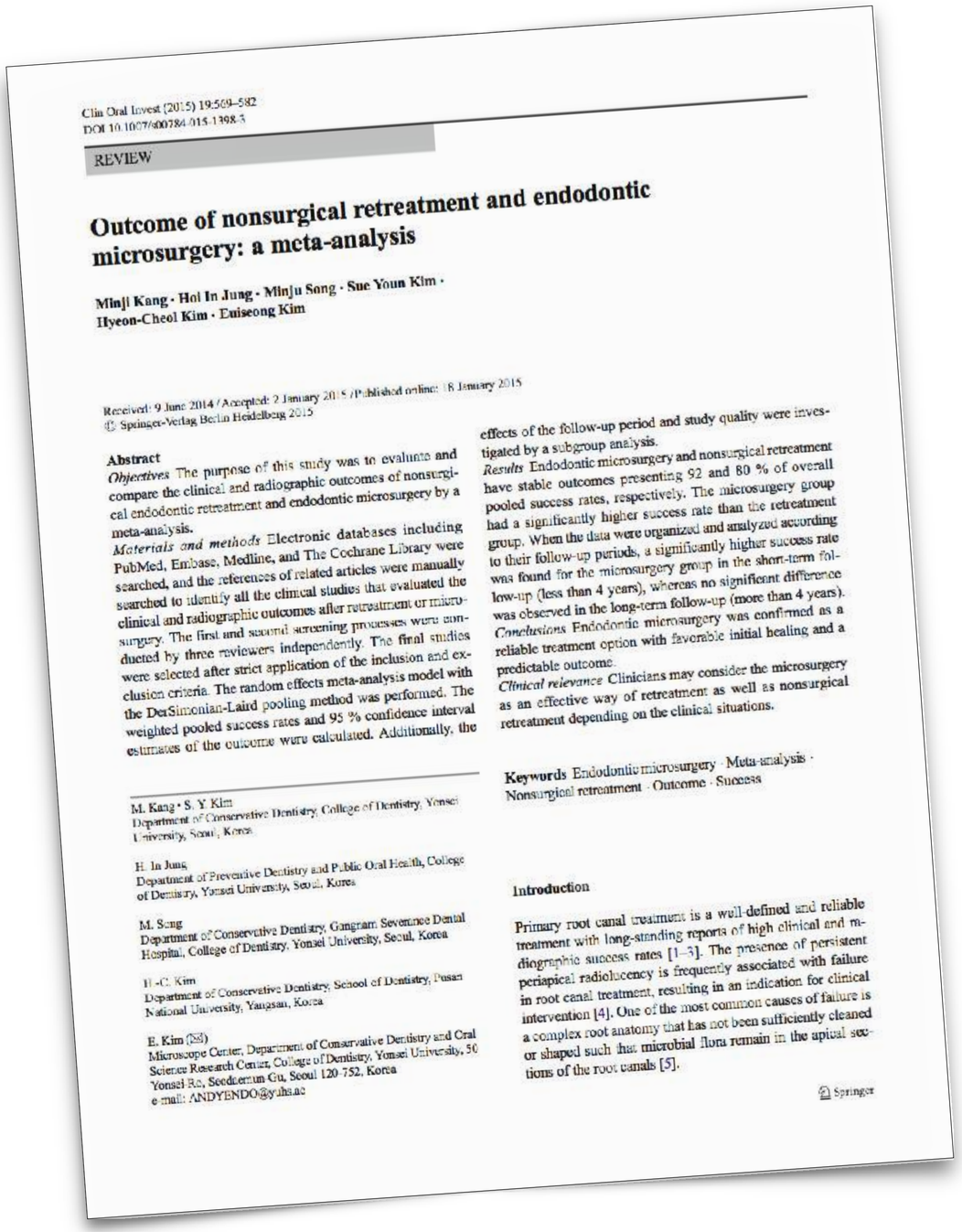
Primary root canal treatment is a well-defined and reliable treatment with long-standing reports of high clinical and radiographic success rates [1–3]. The presence of persistent periapical radiolucency is frequently associated with failure in root canal treatment, resulting in an indication for clinical intervention [4]. One of the most common causes of failure is a complex root anatomy that has not been sufficiently cleaned or shaped such that microbial flora remain in the apical sections of the root canals [5].

Outcome of nonsurgical retreatment and endodontic microsurgery: a meta-analysis

7 études de retraitement

11 études de microchirurgie

Clinic Oral Invest 2015 (19)



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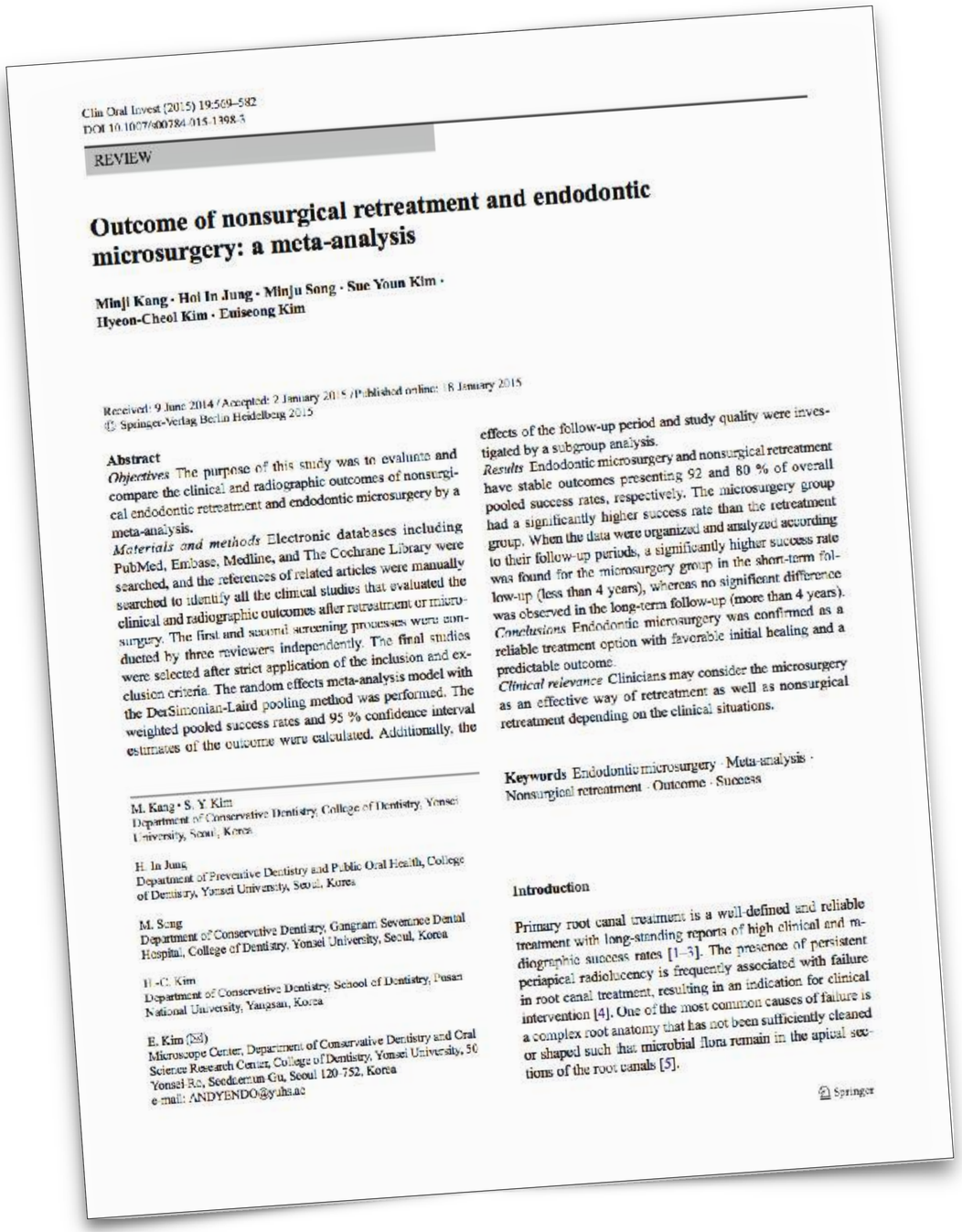
Outcome of nonsurgical retreatment and endodontic microsurgery: a meta-analysis

Pour un suivi de moins de 4 ans

Retraitement conventionnel **80%**

Chirurgie Endodontique **92%**

Clinic Oral Invest 2015 (19)



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Outcome of nonsurgical retreatment and endodontic microsurgery: a meta-analysis

« La microchirurgie endodontique est une ***option de traitement fiable*** *avec un taux de guérison initial favorable et un taux de succès élevé »*

Clinic Oral Invest 2015 (19)


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OPMI pico
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Carl Zeiss
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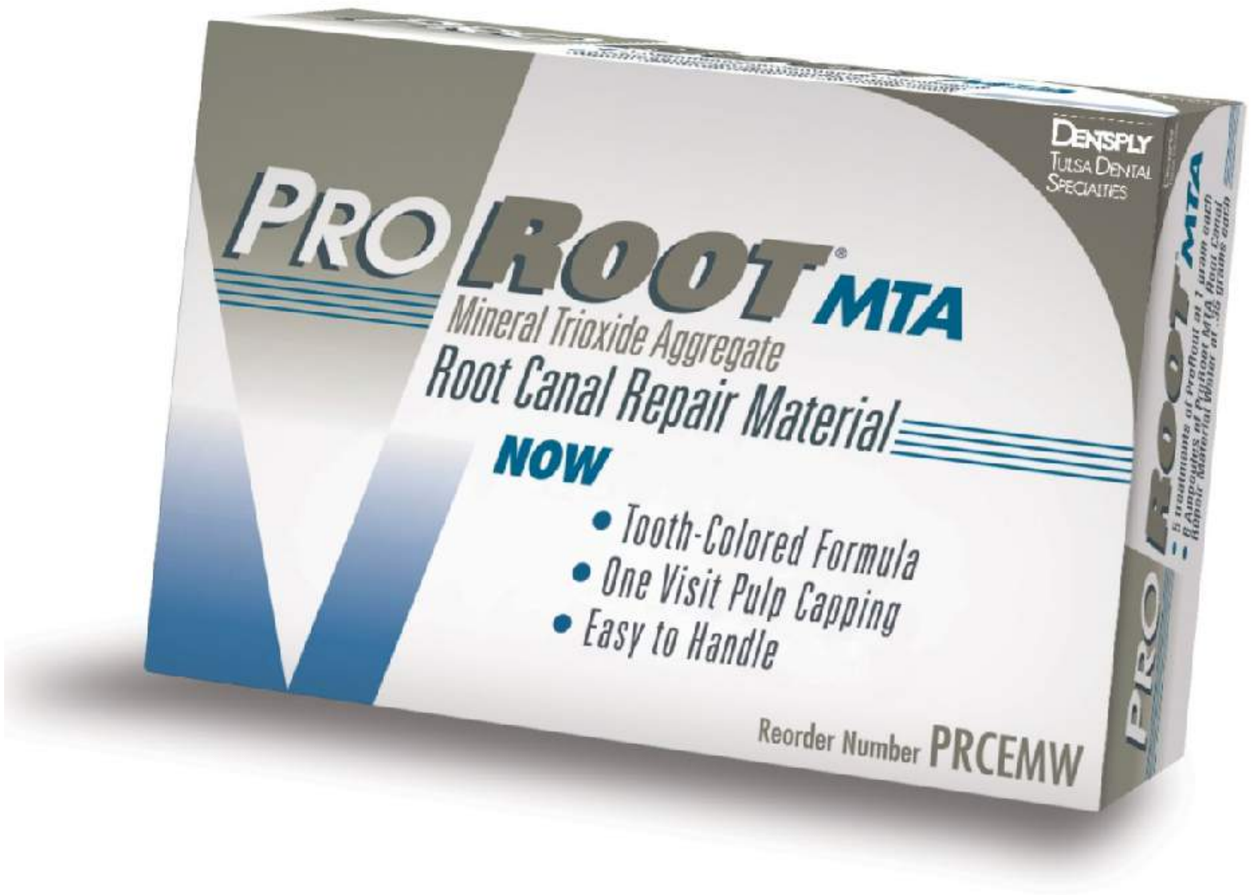
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NOW
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• One Visit Pulp Capping
• Easy to Handle
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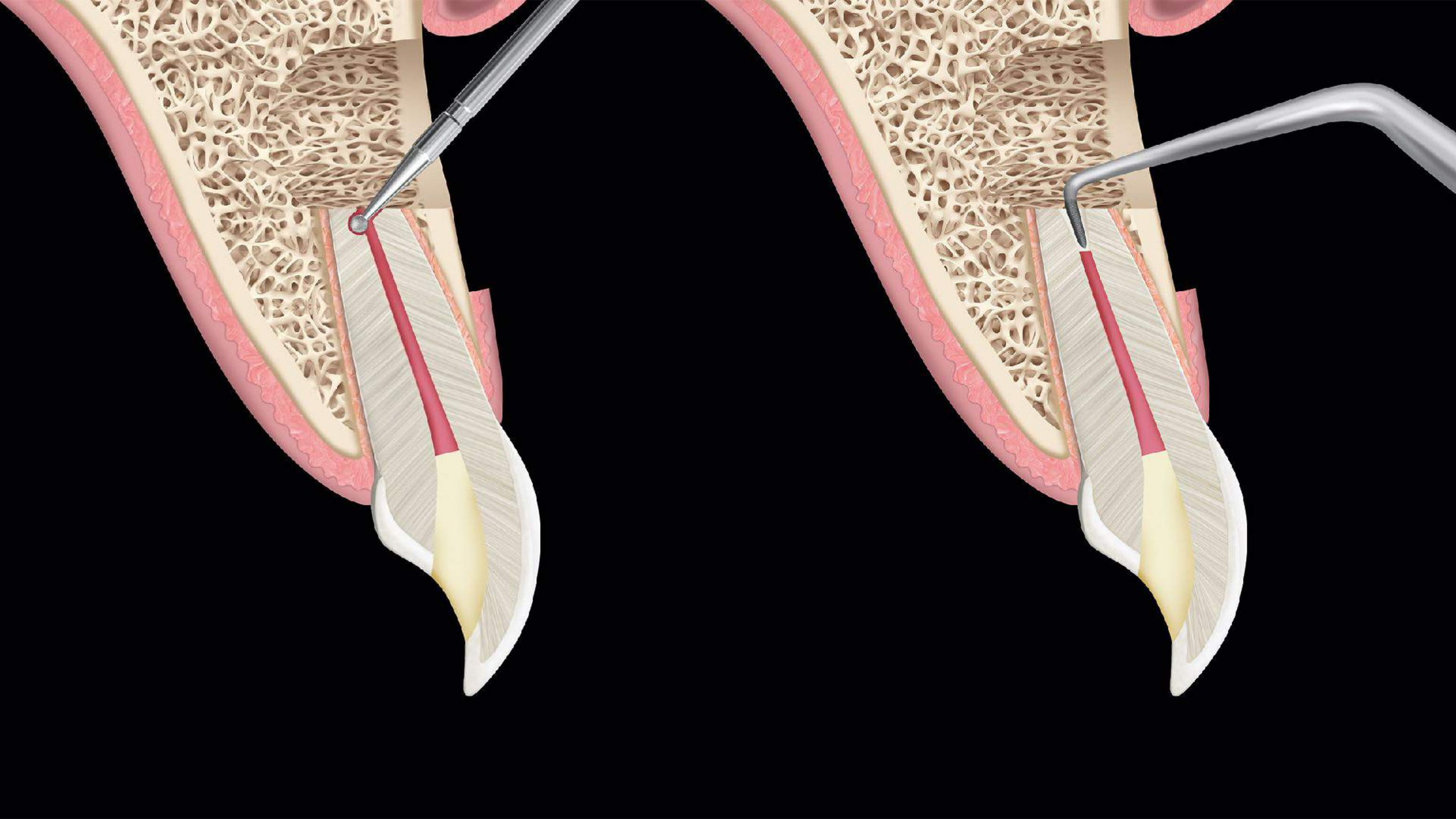

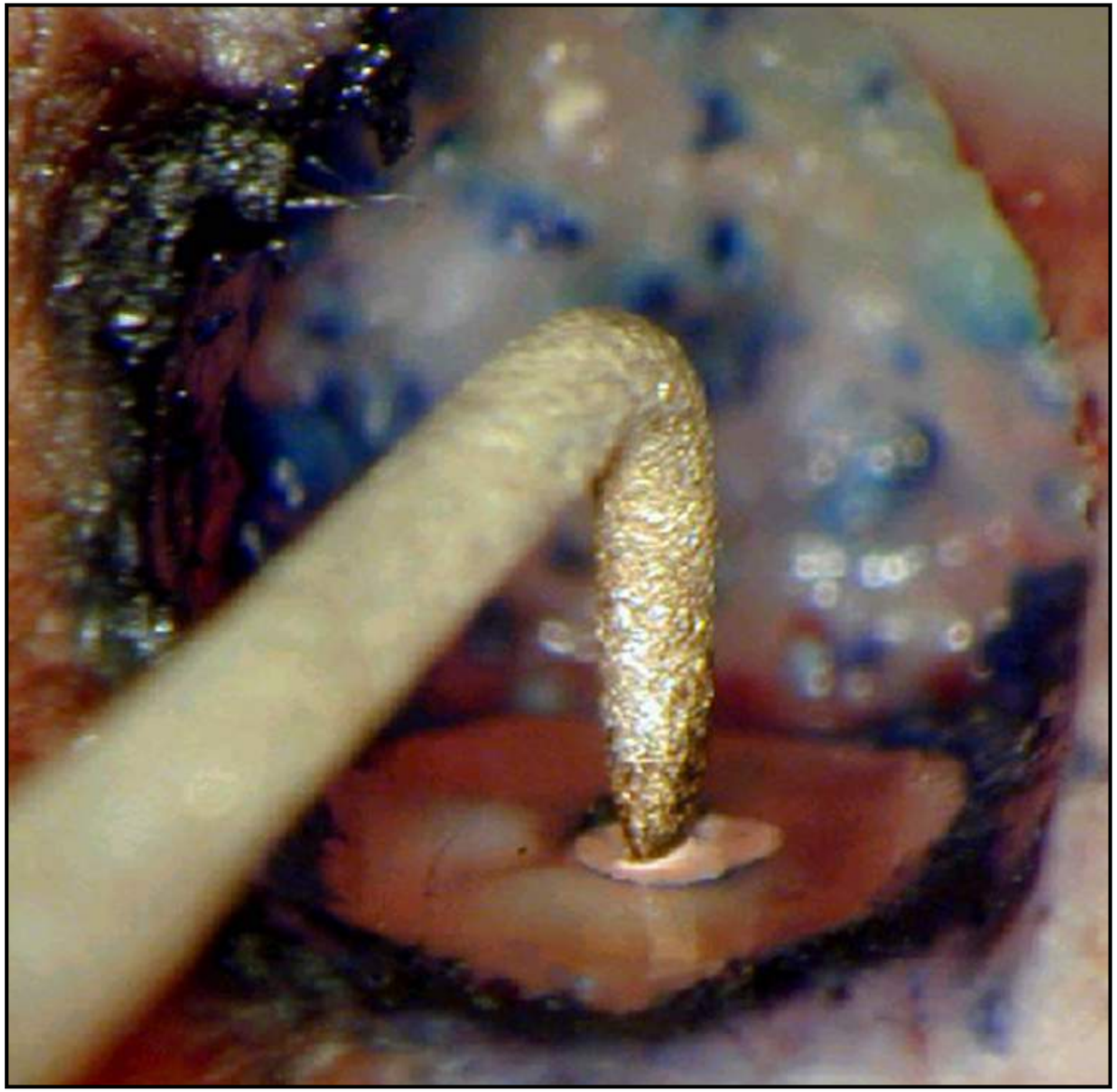

Dr Kim


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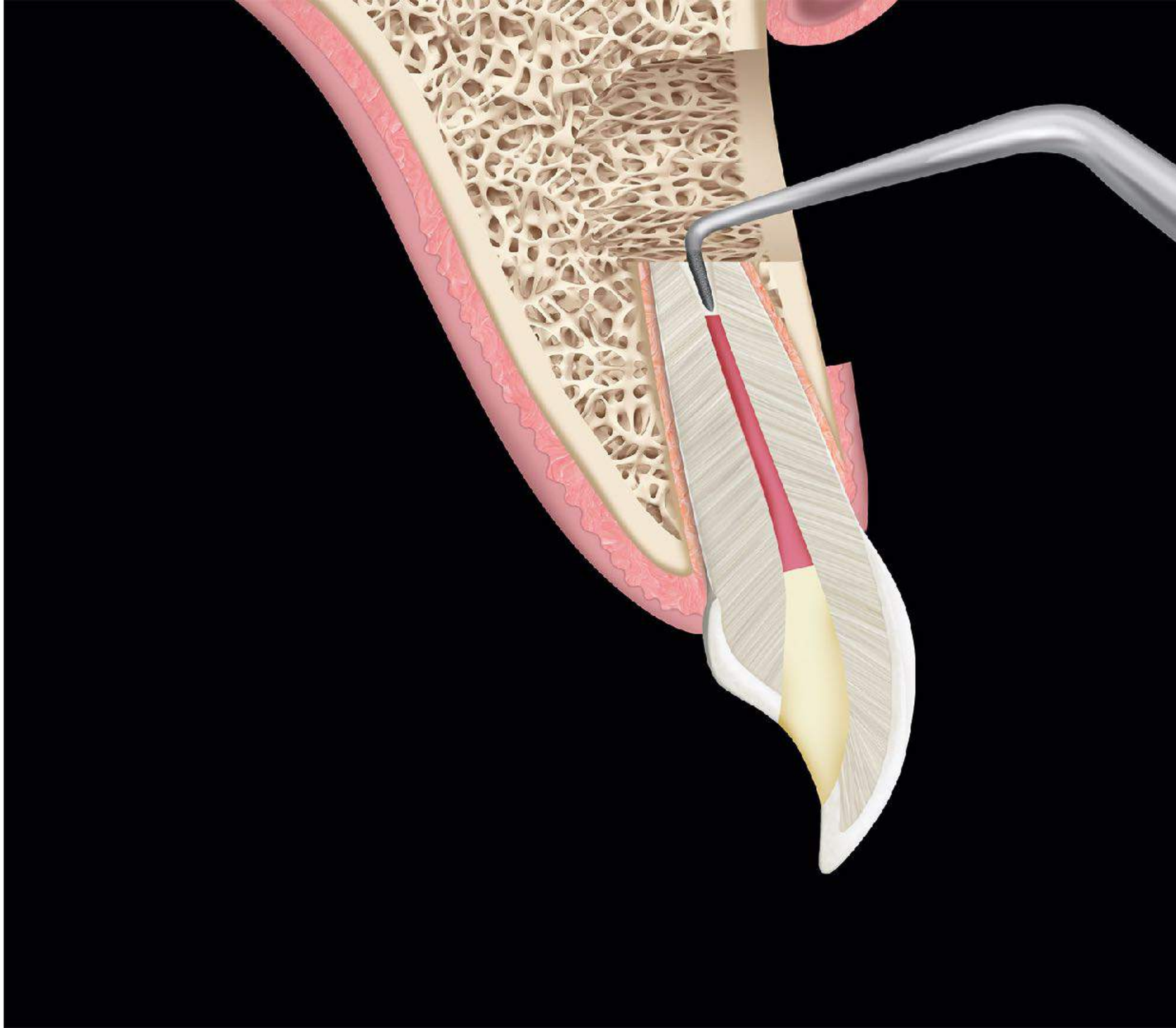

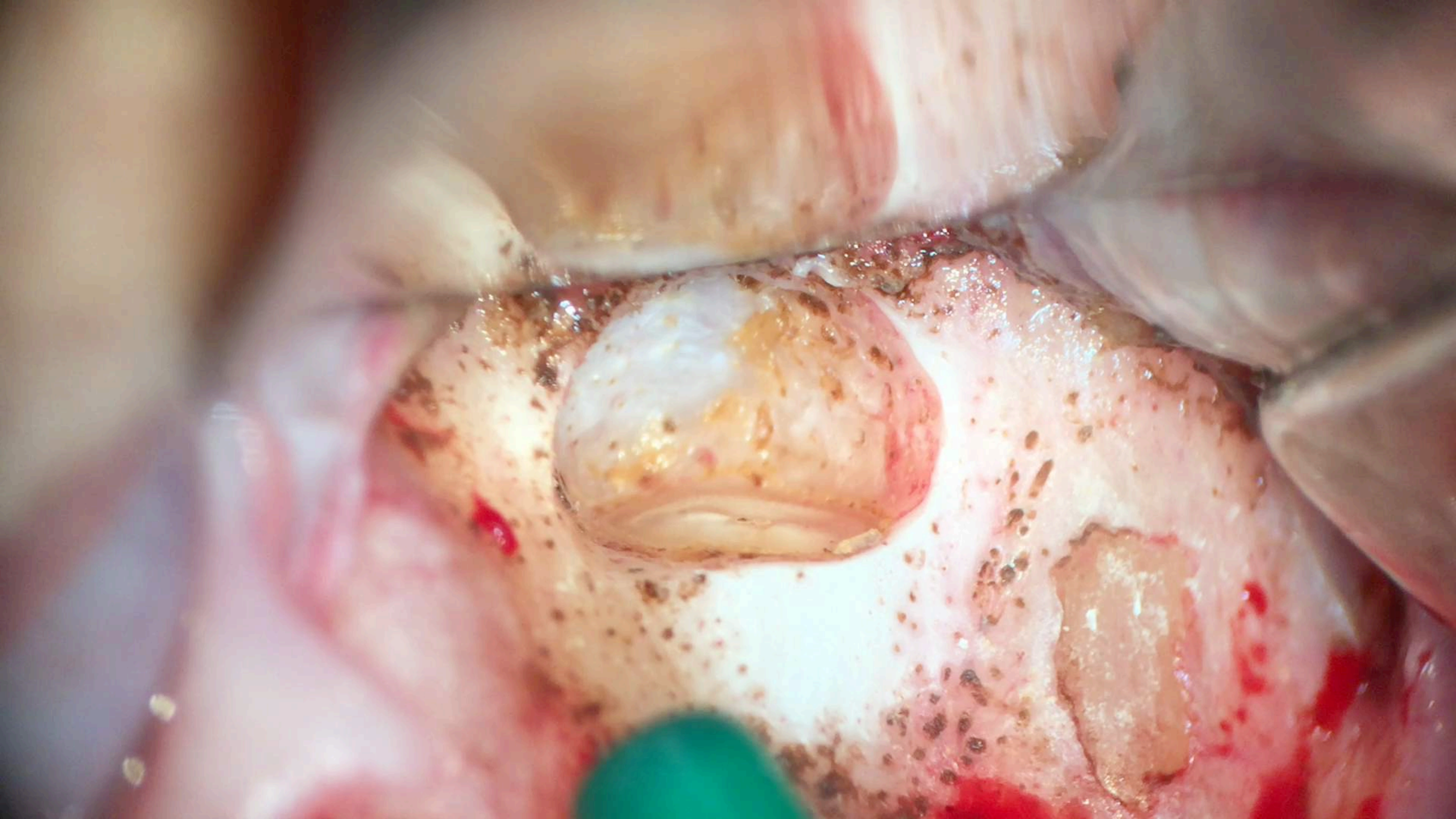


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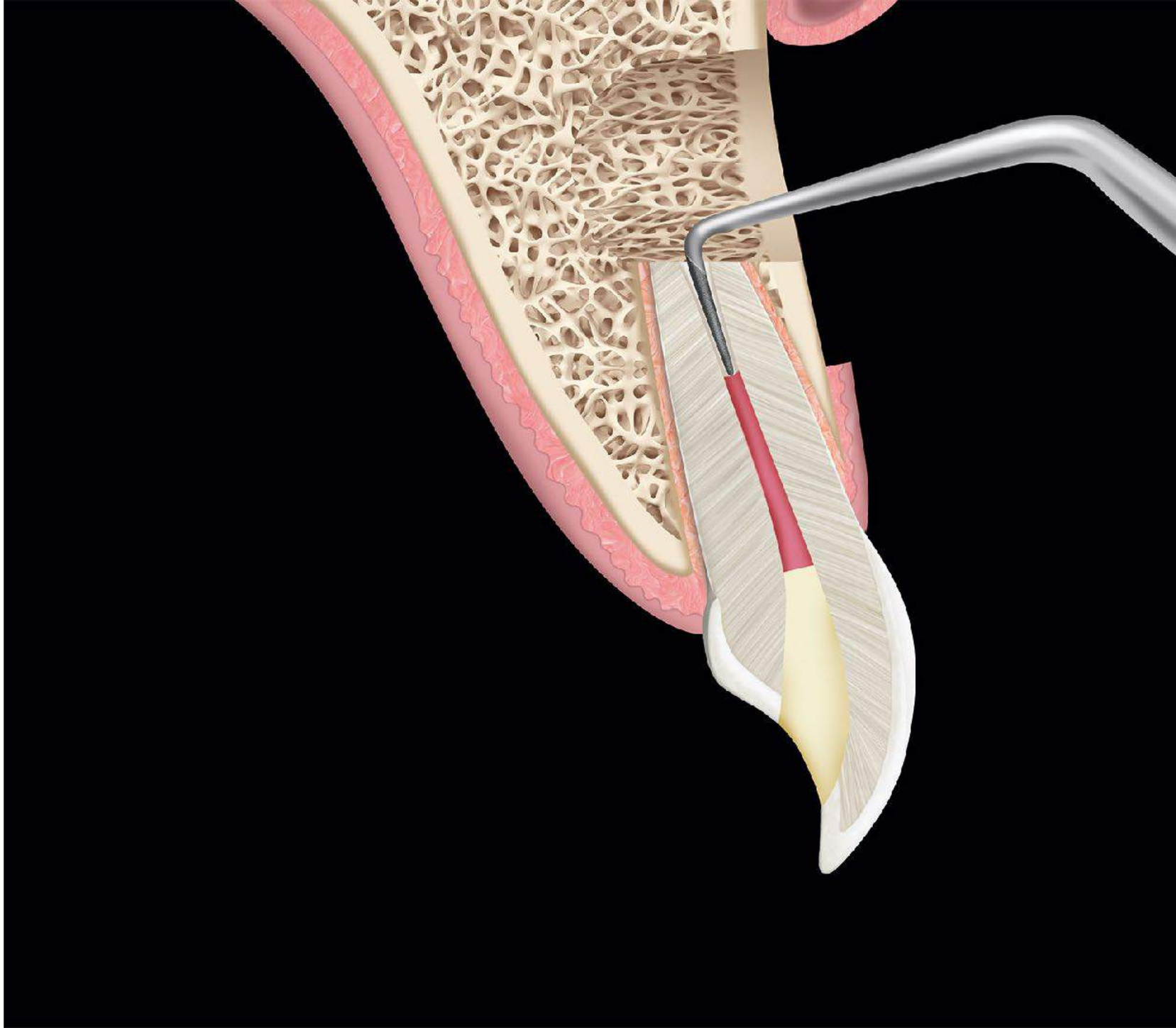

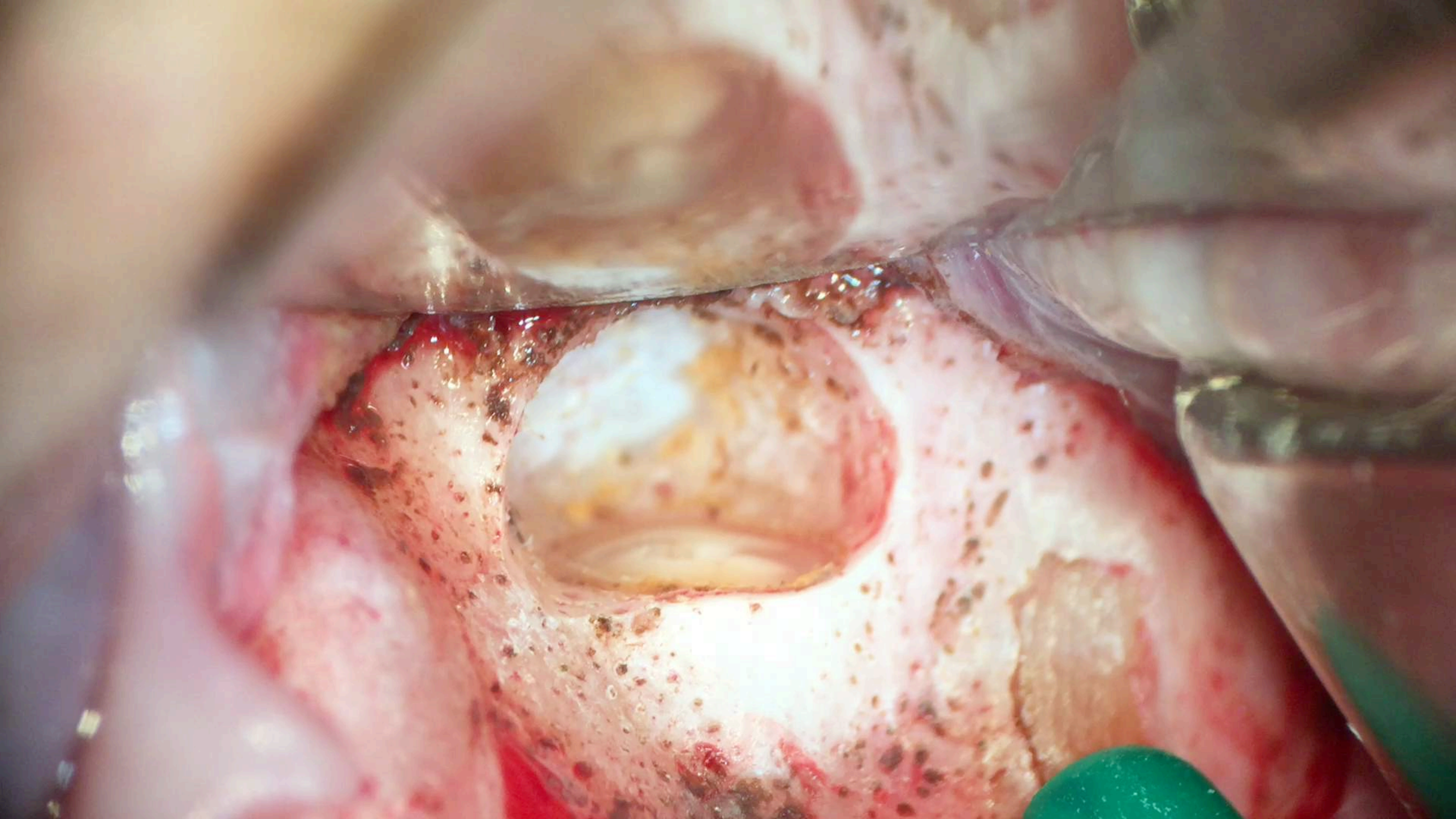


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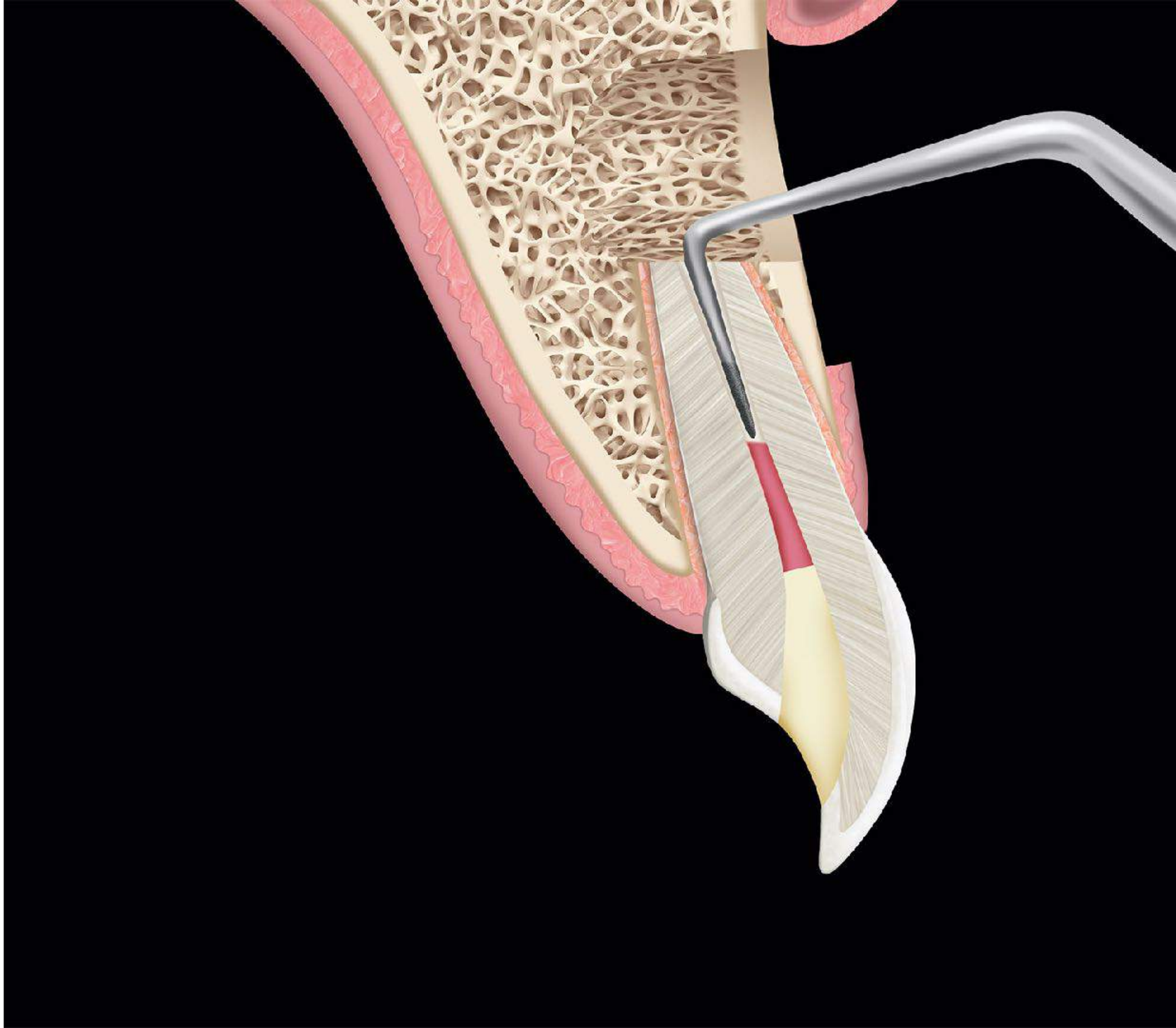

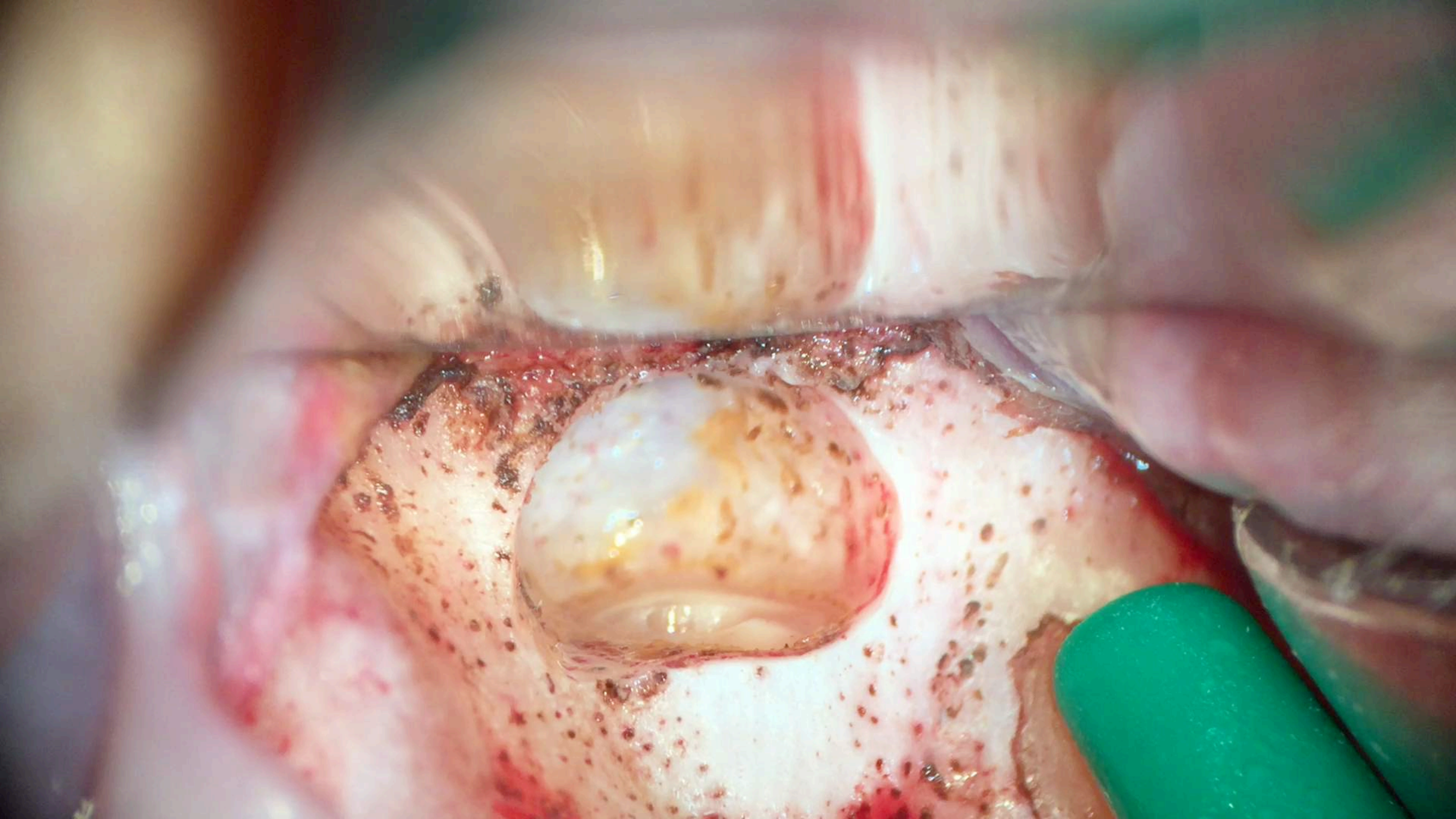

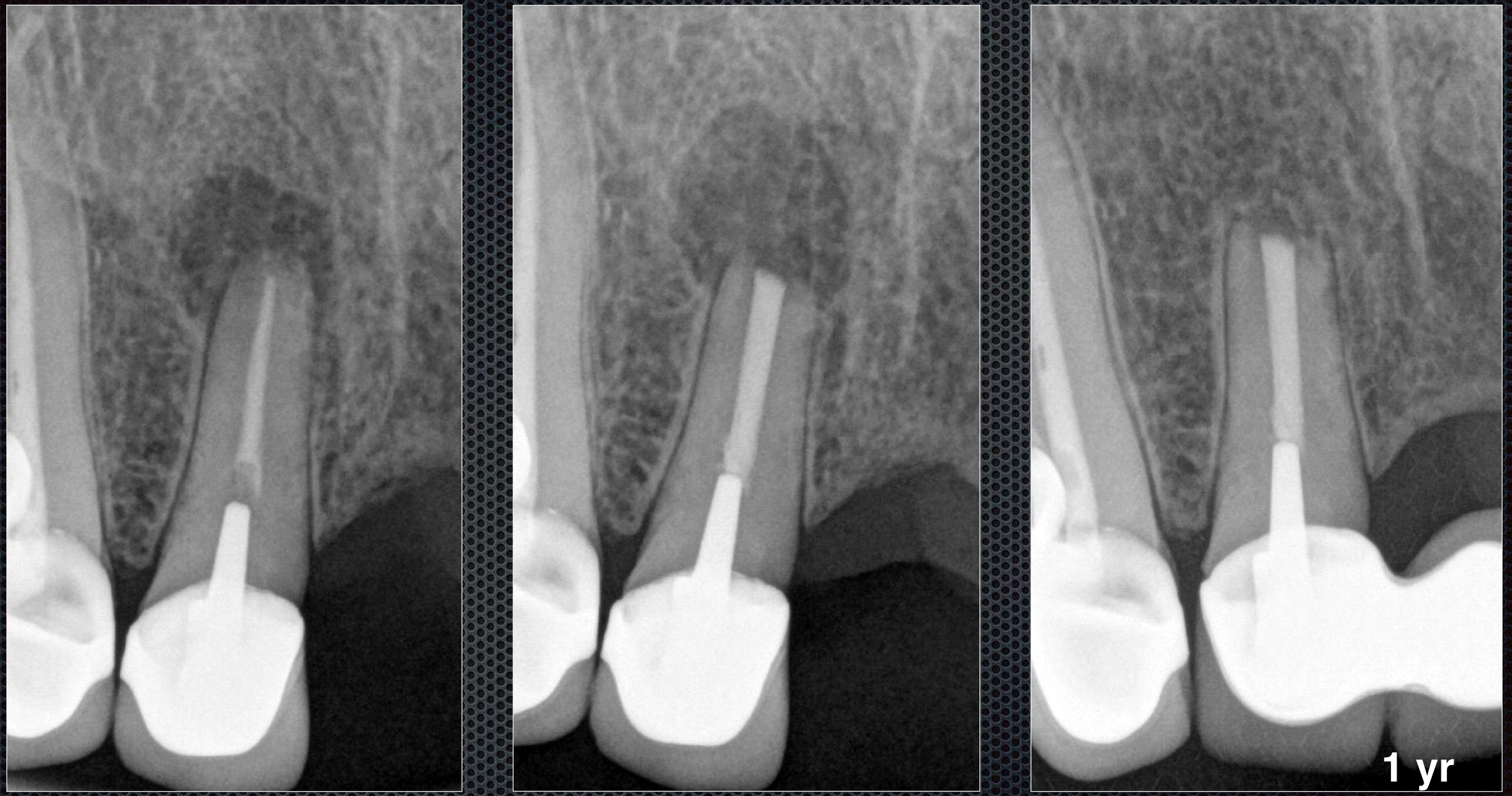
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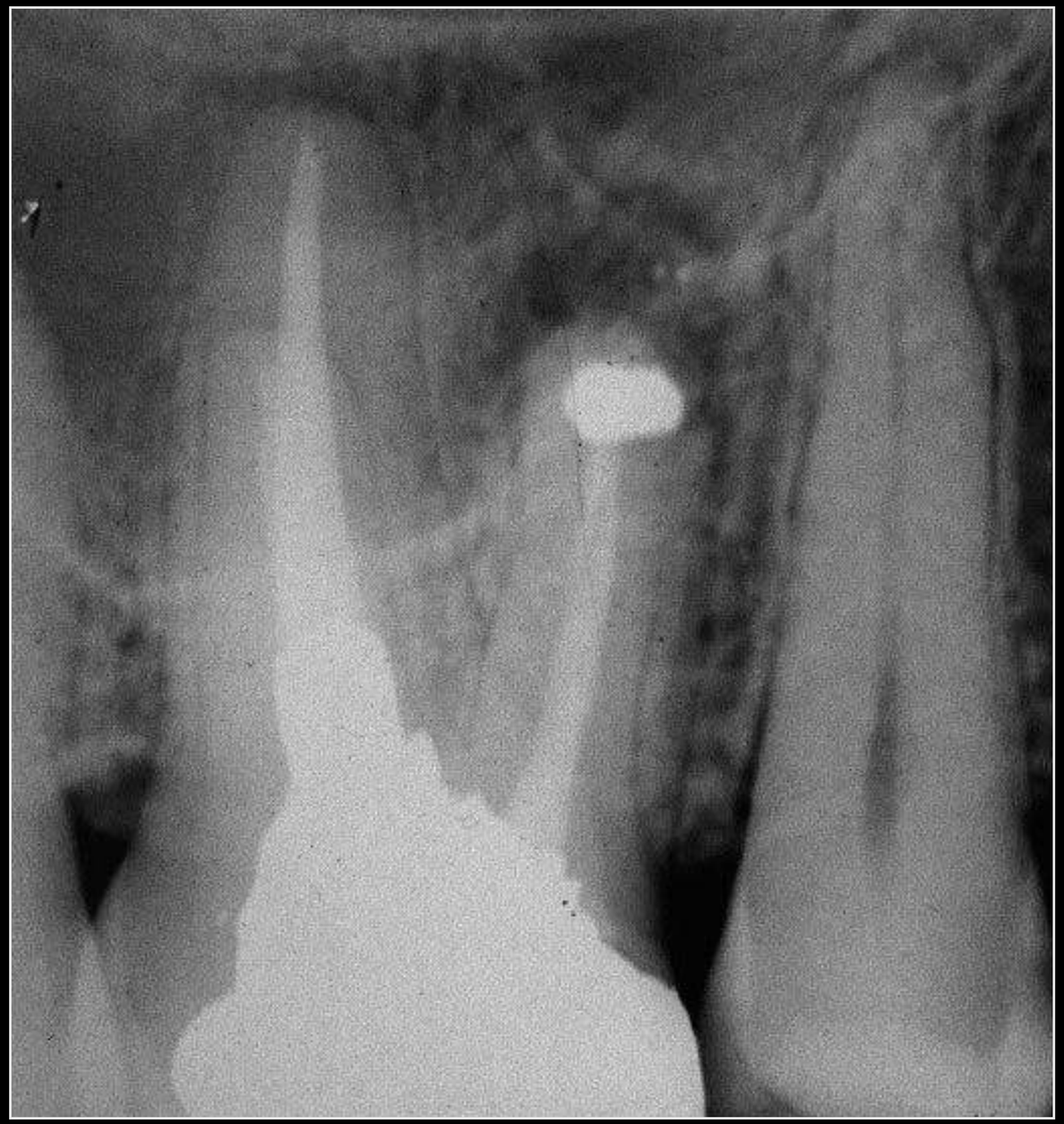

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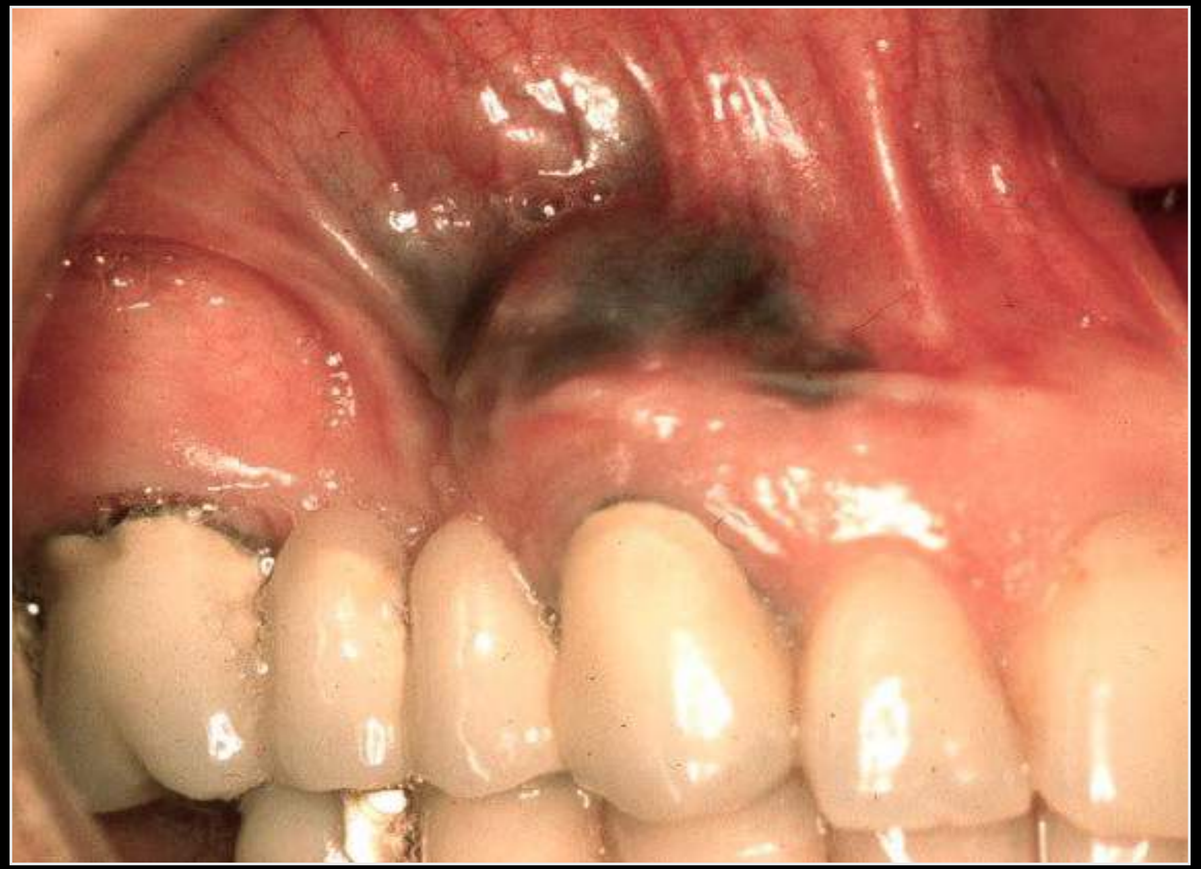

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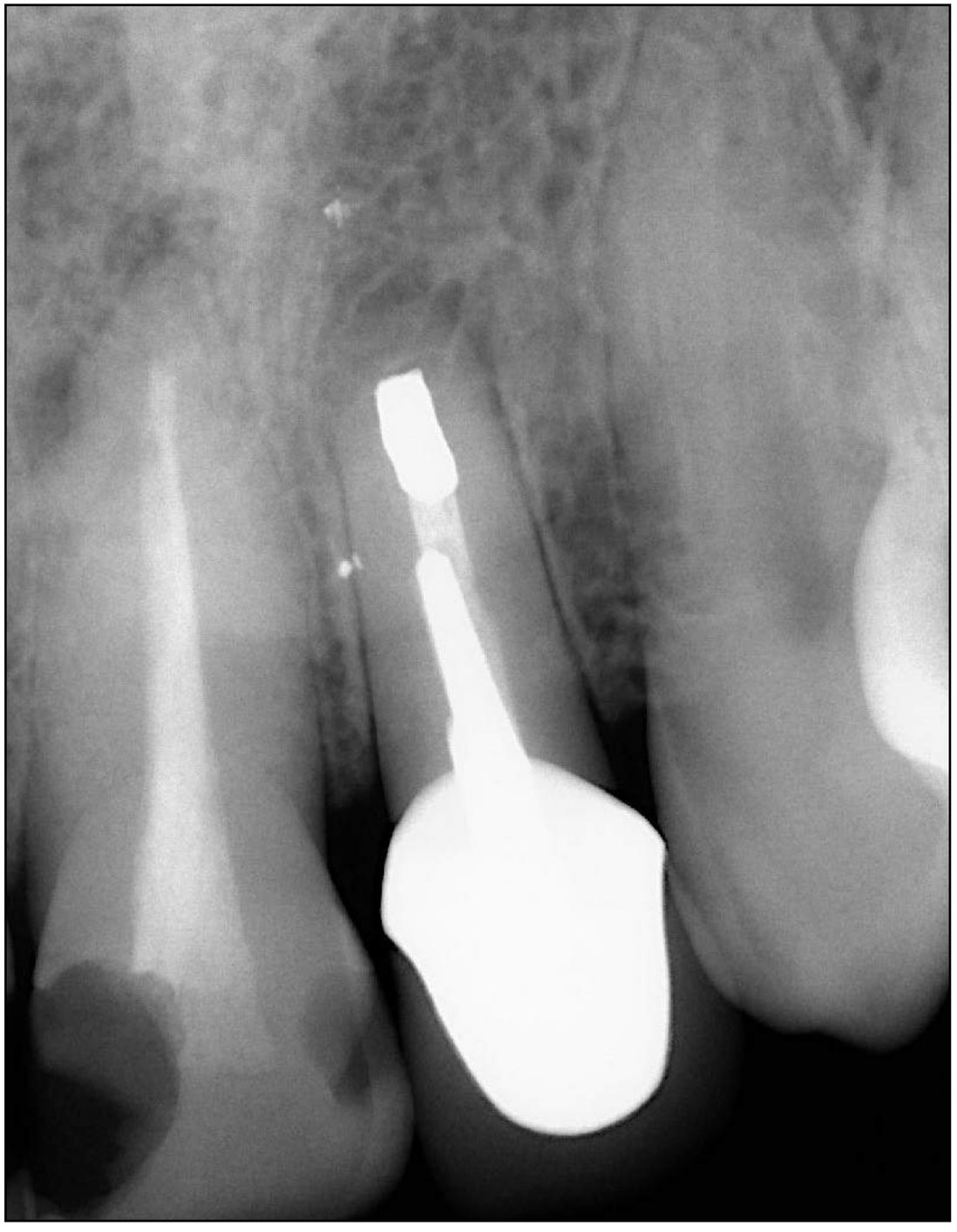

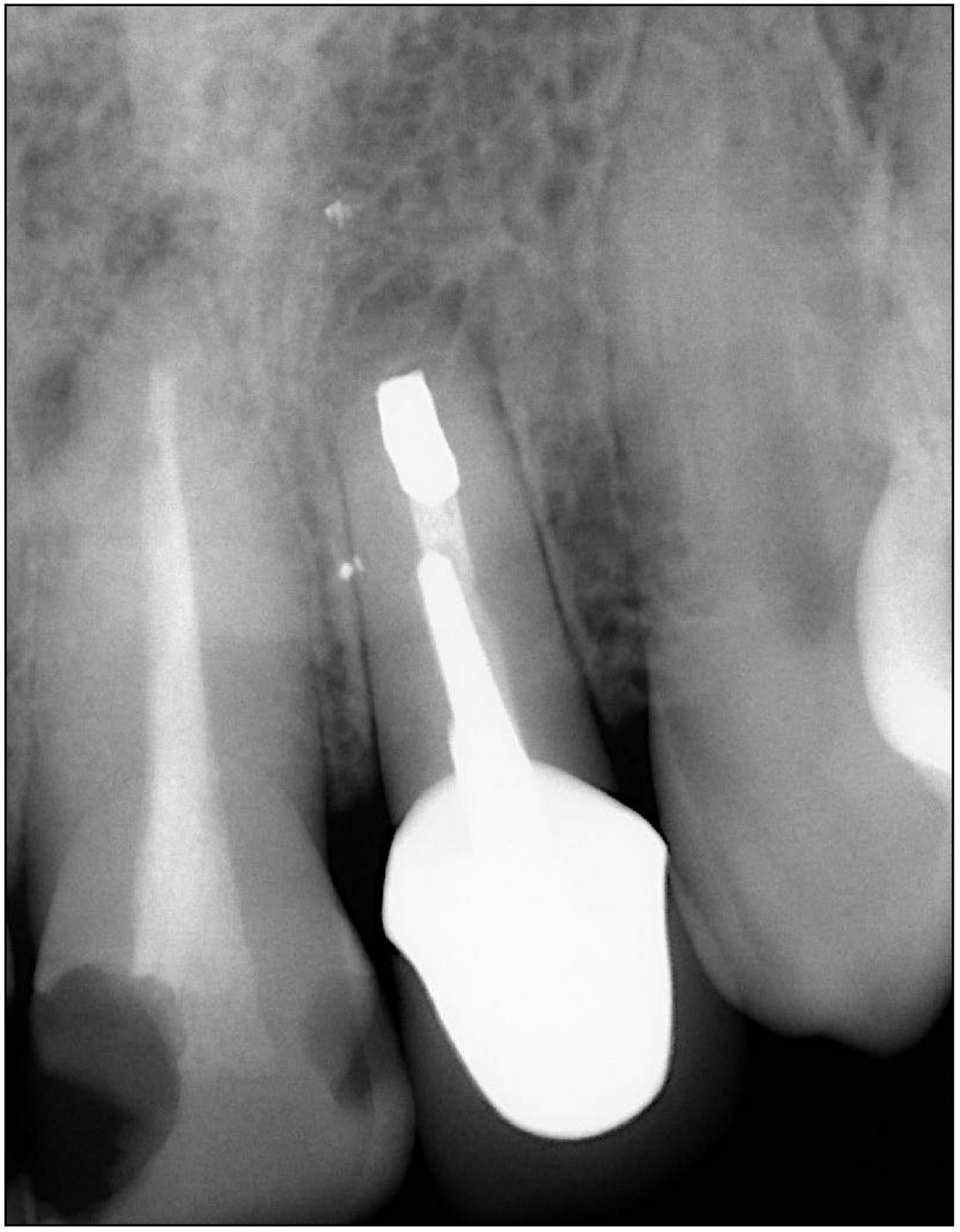

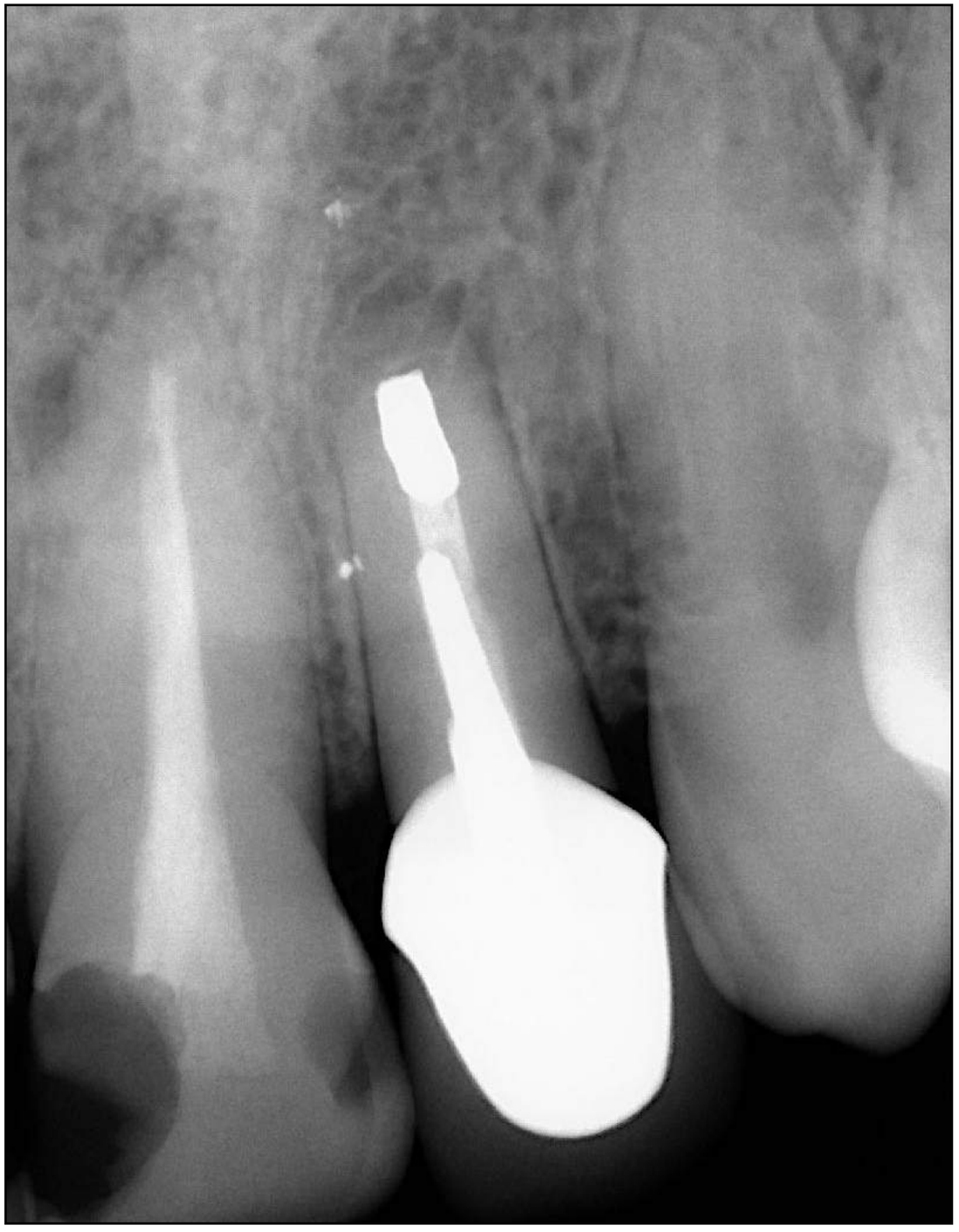

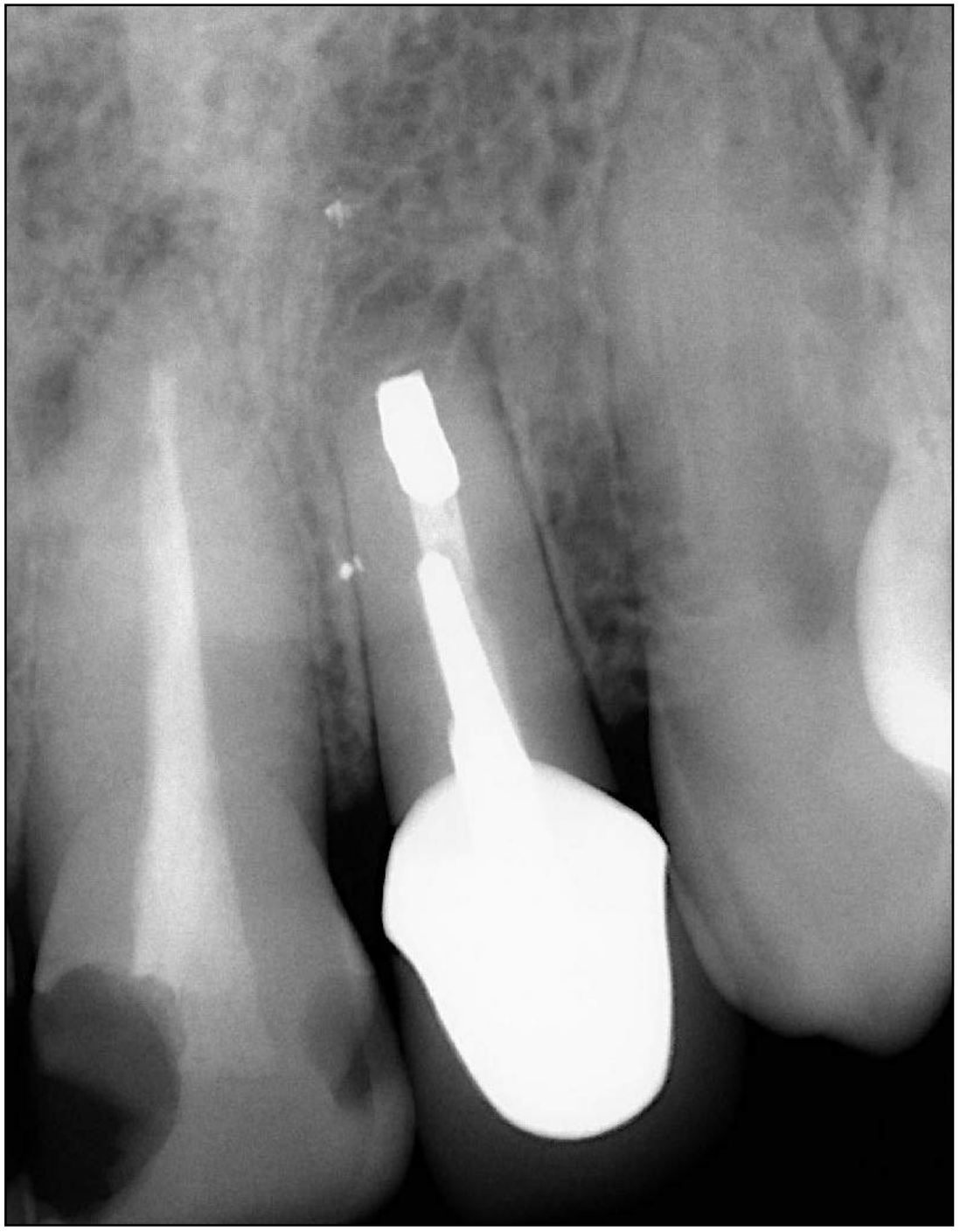


RVG 6200


TotalFill® BC RRM™ Fast Set Putty
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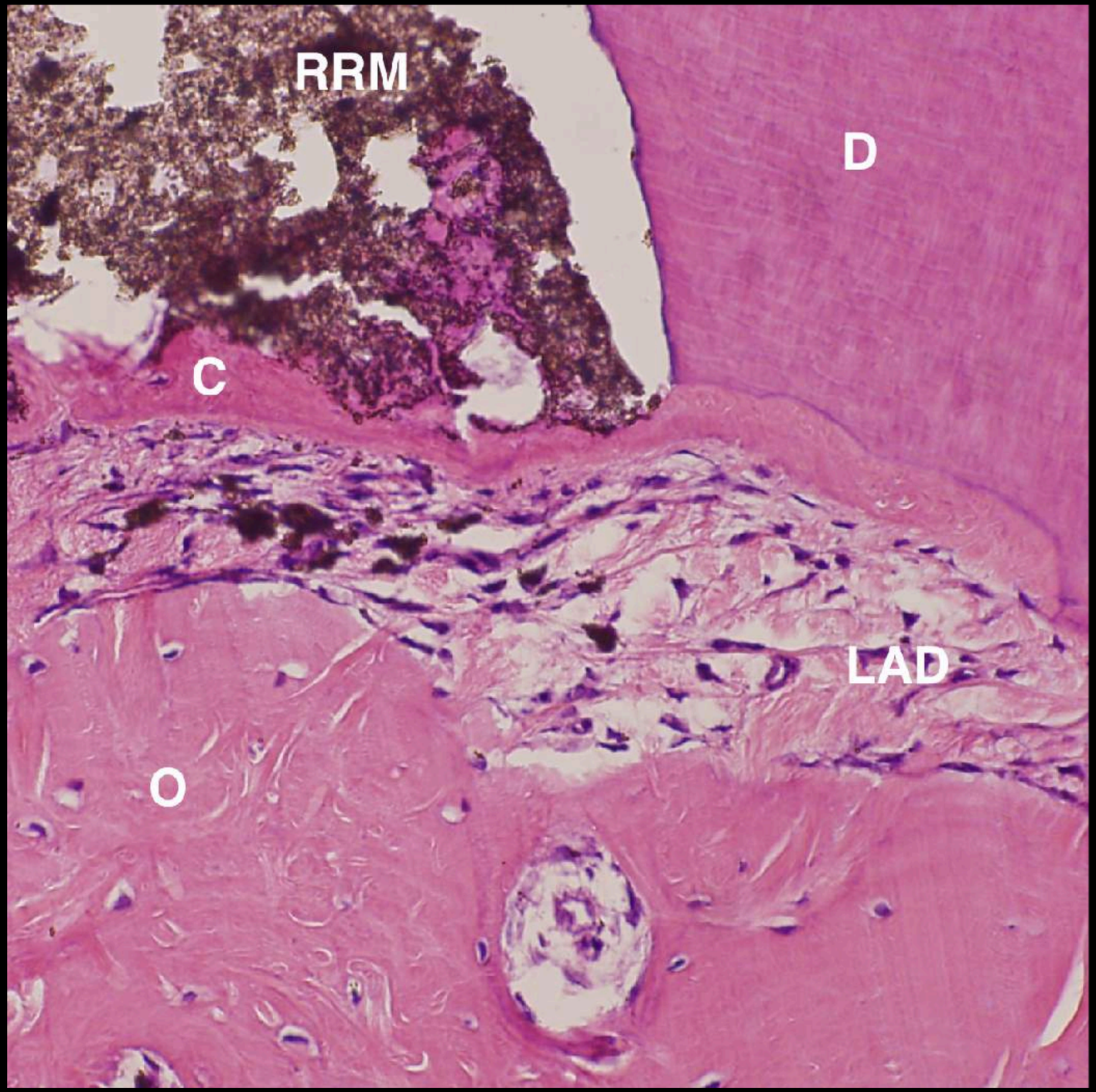
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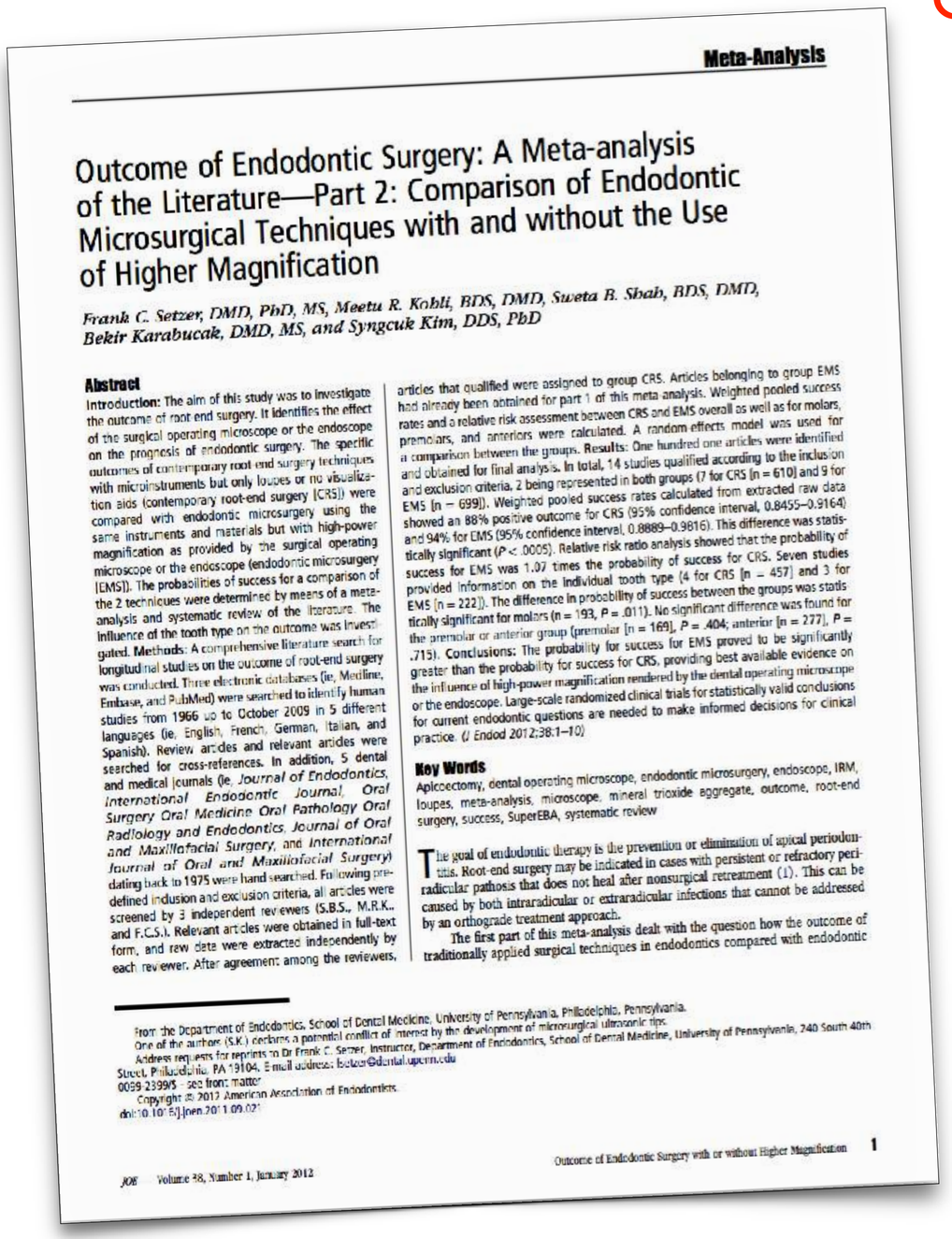

Meta-Analysis

Outcome of Endodontic Surgery: A Meta-analysis of the Literature—Part 2: Comparison of Endodontic Microsurgical Techniques with and without the Use of Higher Magnification

Frank C. Setzer, DMD, PhD, MS, Meetu R. Kohli, BDS, DMD, Sweta B. Shah, BDS, DMD, Bekir Karabucak, DMD, MS, and Syngcuk Kim, DDS, PhD

Abstract

Introduction: The aim of this study was to investigate the outcome of root-end surgery. It identifies the effect of the surgical operating microscope or the endoscope on the prognosis of endodontic surgery. The specific outcomes of contemporary root-end surgery techniques with microinstruments but only loupes or no visualization aids (contemporary root-end surgery [CRS]) were compared with endodontic microsurgery using the same instruments and materials but with high-power magnification as provided by the surgical operating microscope or the endoscope (endodontic microsurgery [EMS]). The probabilities of success for a comparison of the 2 techniques were determined by means of a meta-analysis and systematic review of the literature. The influence of the tooth type on the outcome was investigated. **Methods:** A comprehensive literature search for longitudinal studies on the outcome of root-end surgery was conducted. Three electronic databases (ie, Medline, Embase, and PubMed) were searched to identify human studies from 1966 up to October 2009 in 5 different languages (ie, English, French, German, Italian, and Spanish). Review articles and relevant articles were searched for cross-references. In addition, 5 dental and medical journals (ie, *Journal of Endodontics, International Endodontic Journal, Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics, Journal of Oral and Maxillofacial Surgery, and International Journal of Oral and Maxillofacial Surgery*) dating back to 1975 were hand searched. Following predefined inclusion and exclusion criteria, all articles were screened by 3 independent reviewers (S.B.S., M.R.K., and F.C.S.). Relevant articles were obtained in full-text form, and raw data were extracted independently by each reviewer. After agreement among the reviewers, articles that qualified were assigned to group CRS. Articles belonging to group EMS had already been obtained for part 1 of this meta-analysis. Weighted pooled success rates and a relative risk assessment between CRS and EMS overall as well as for molars, premolars, and anteriors were calculated. A random effects model was used for a comparison between the groups. **Results:** One hundred one articles were identified and obtained for final analysis. In total, 14 studies qualified according to the inclusion and exclusion criteria, 2 being represented in both groups (7 for CRS [n = 610] and 9 for EMS [n = 699]). Weighted pooled success rates calculated from extracted raw data showed an 88% positive outcome for CRS (95% confidence interval, 0.8455–0.9164) and 94% for EMS (95% confidence interval, 0.8889–0.9816). This difference was statistically significant ($P < .0005$). Relative risk ratio analysis showed that the probability of success for EMS was 1.07 times the probability of success for CRS. Seven studies provided information on the individual tooth type (4 for CRS [n = 457] and 3 for EMS [n = 222]). The difference in probability of success between the groups was statistically significant for molars (n = 193, $P = .011$). No significant difference was found for the premolar or anterior group (premolar [n = 169], $P = .404$; anterior [n = 277], $P = .715$). **Conclusions:** The probability for success for EMS proved to be significantly greater than the probability for success for CRS, providing best available evidence on the influence of high-power magnification rendered by the dental operating microscope or the endoscope. Large-scale randomized clinical trials for statistically valid conclusions for current endodontic questions are needed to make informed decisions for clinical practice. (*J Endod 2012;38:1–10*)

Key Words

Apicoectomy, dental operating microscope, endodontic microsurgery, endoscope, IRM, loupes, meta-analysis, microscope, mineral trioxide aggregate, outcome, root-end surgery, success, SuperEBA, systematic review

The goal of endodontic therapy is the prevention or elimination of apical periodontitis. Root-end surgery may be indicated in cases with persistent or refractory periradicular pathosis that does not heal after nonsurgical retreatment (1). This can be caused by both intraradicular or extraradicular infections that cannot be addressed by an orthograde treatment approach.

The first part of this meta-analysis dealt with the question how the outcome of traditionally applied surgical techniques in endodontics compared with endodontic

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One of the authors (S.K.) declares a potential conflict of interest by the development of microsurgical ultrasonic tips.

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0099-2399/$ - see front matter

doi:10.1016/j.joen.2011.09.021

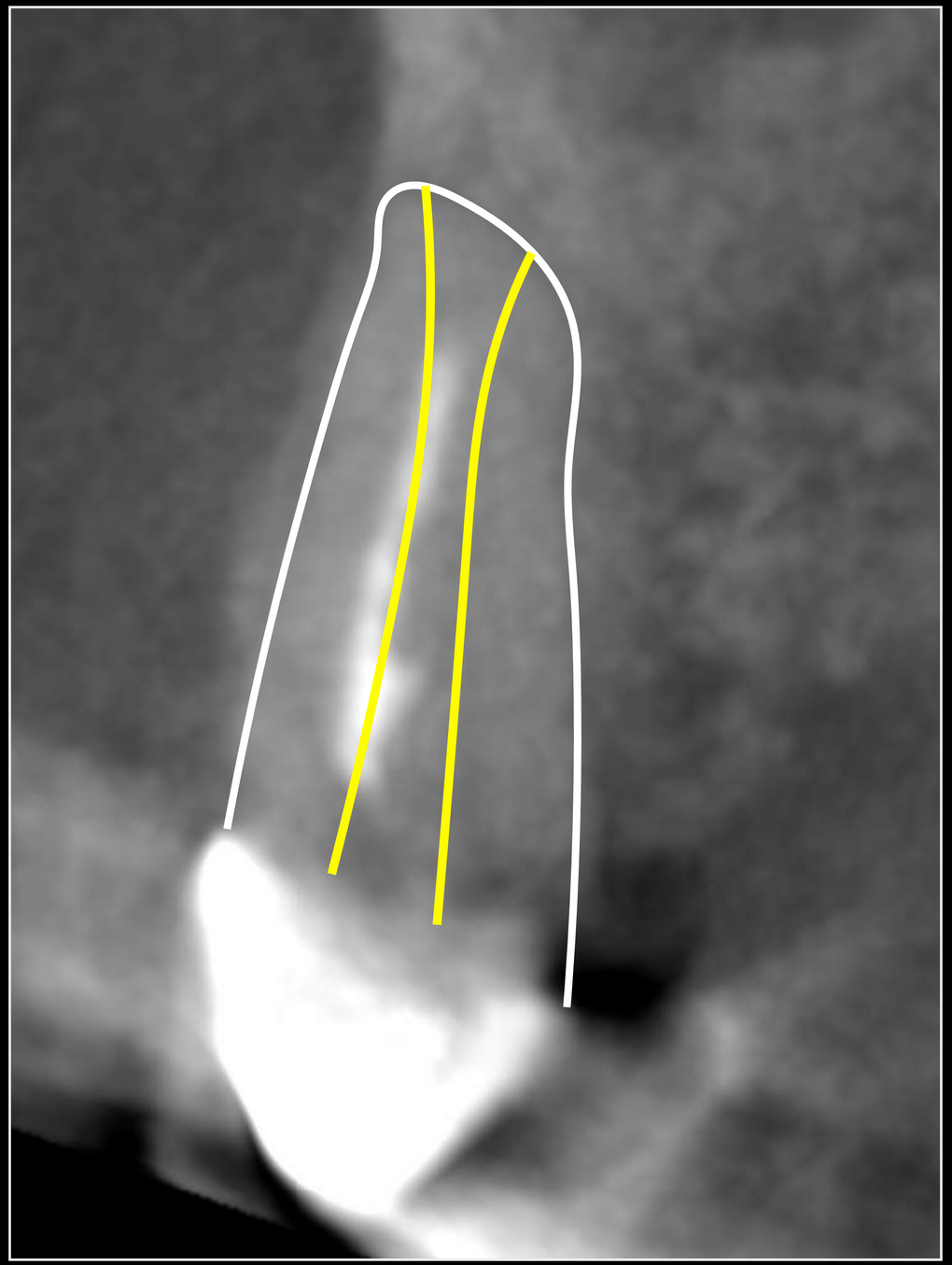
Outcome of Endodontic Surgery: A Meta-analysis of the Litterature-Part 2: Comparison of Endodontic Microsurgical Techniques with and without the Use of Higher Magnification

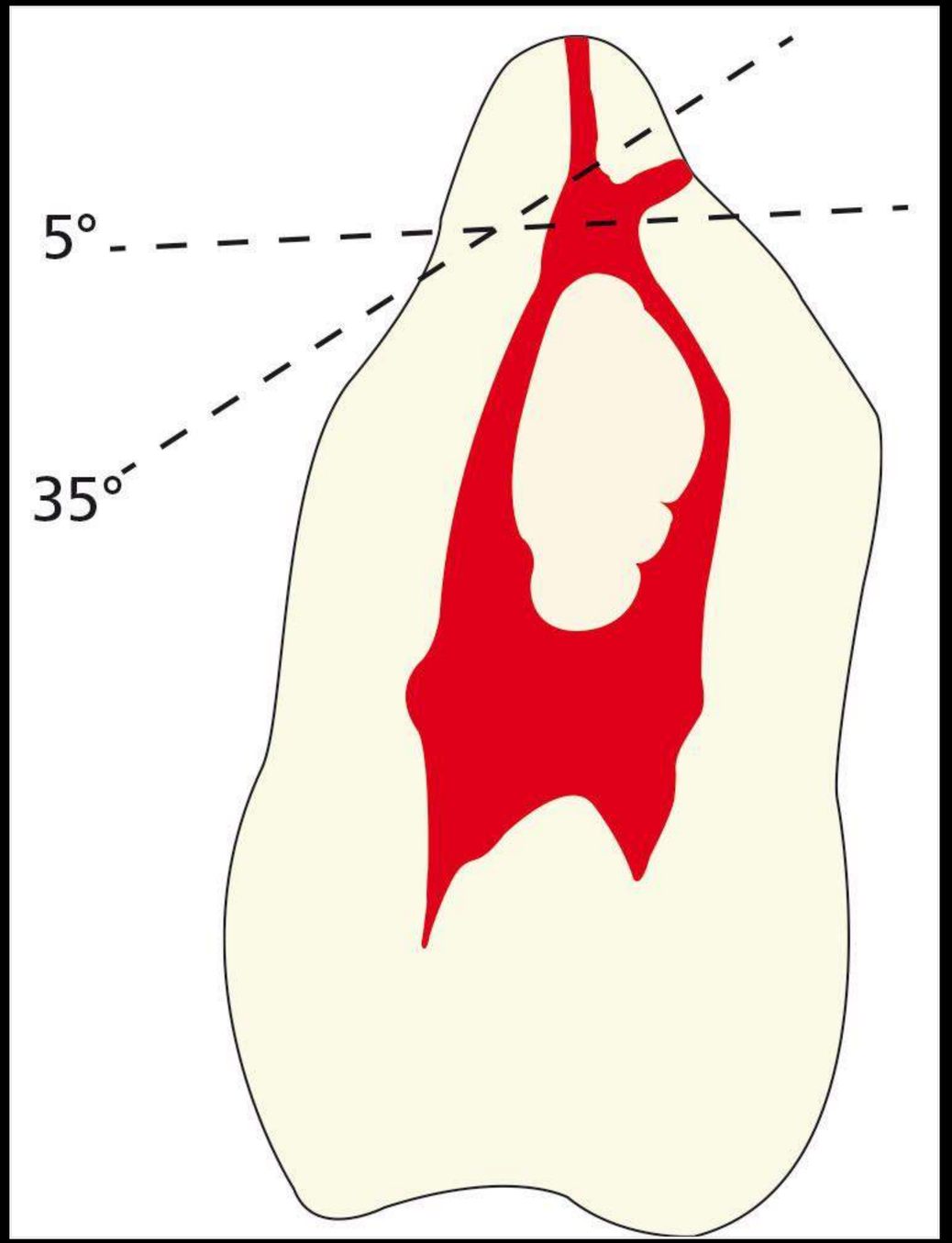
Meilleur taux de succès sur

les molaires

JOE - 38(1); 2012

The root canal anatomy project

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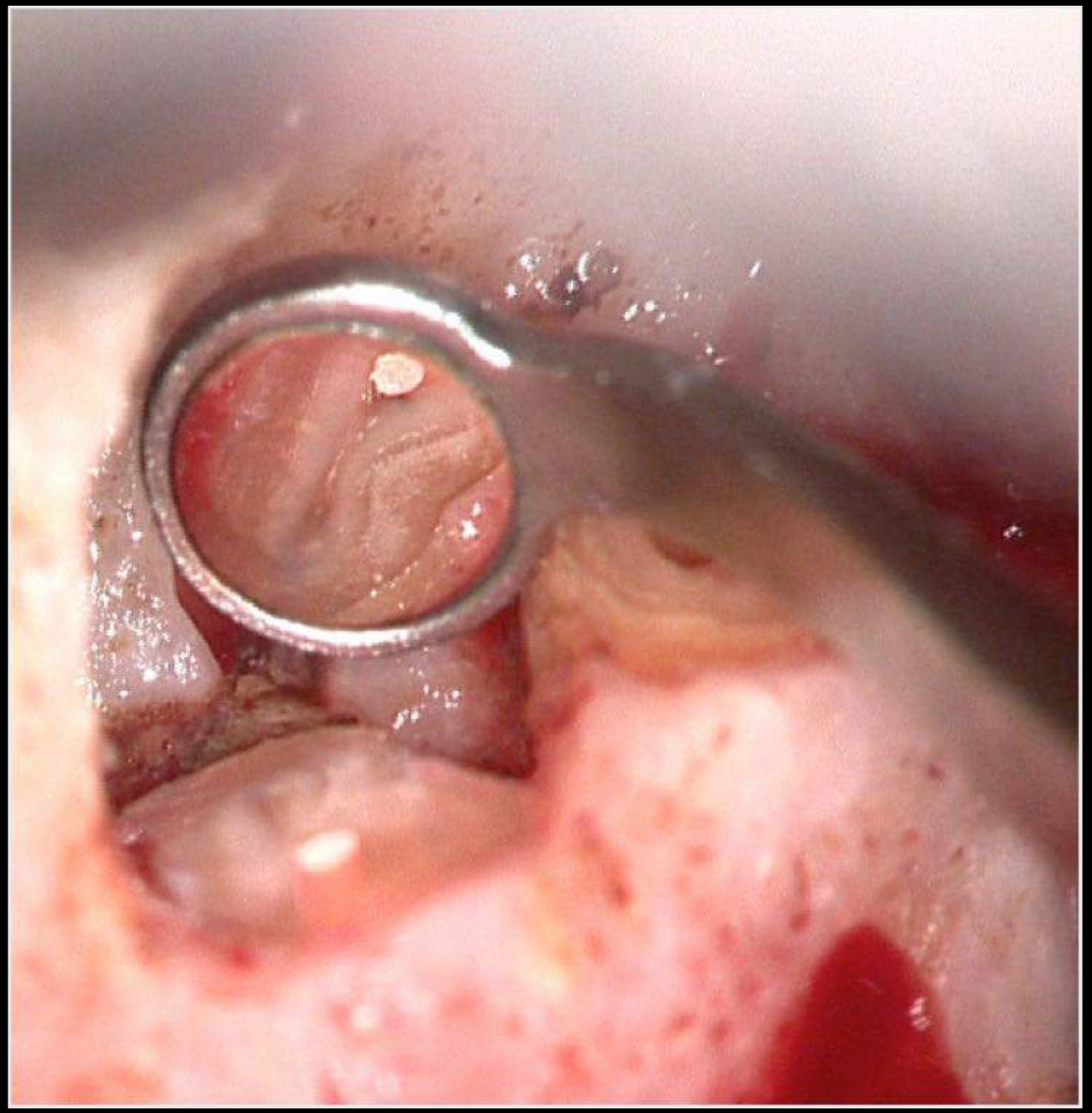
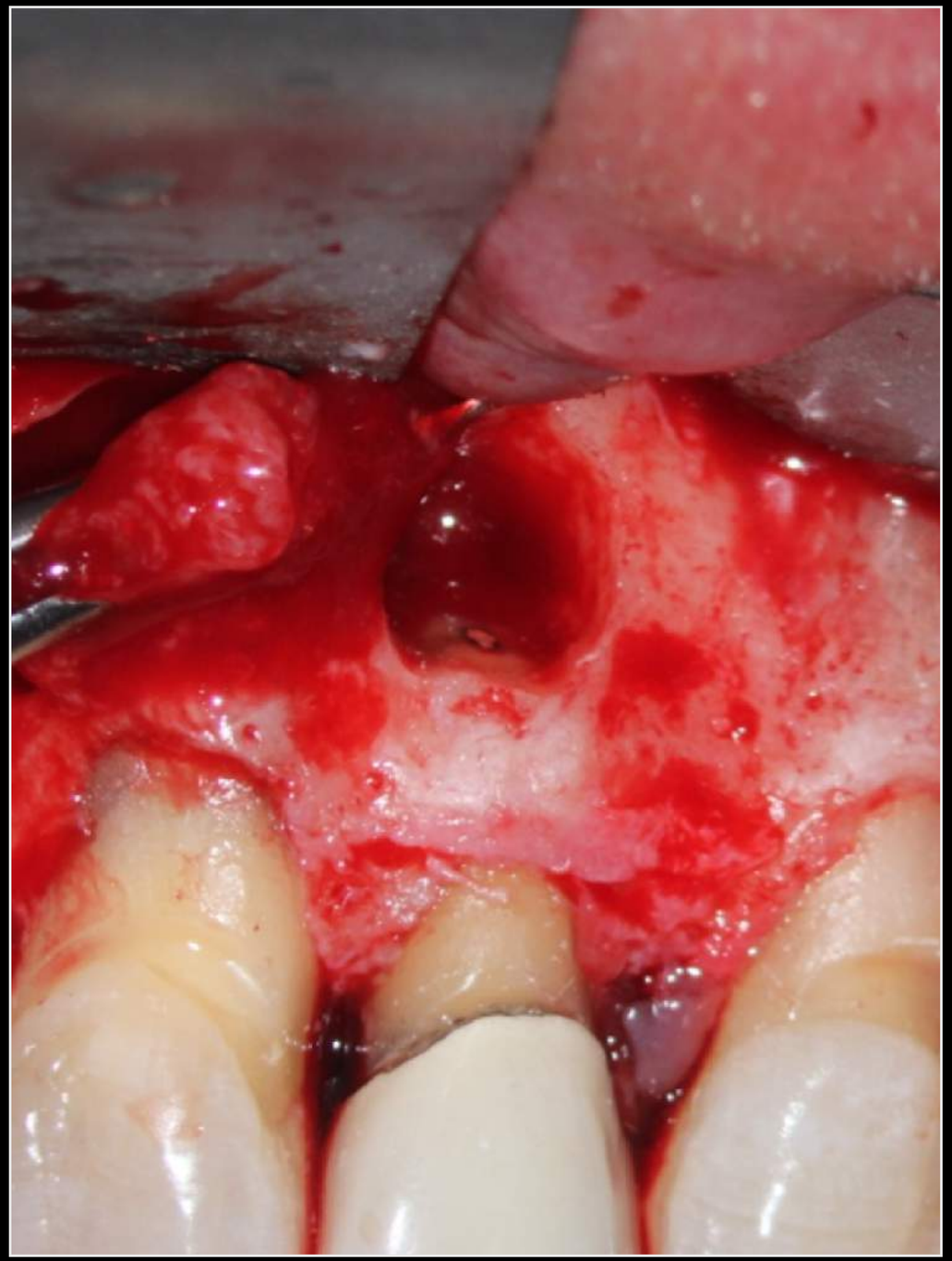
35°

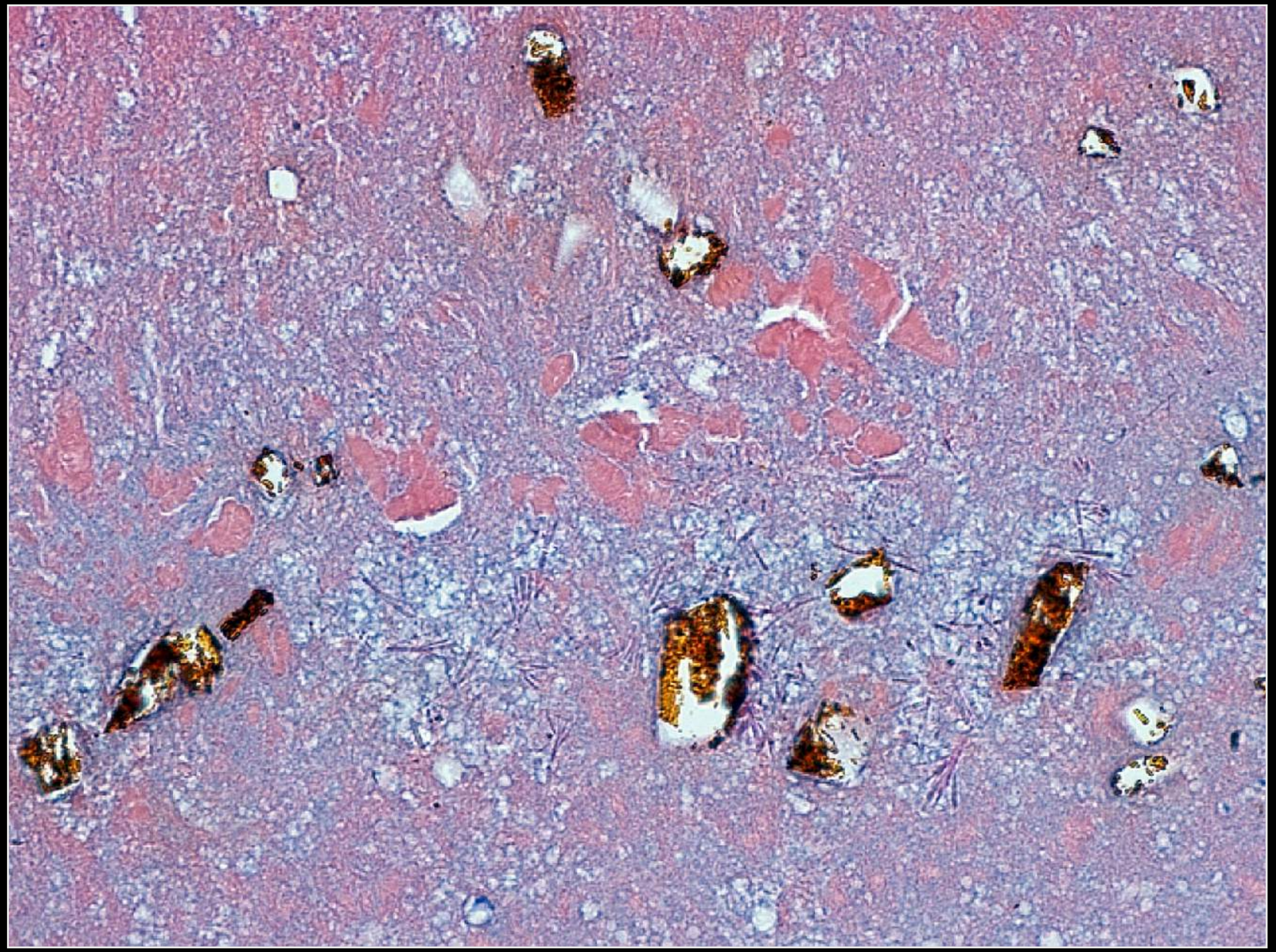


B. Khayat

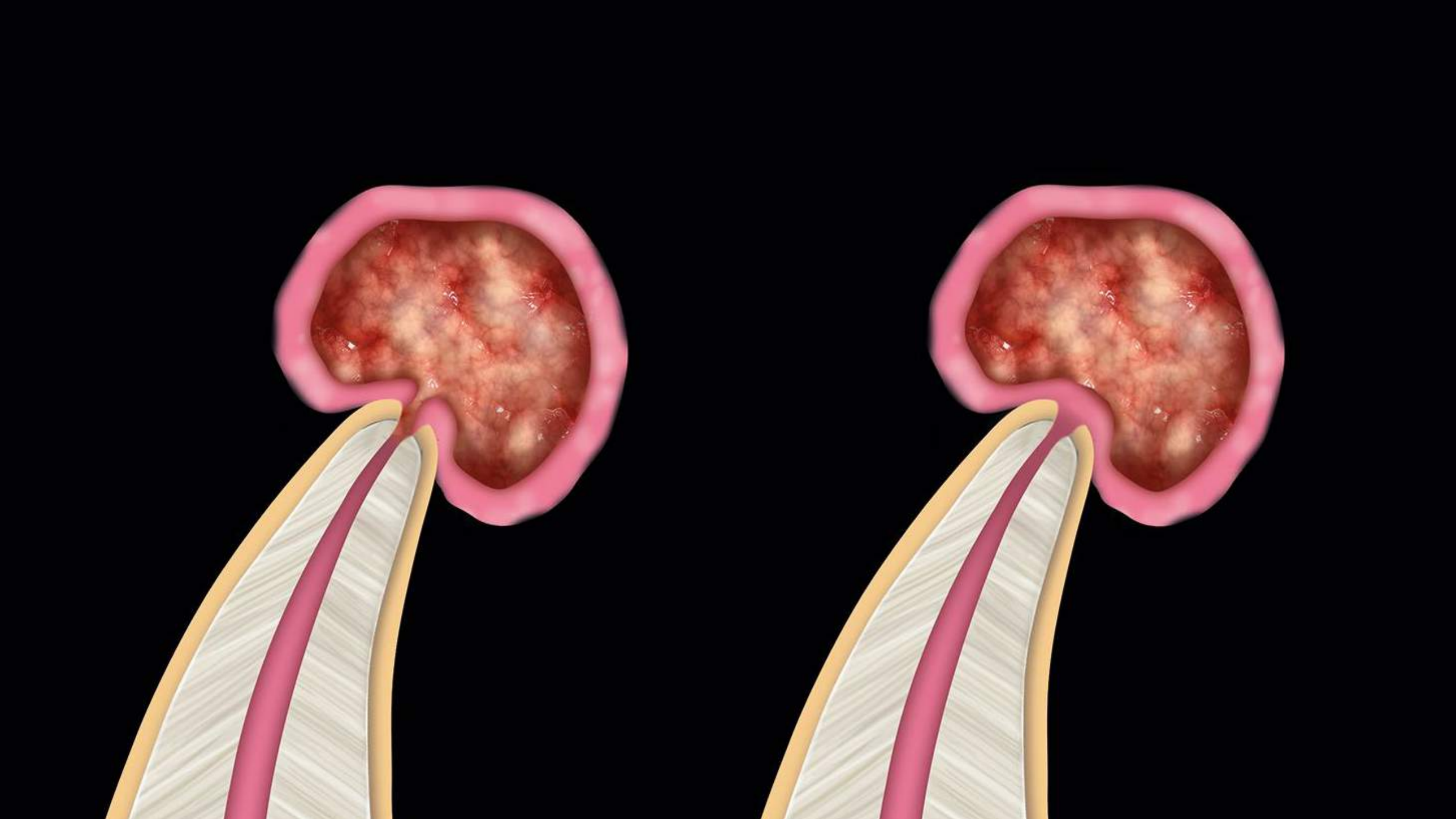
Traitement endodontique adéquat

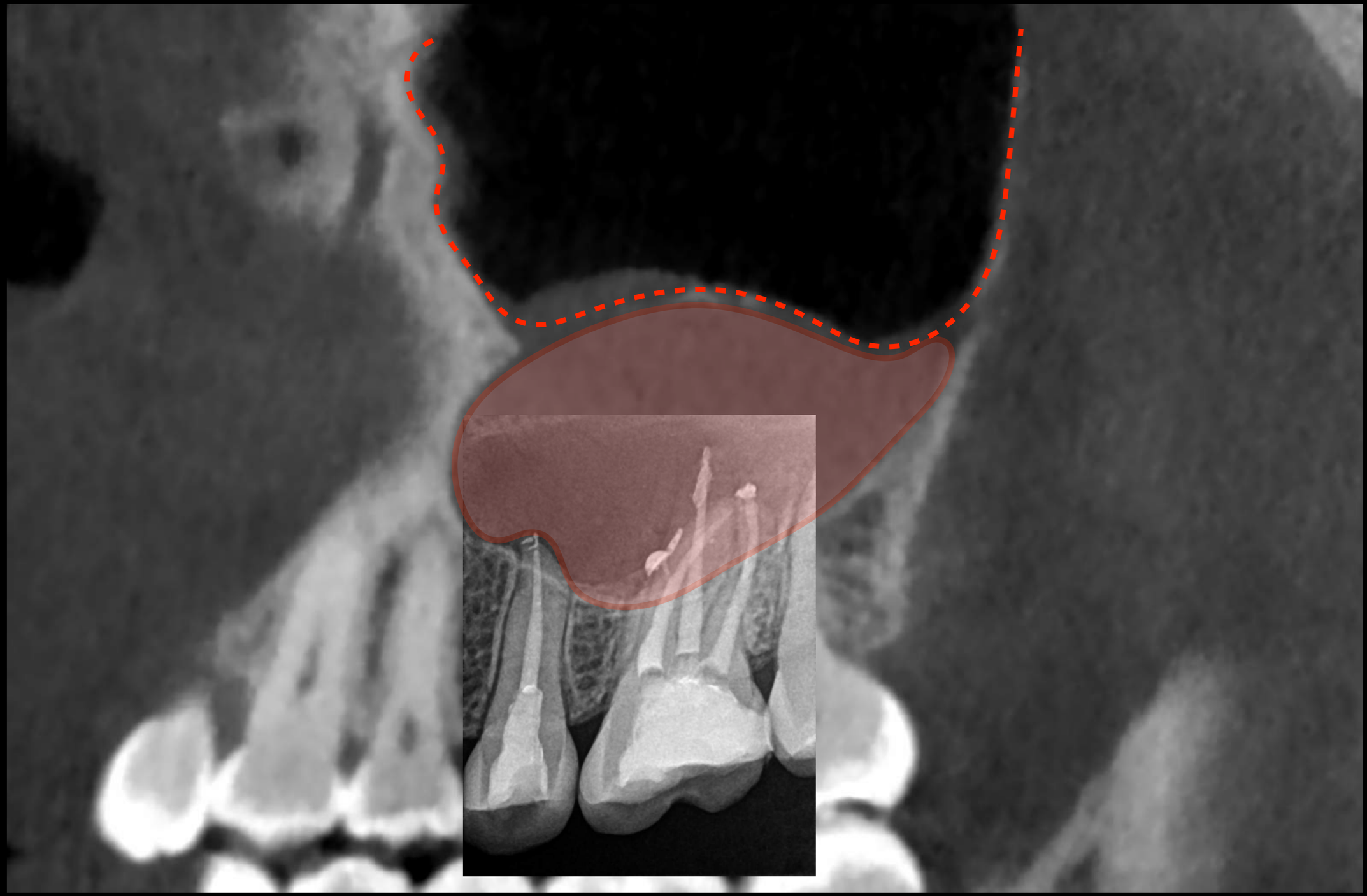
Infection extra-radiculaire

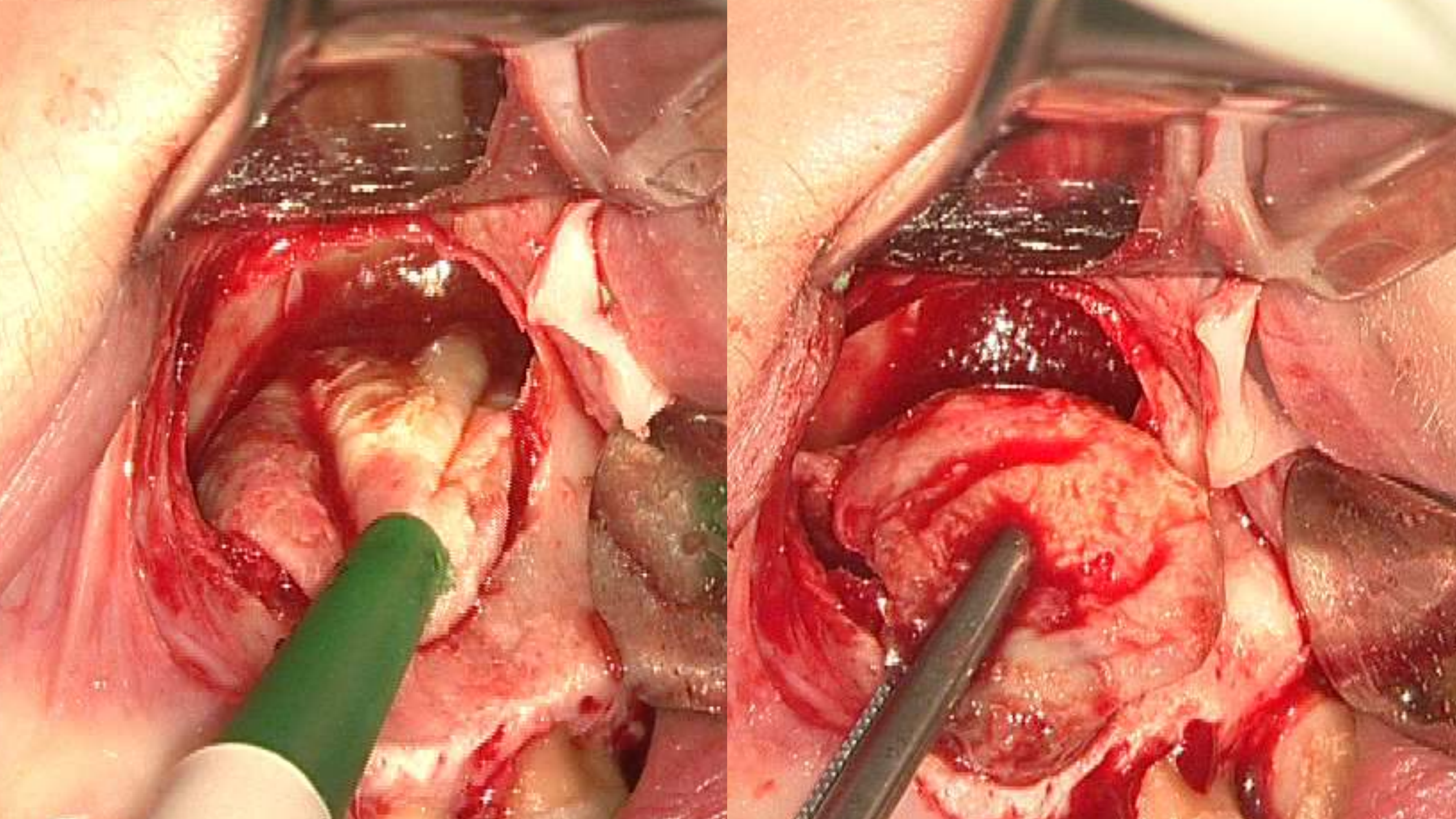


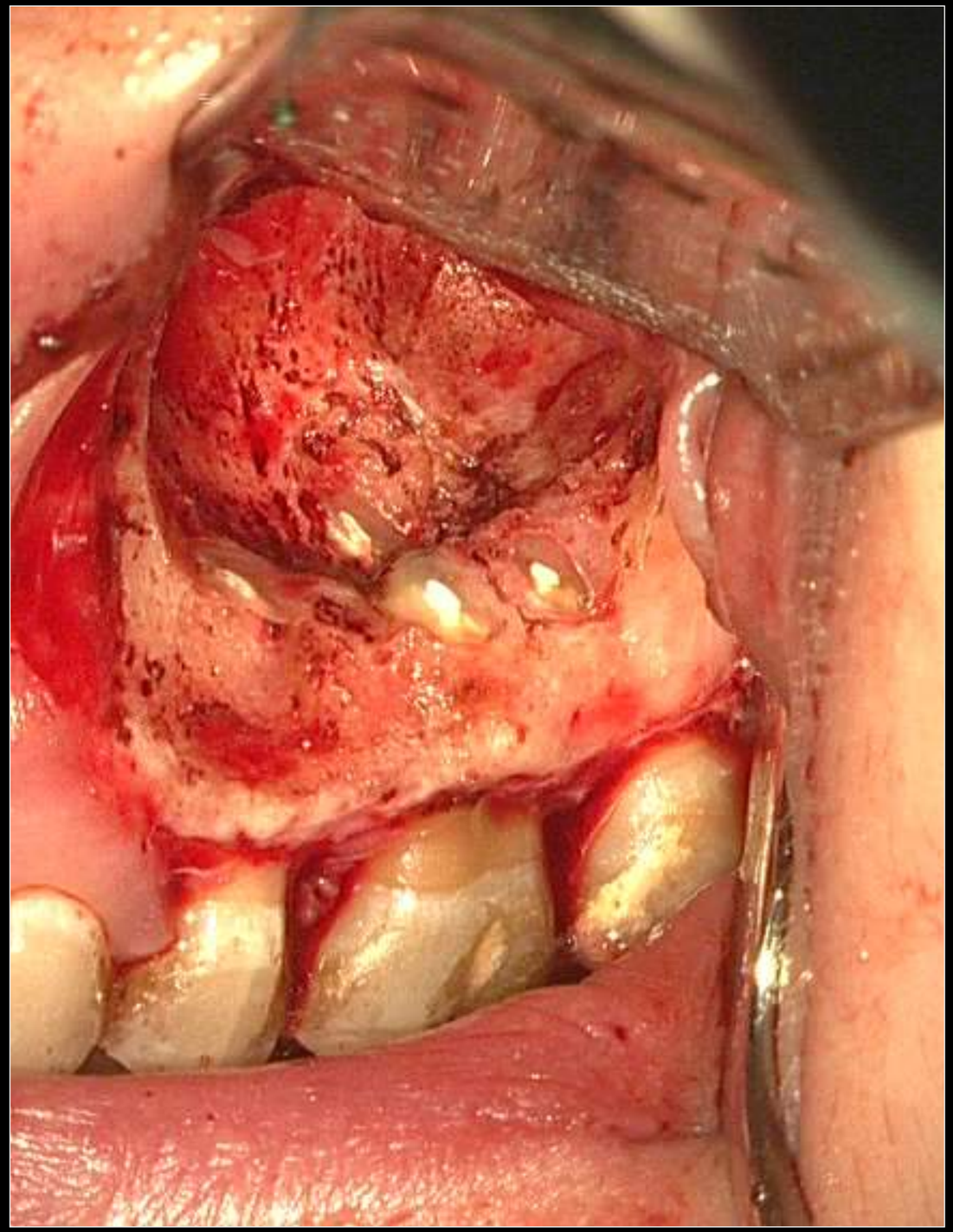


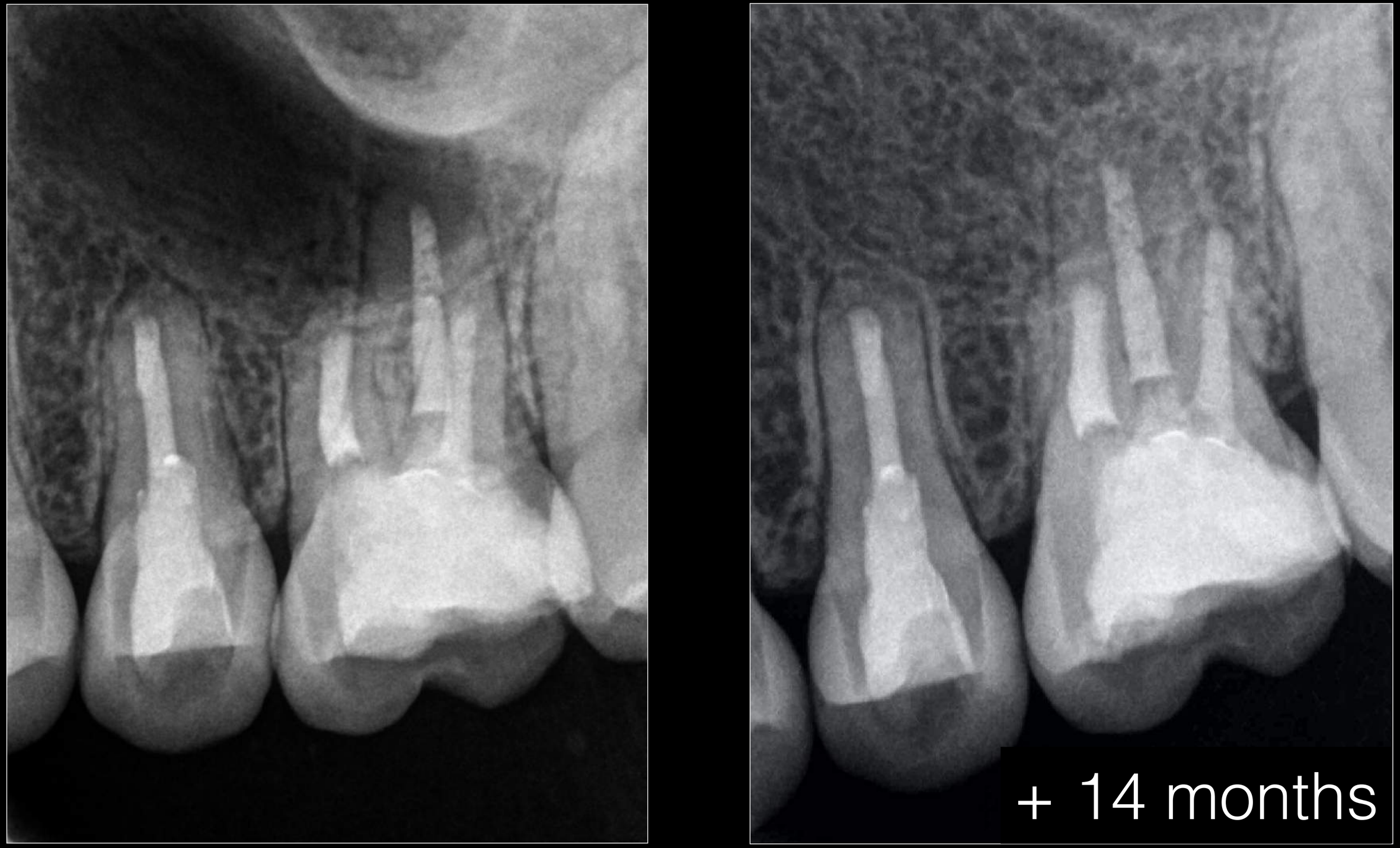

Kystos

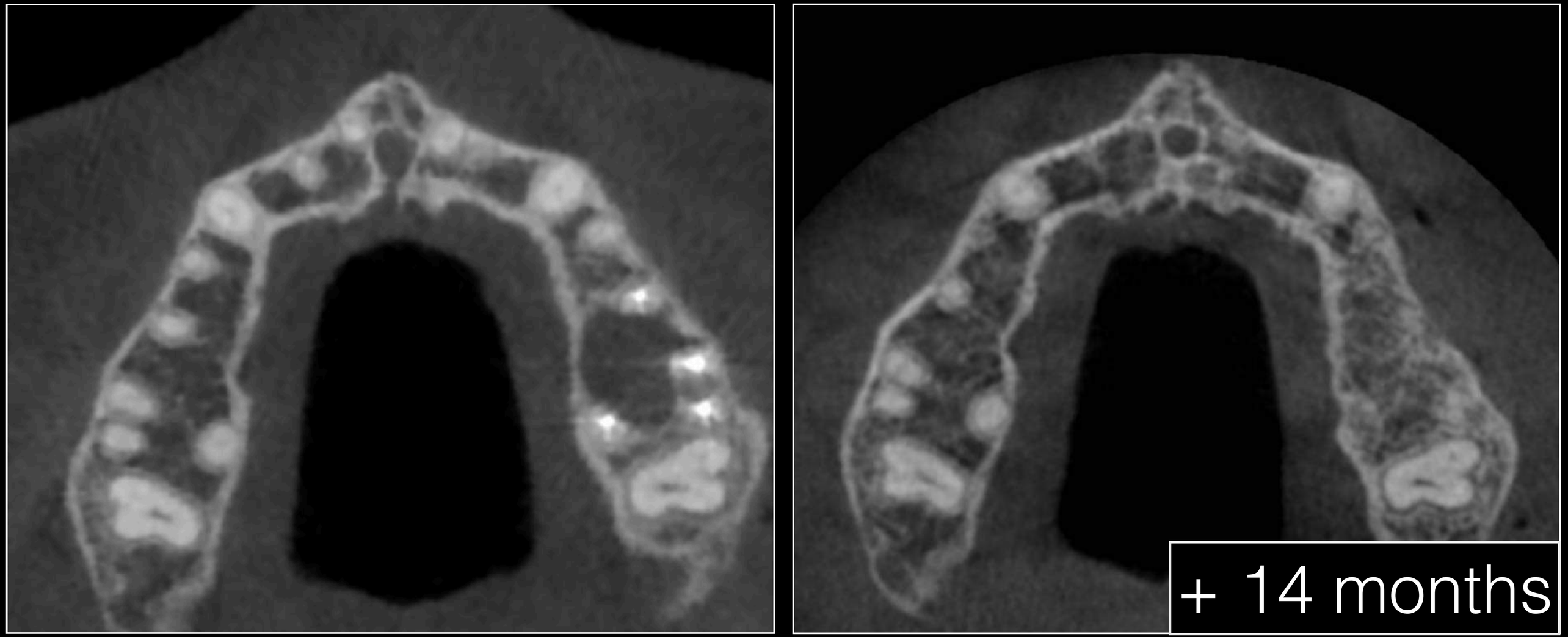






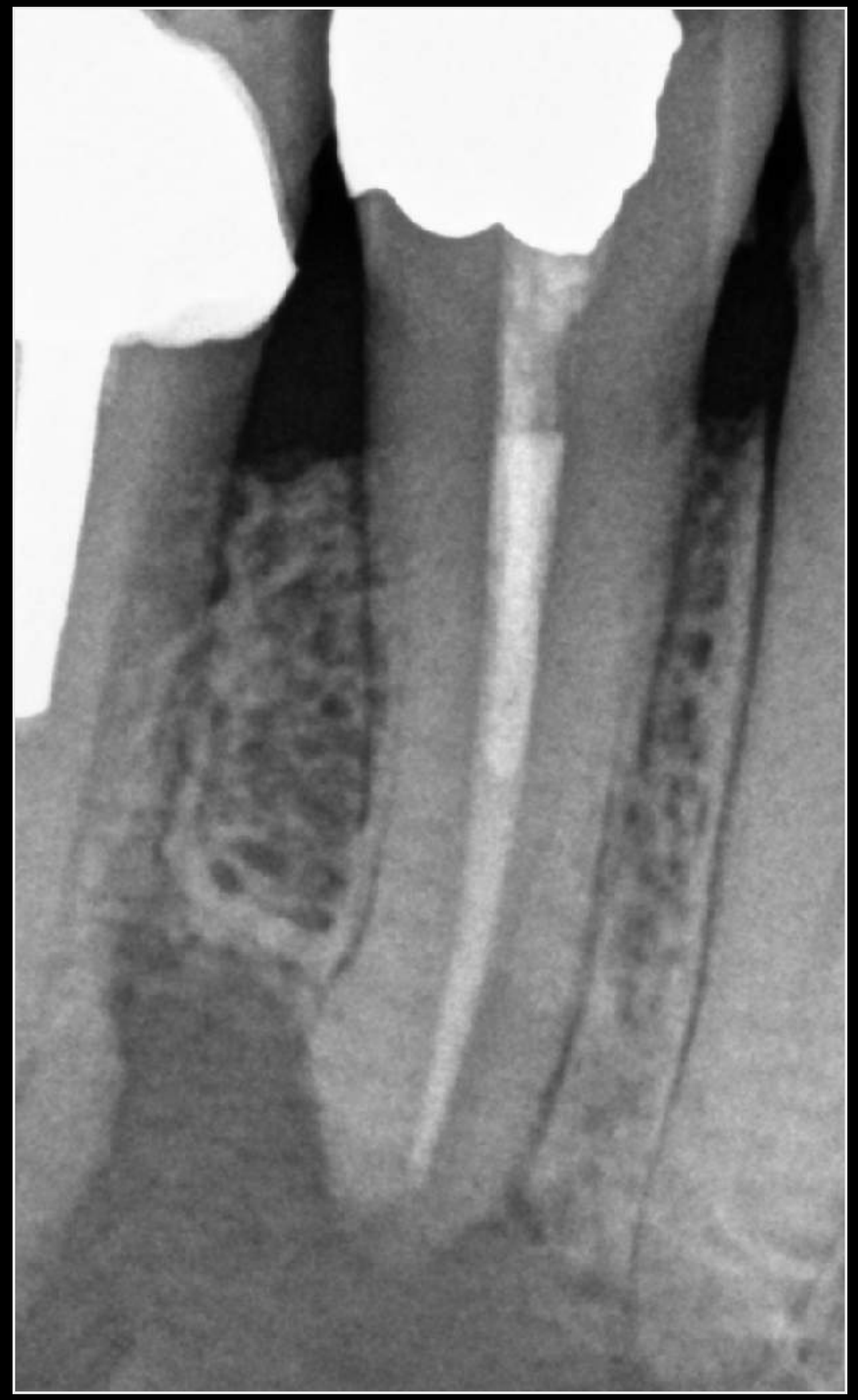


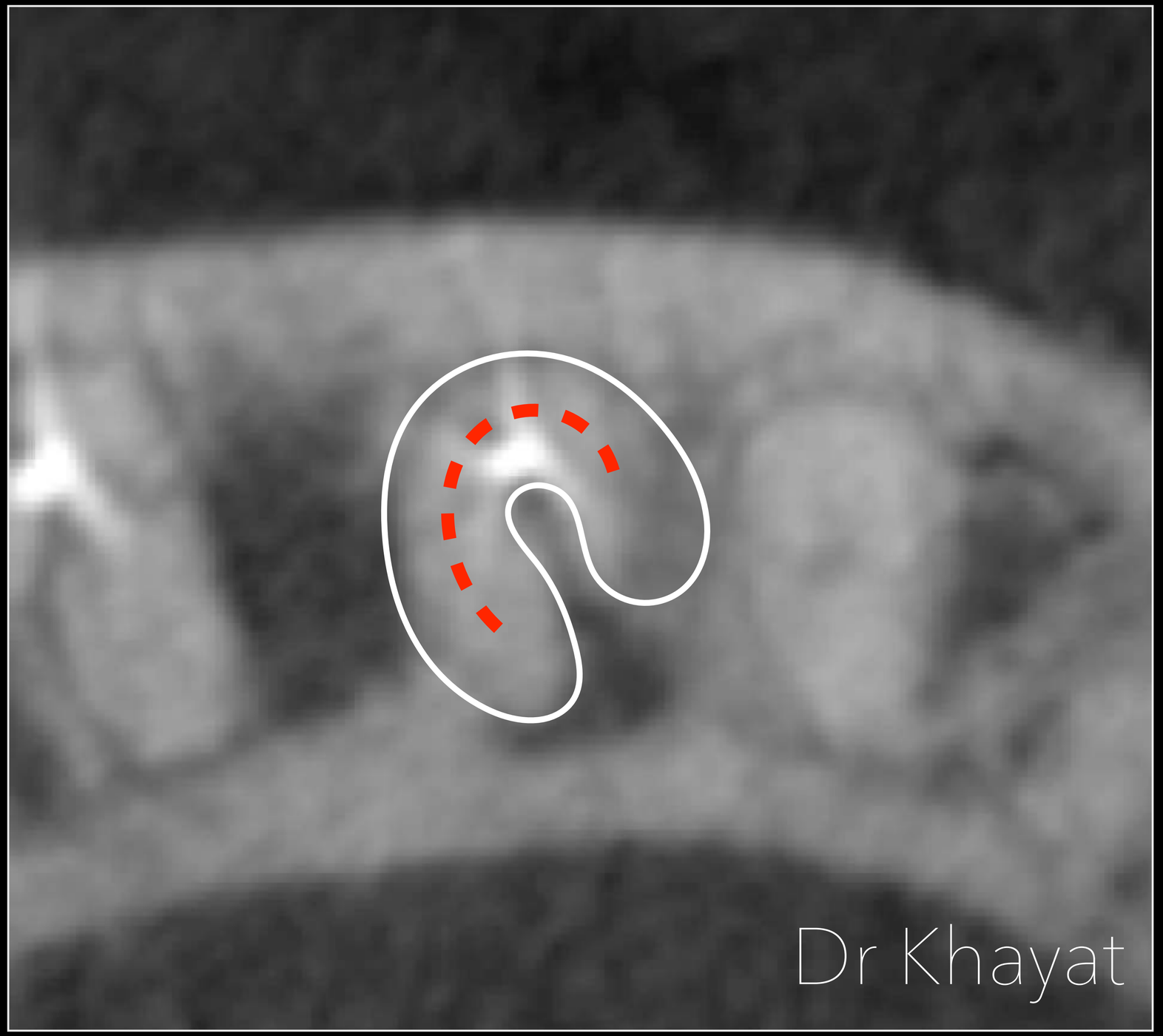

+ 14 months

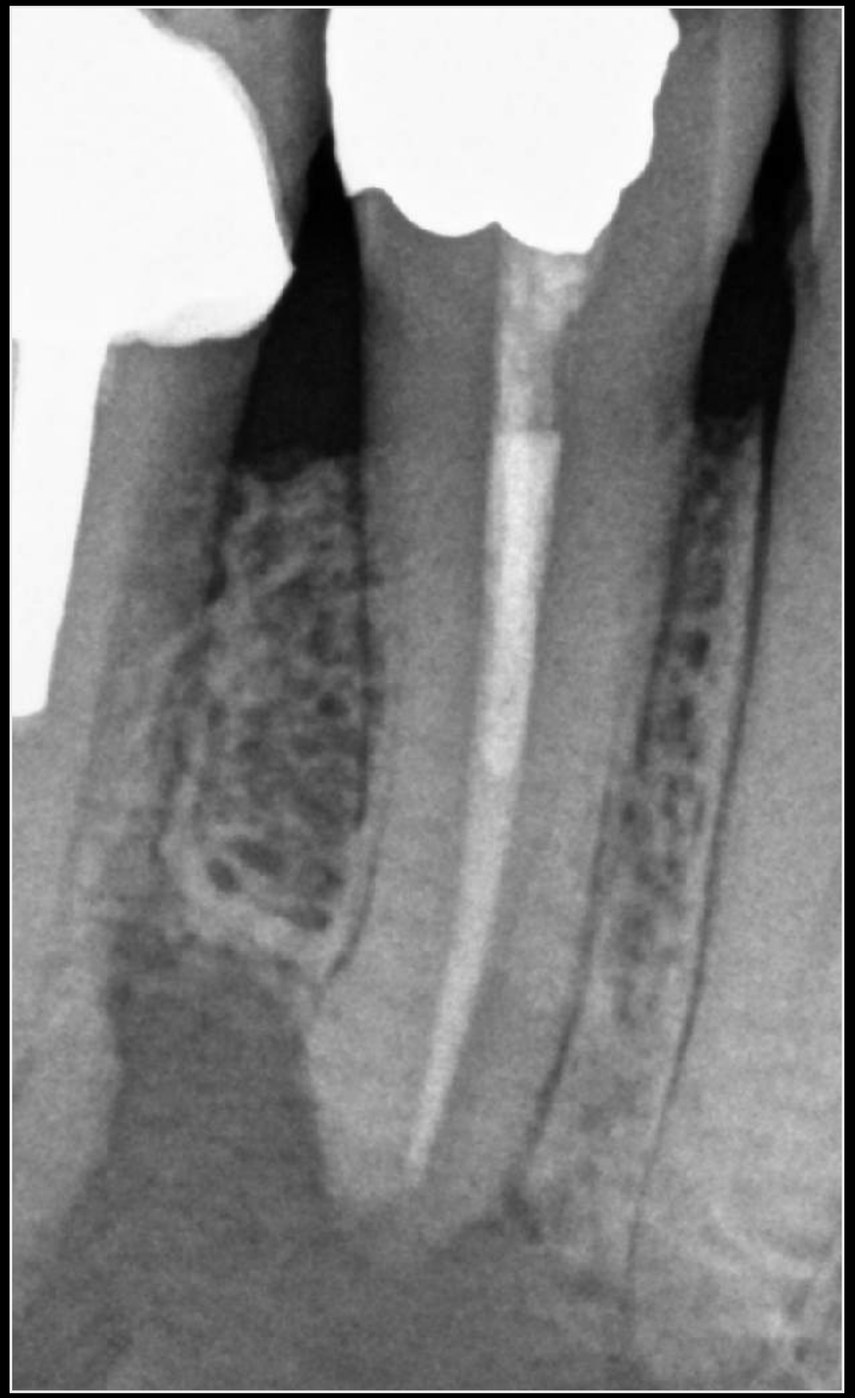

+ 14 months

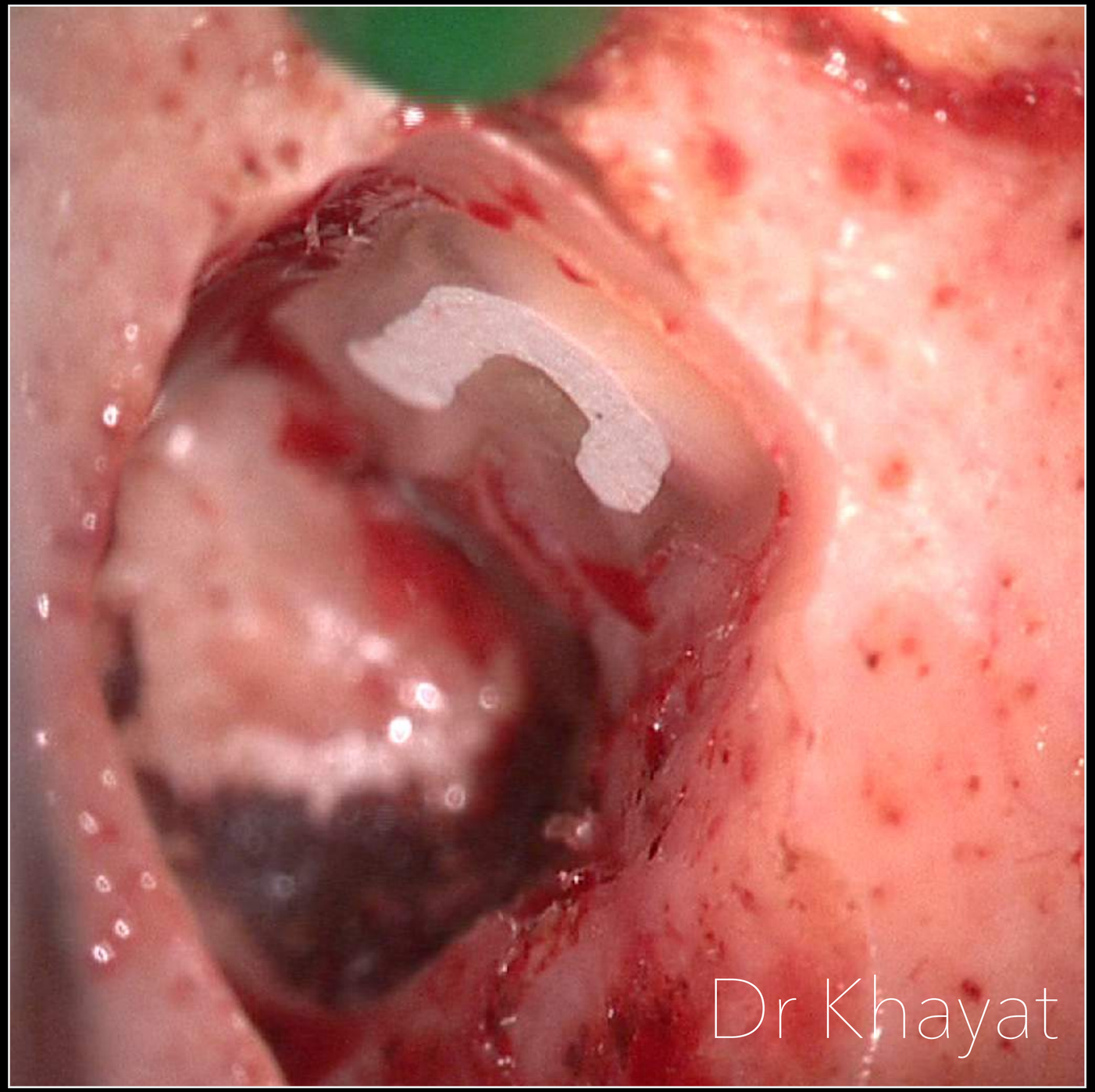
Indications

anatomy




Dr Khayat

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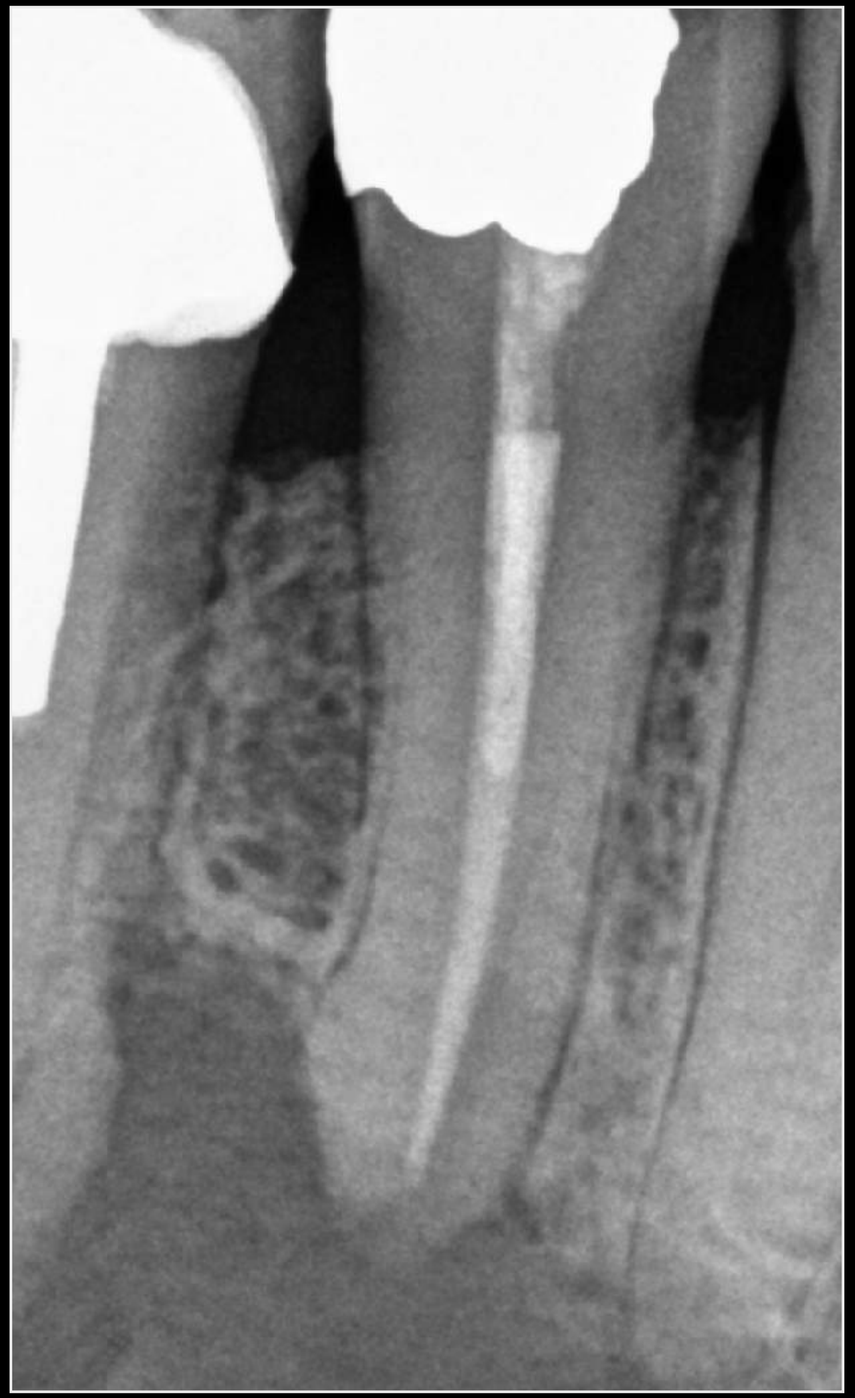



Dr Khayat

Indications

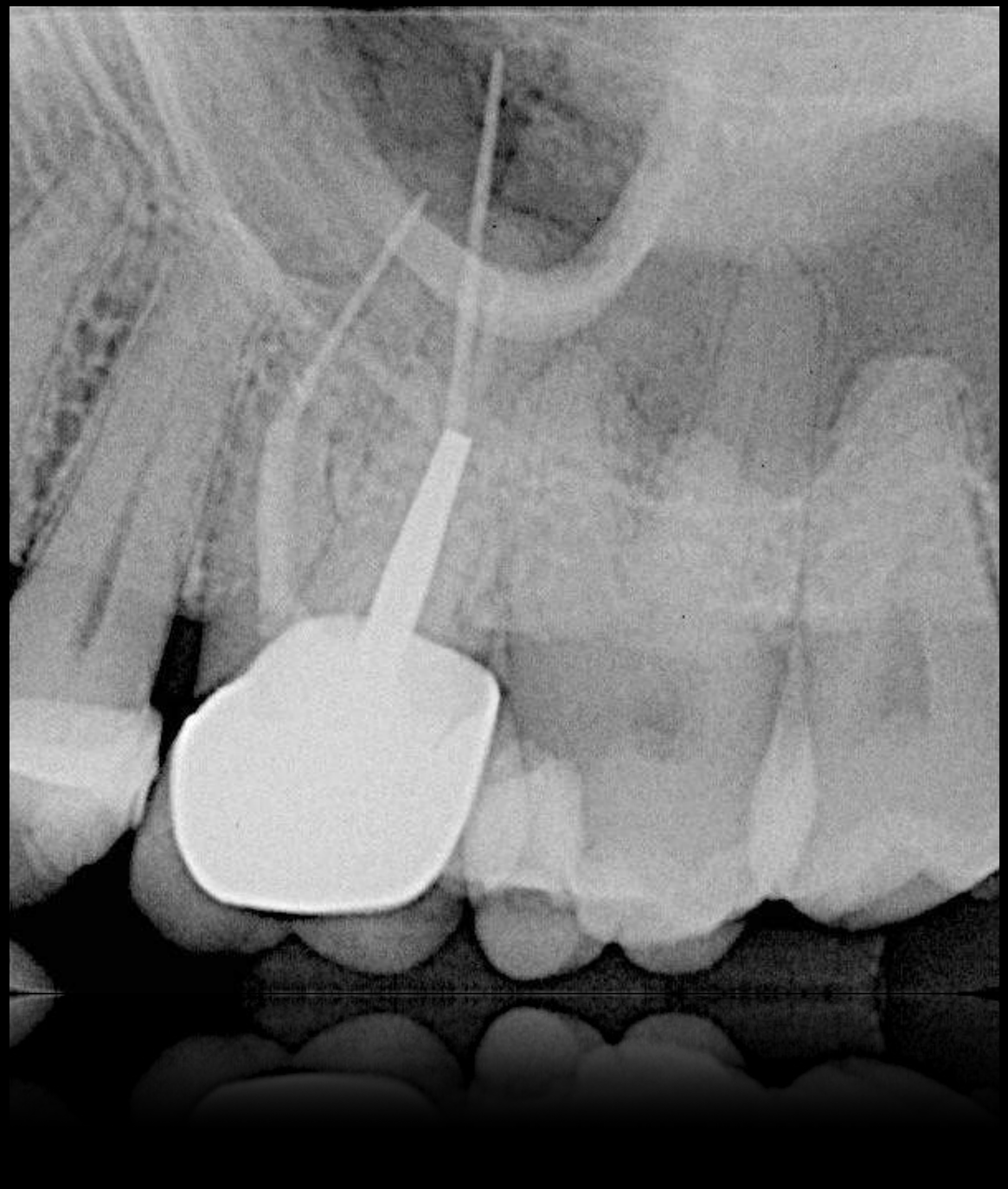
perforations

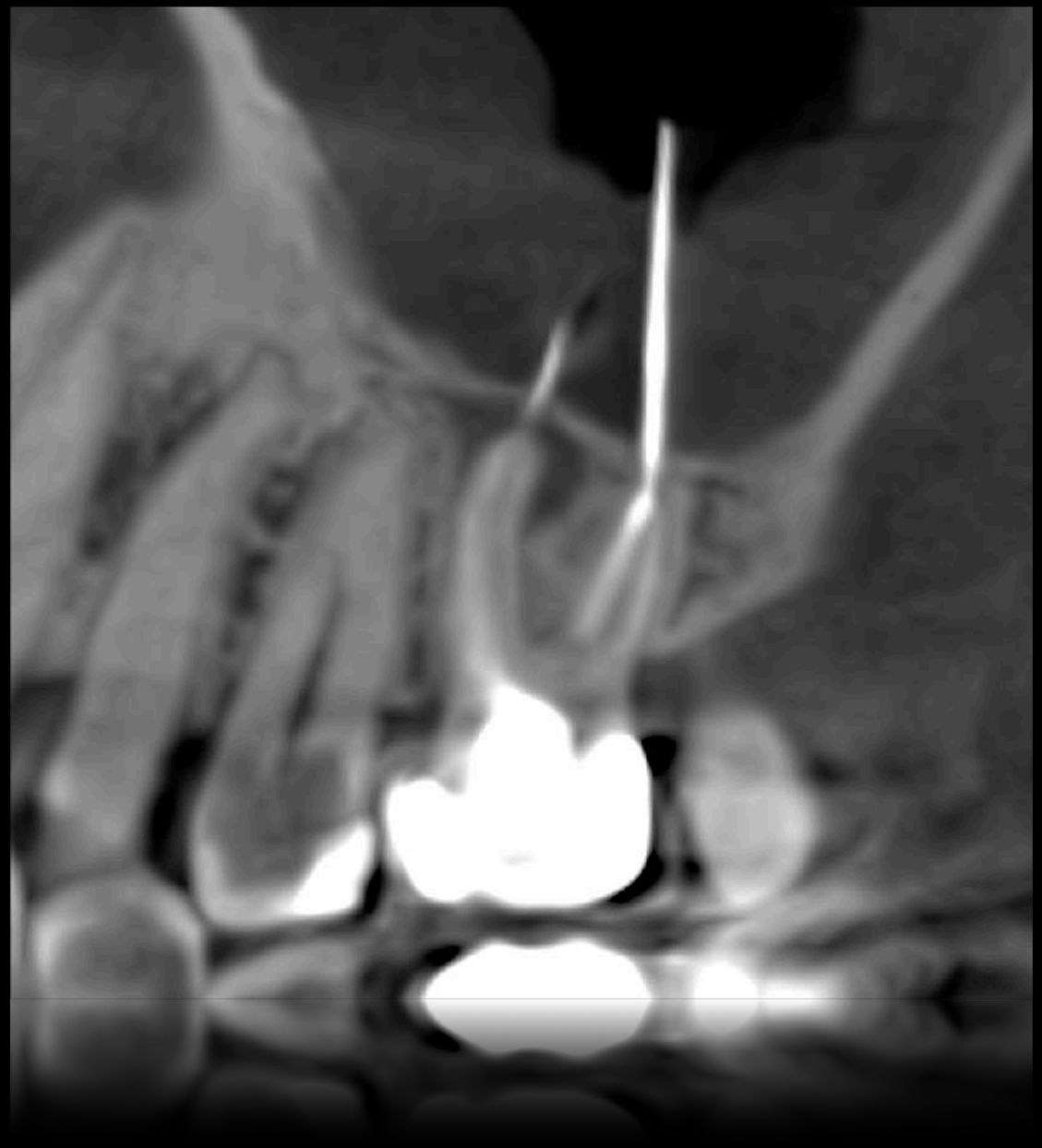

Dr Khayat

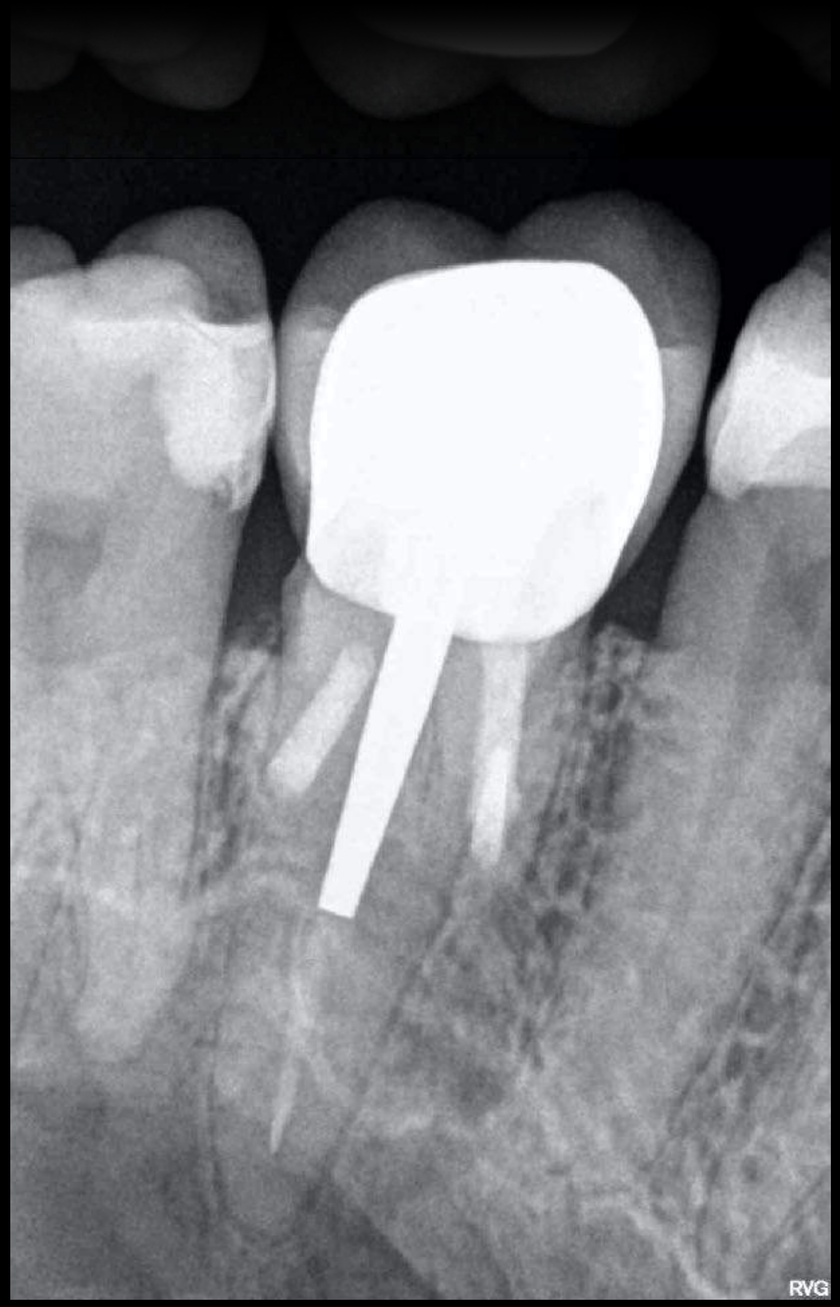

Dr Khayat


Dr Khayat

Retraitement aléatoire



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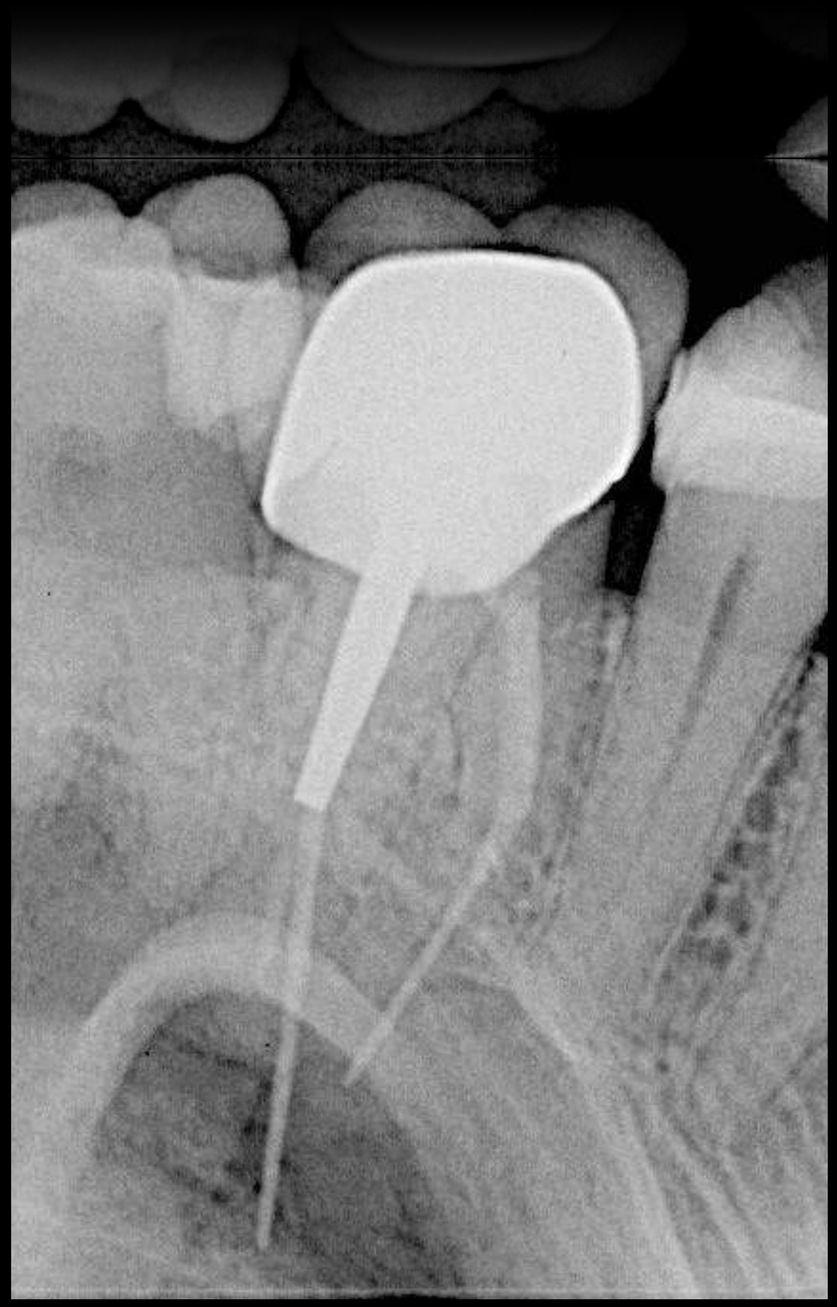
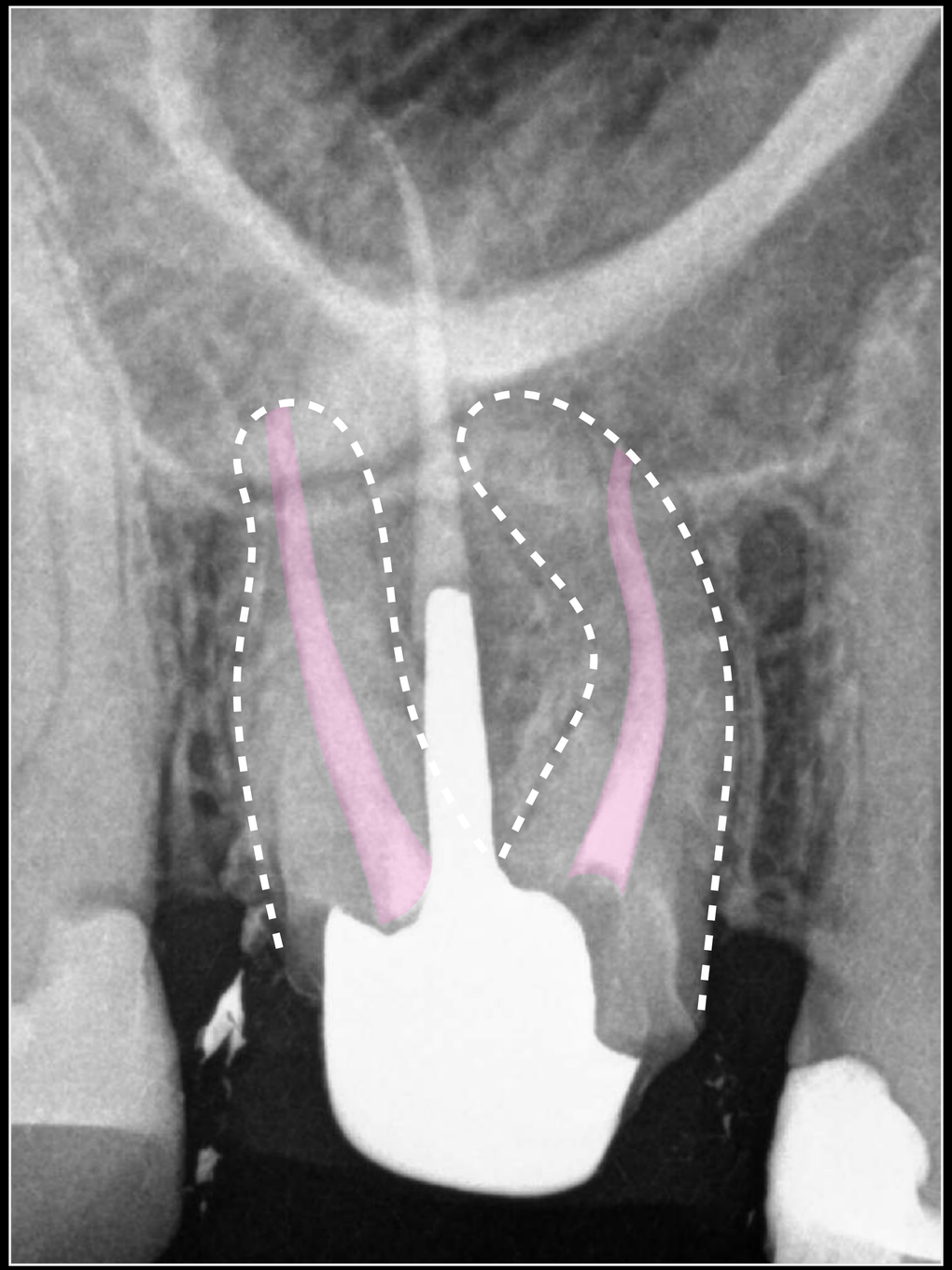
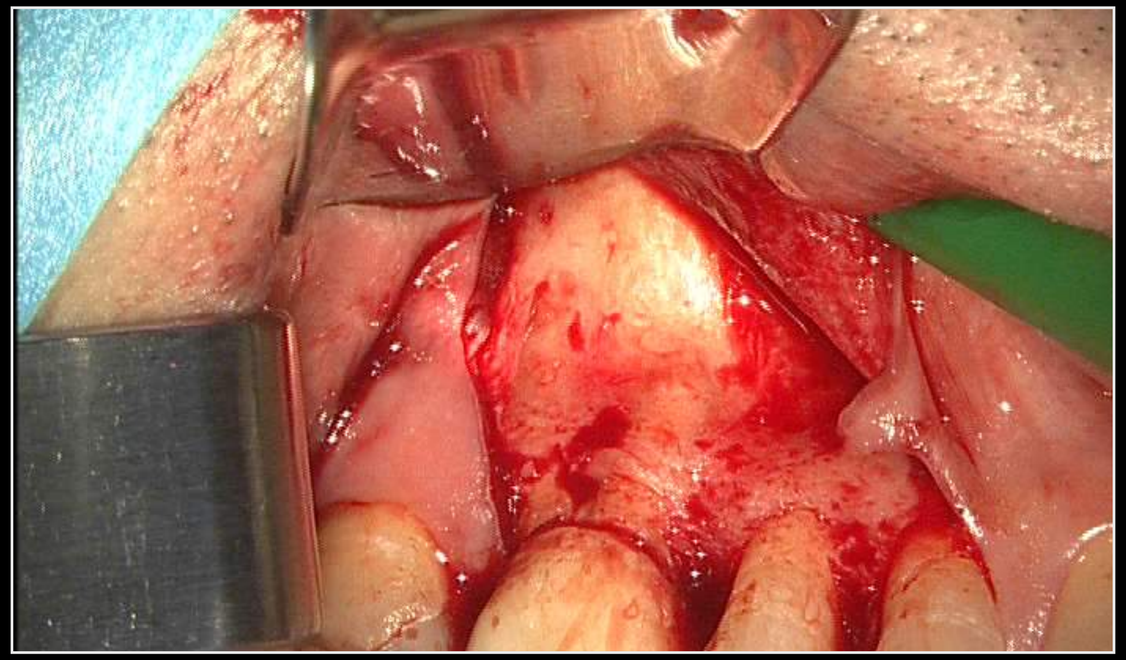
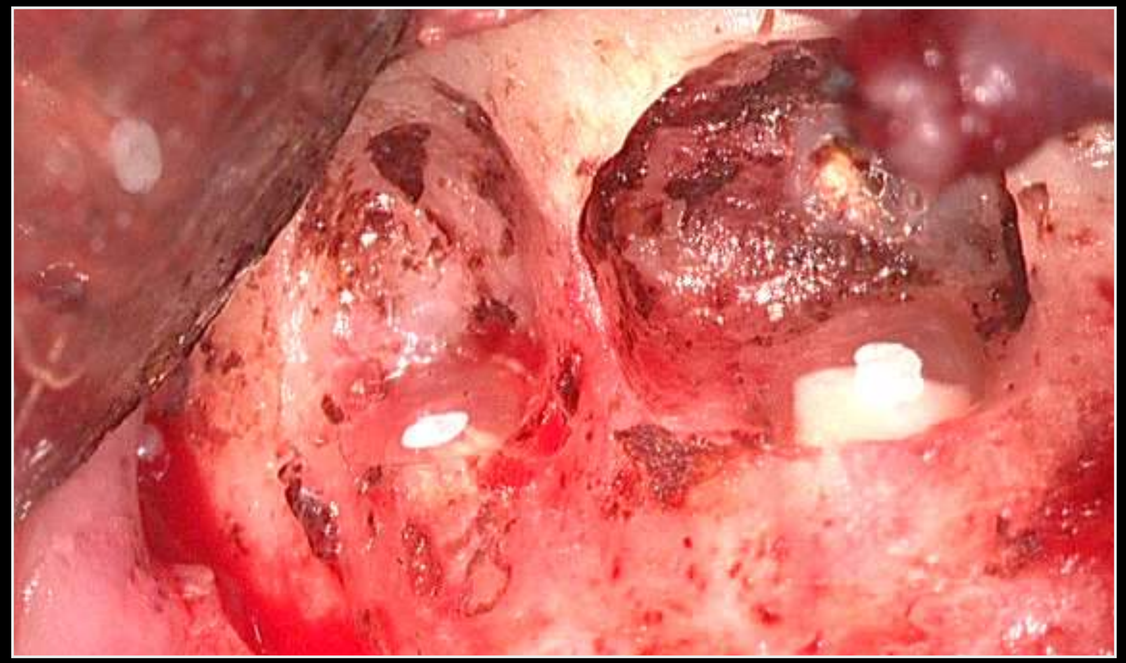
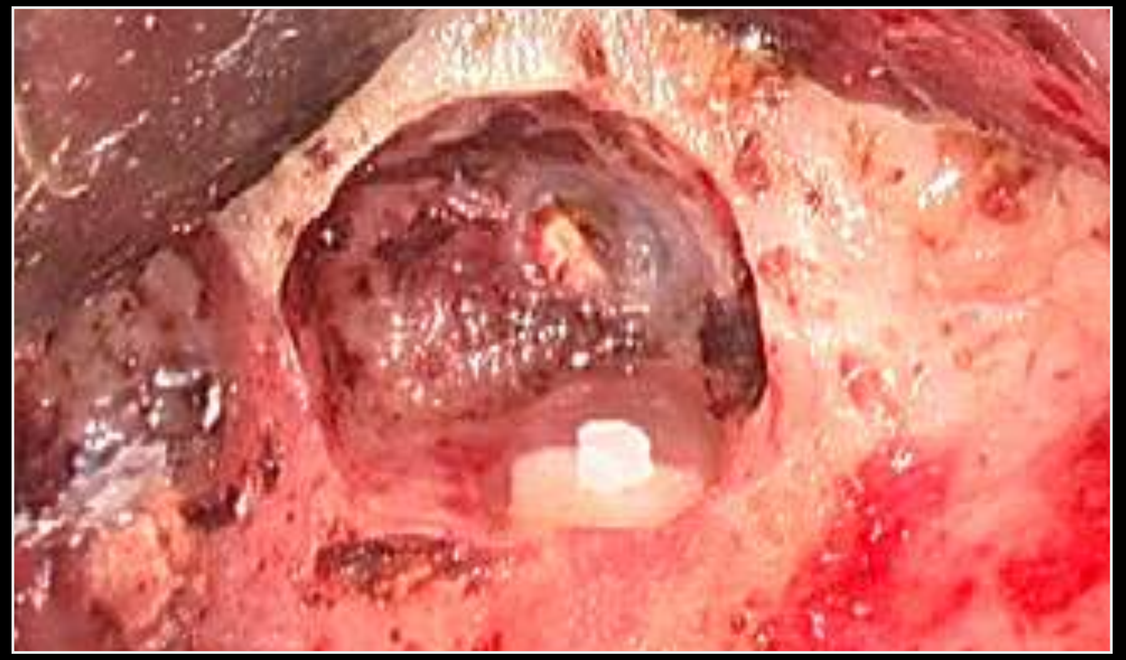
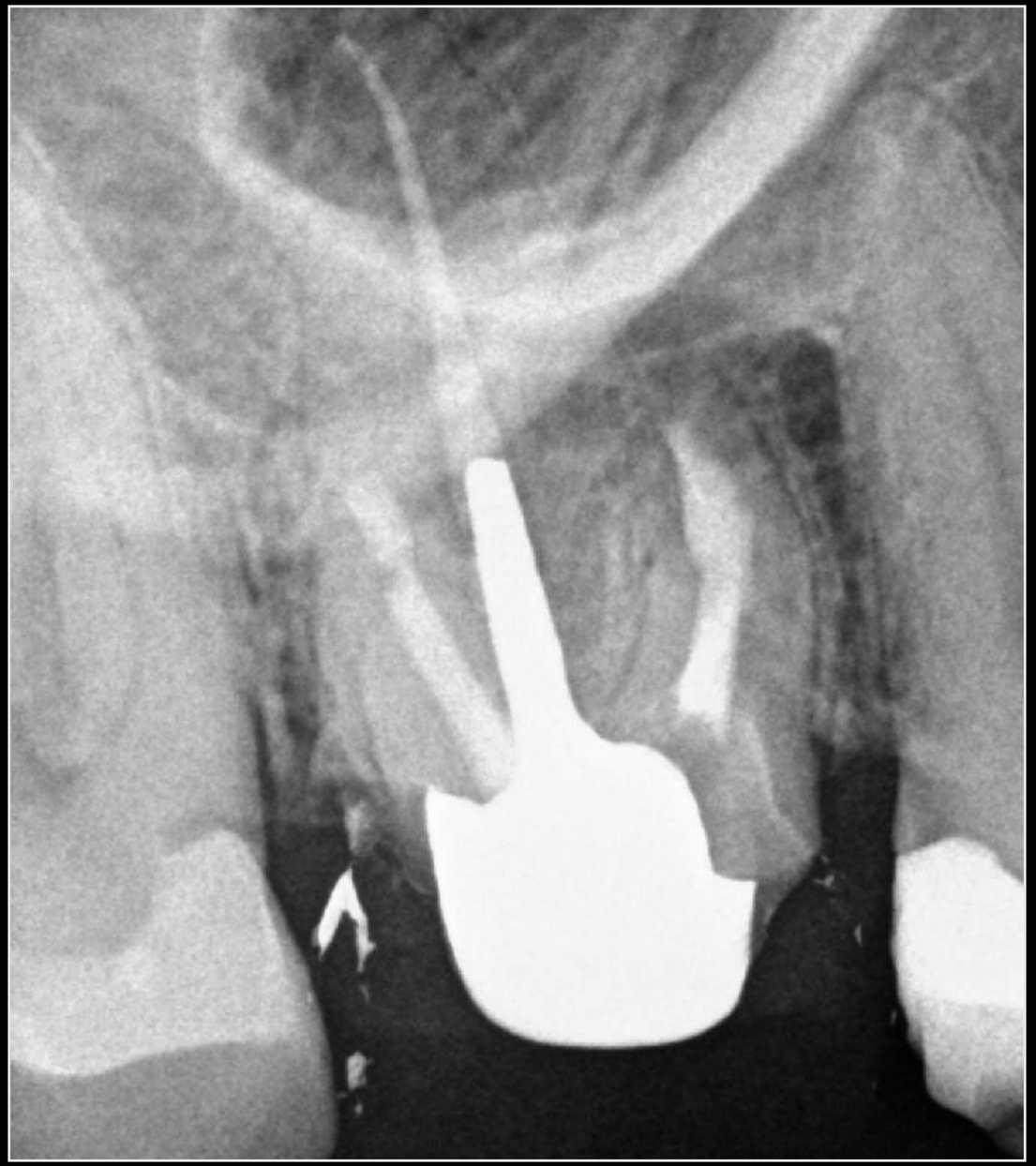




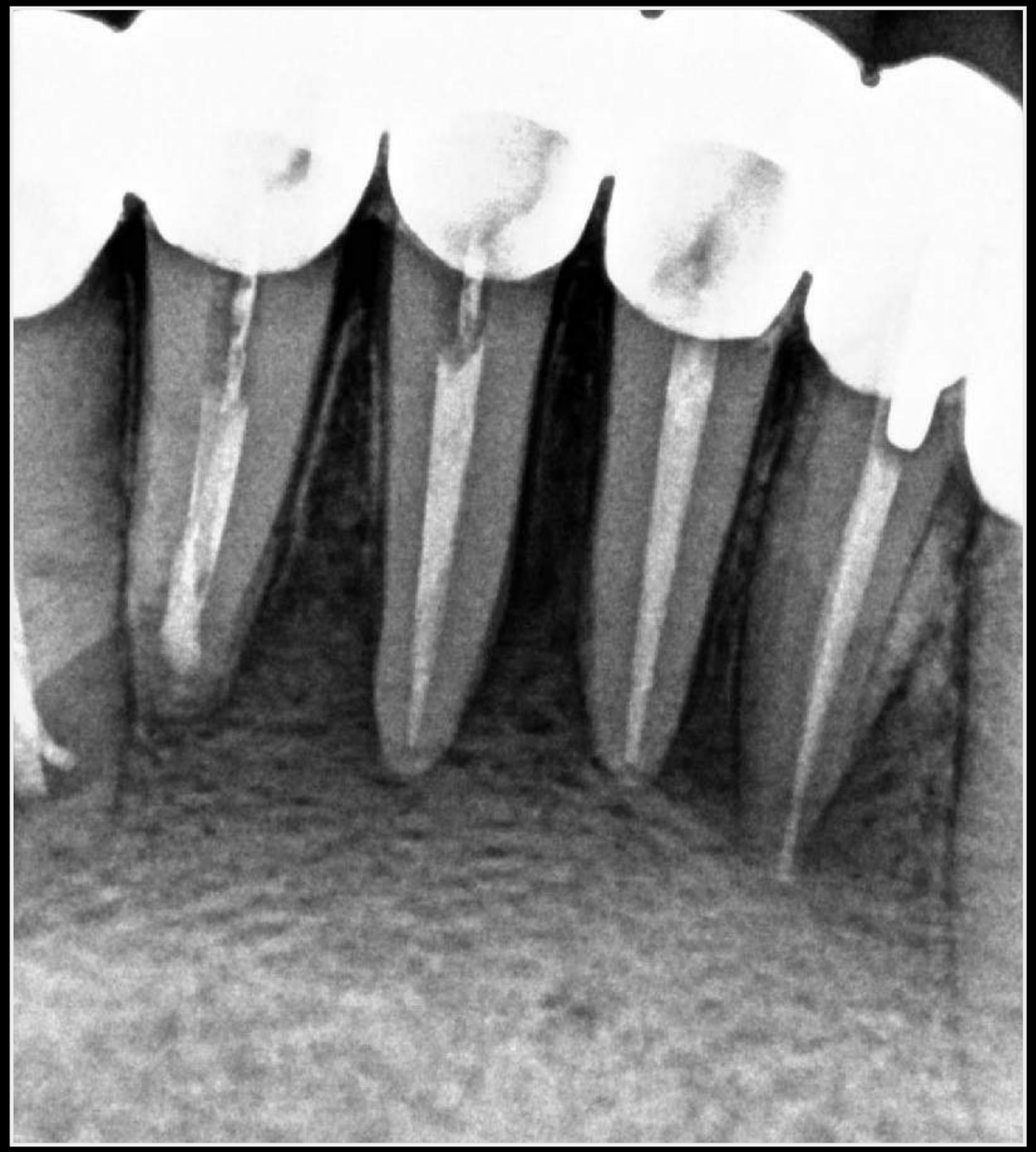


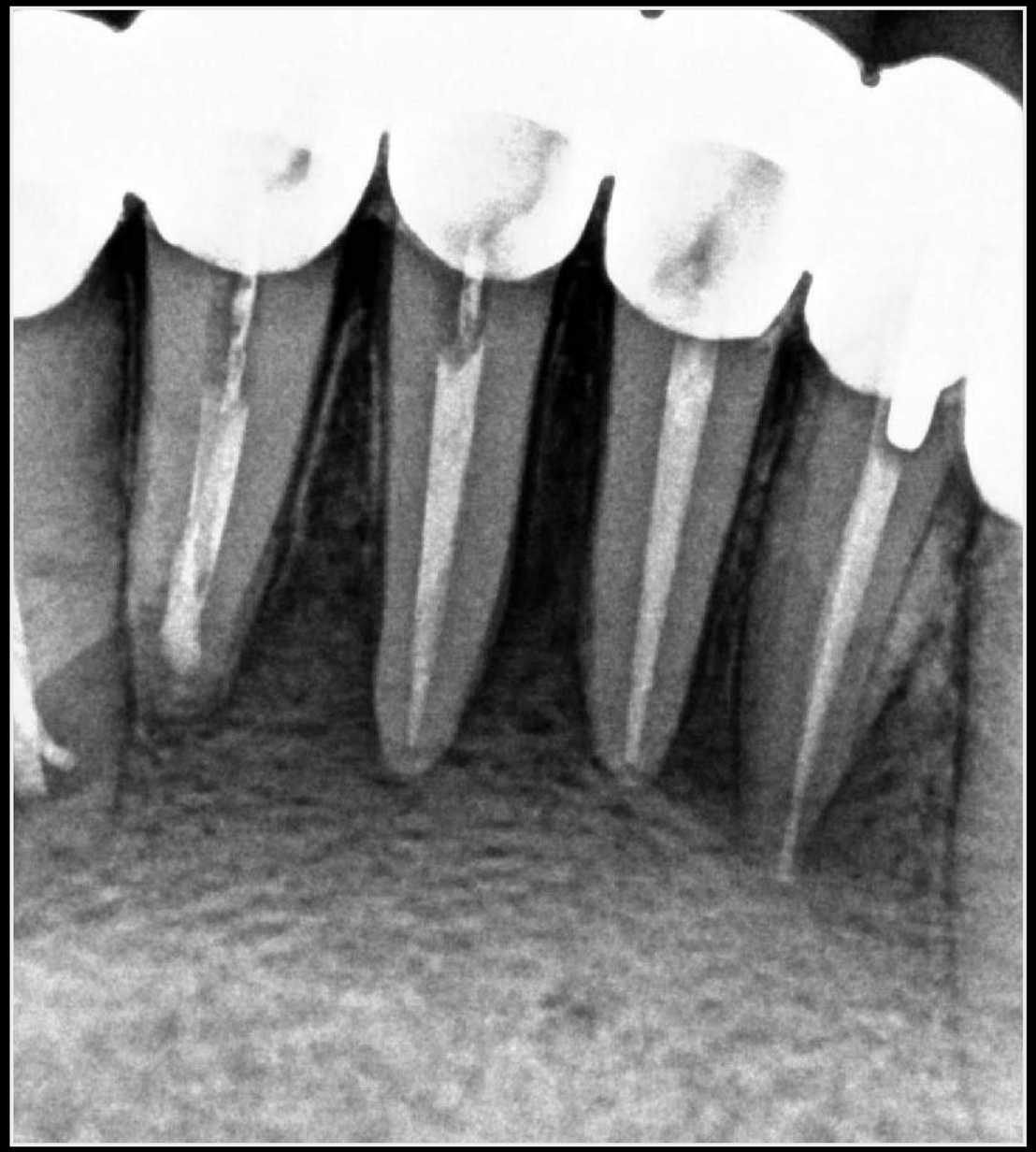


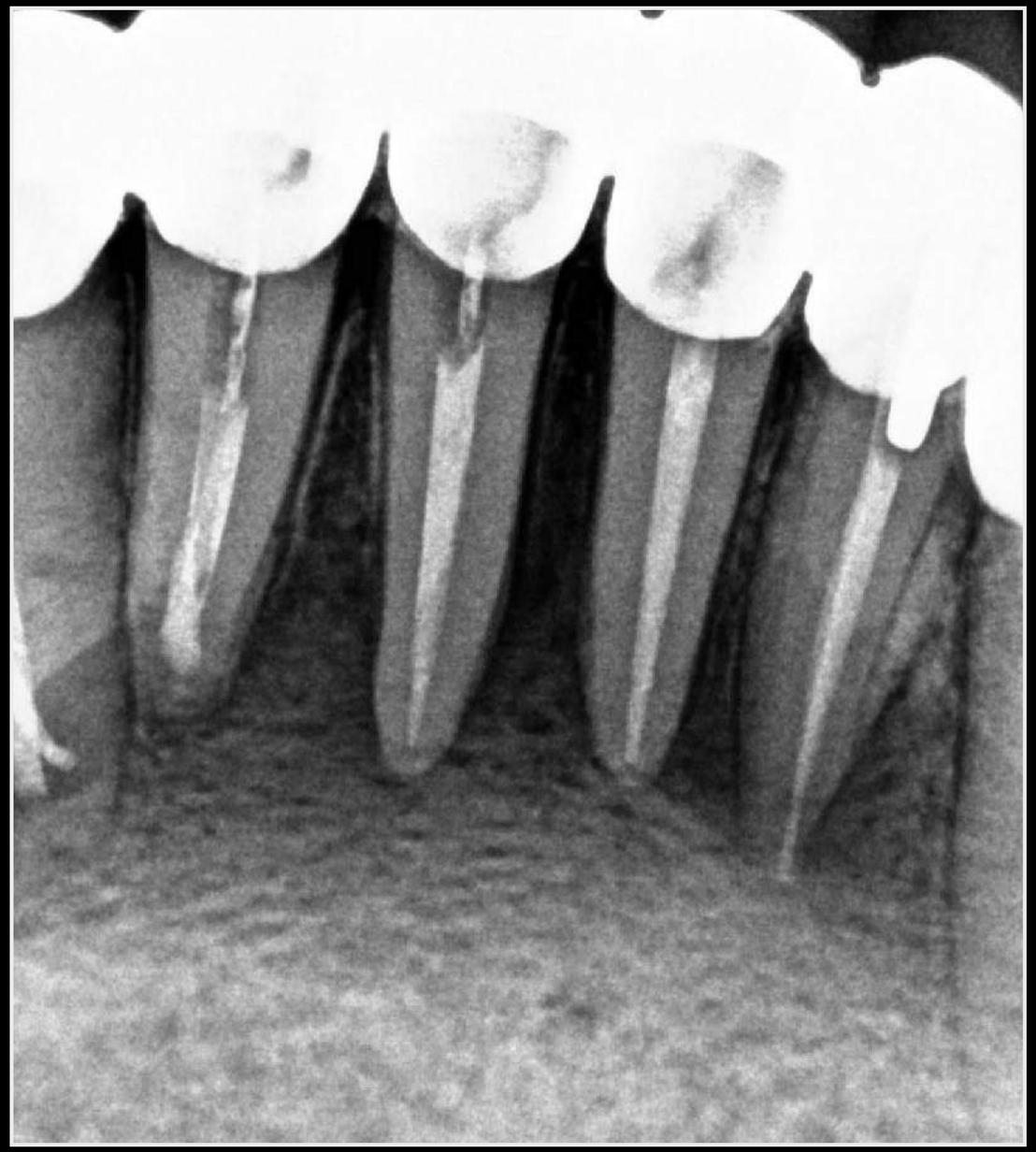


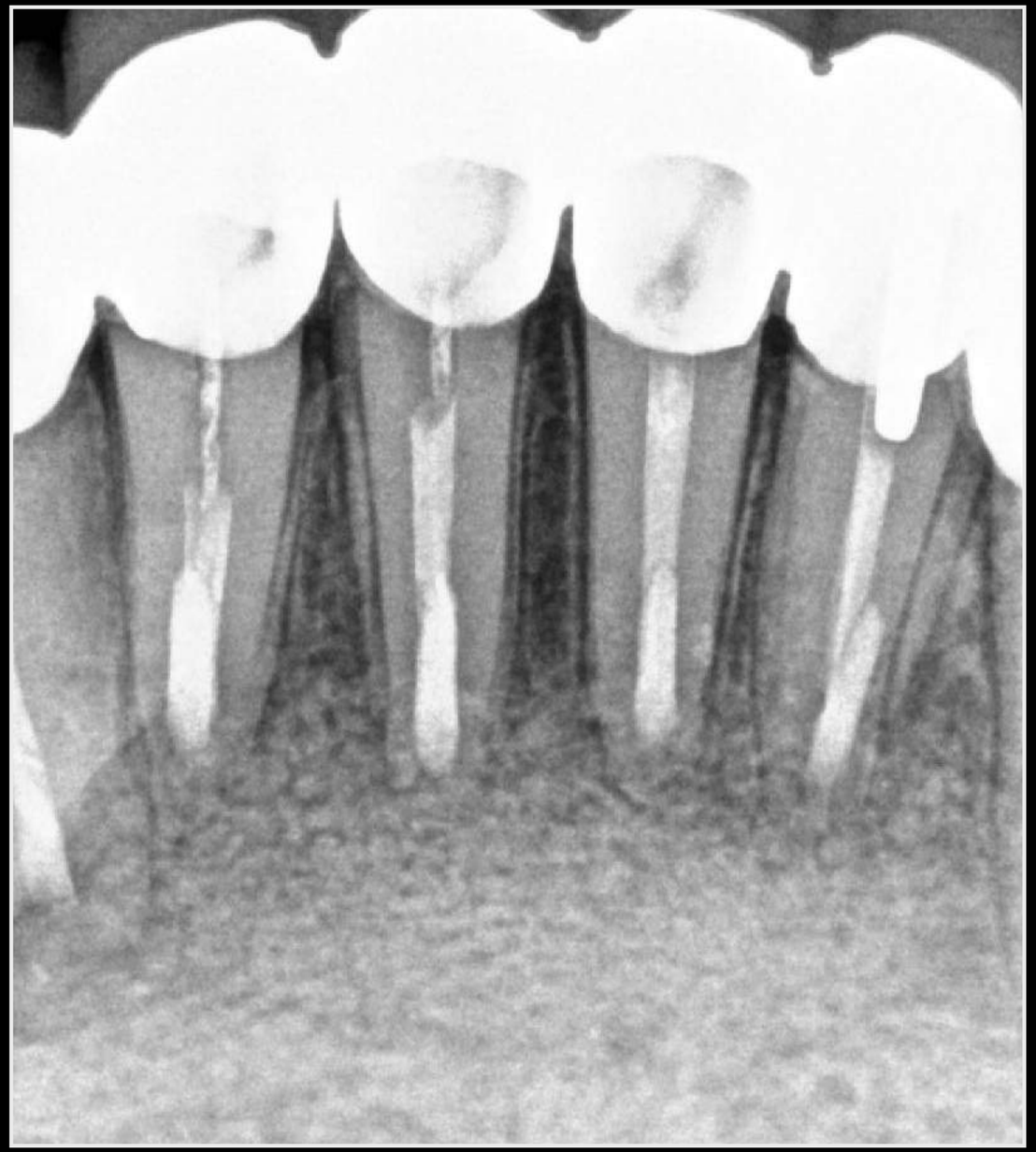


Reconstruction prothétique









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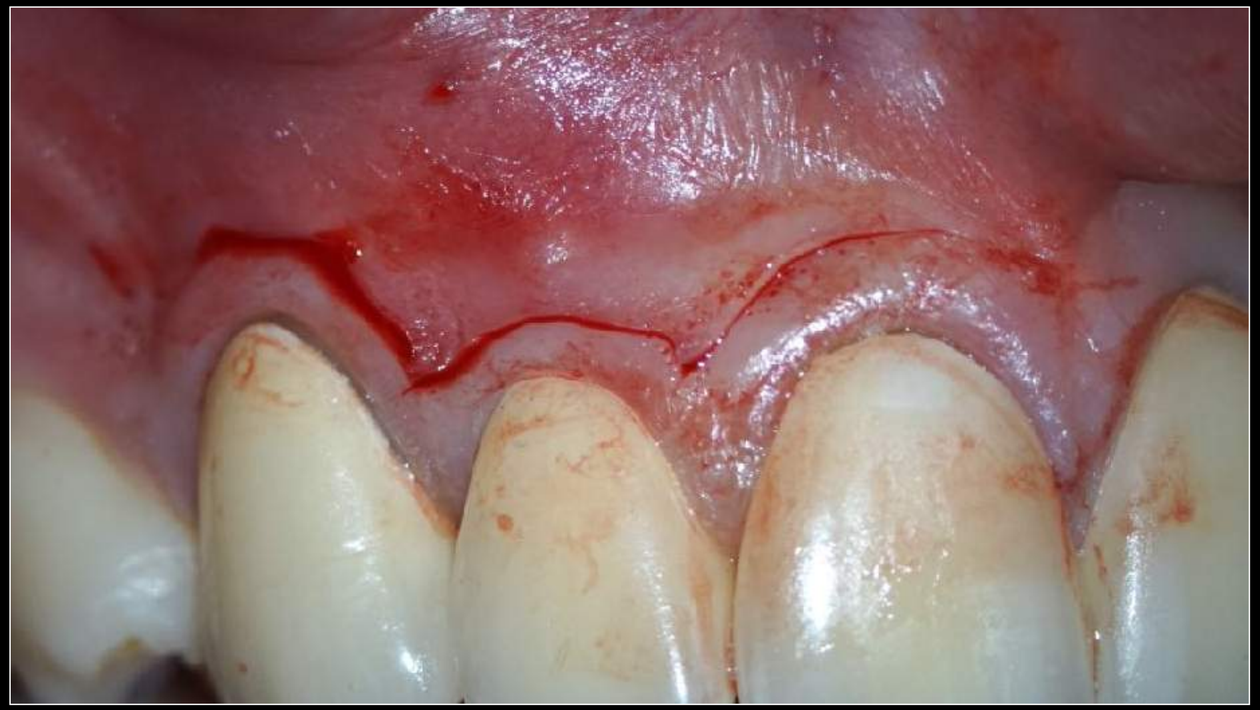

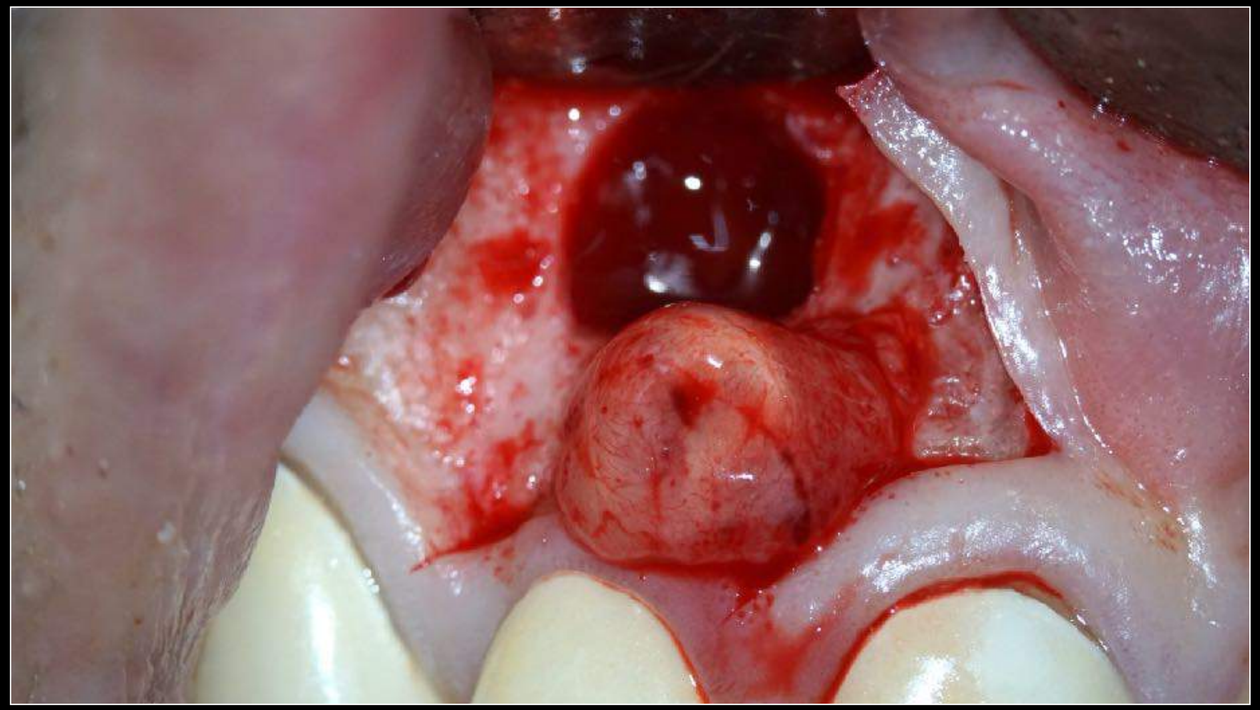

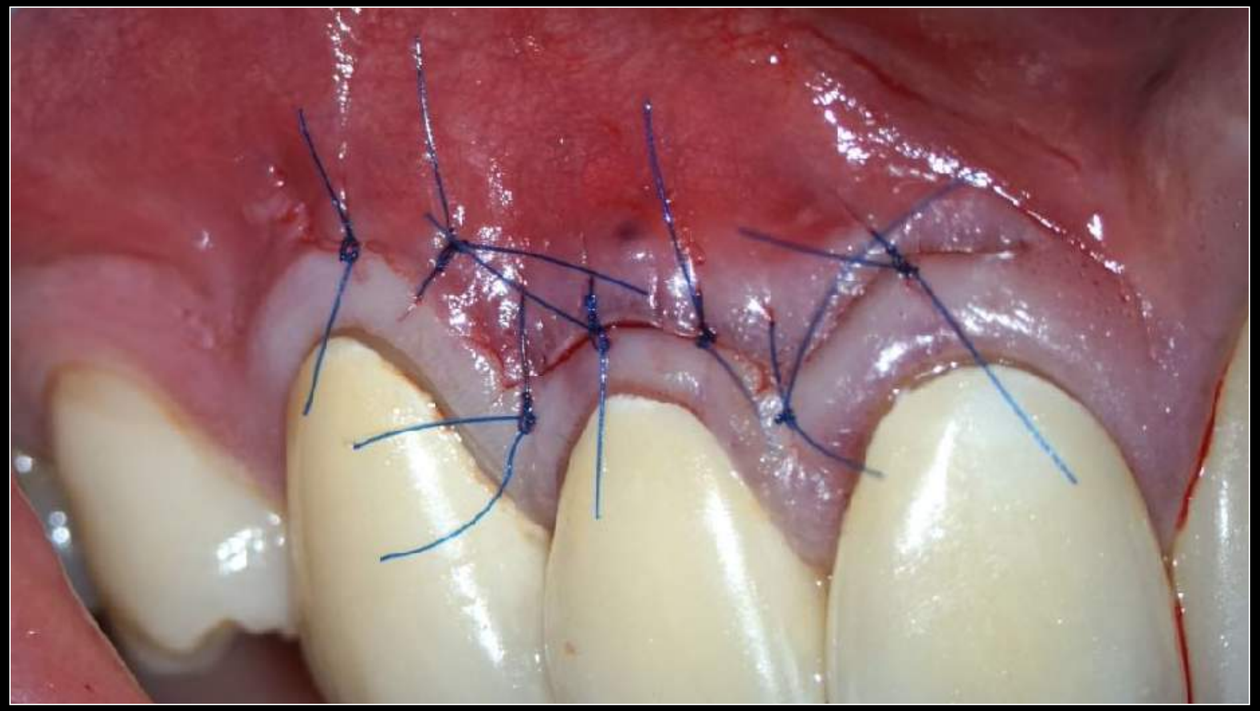

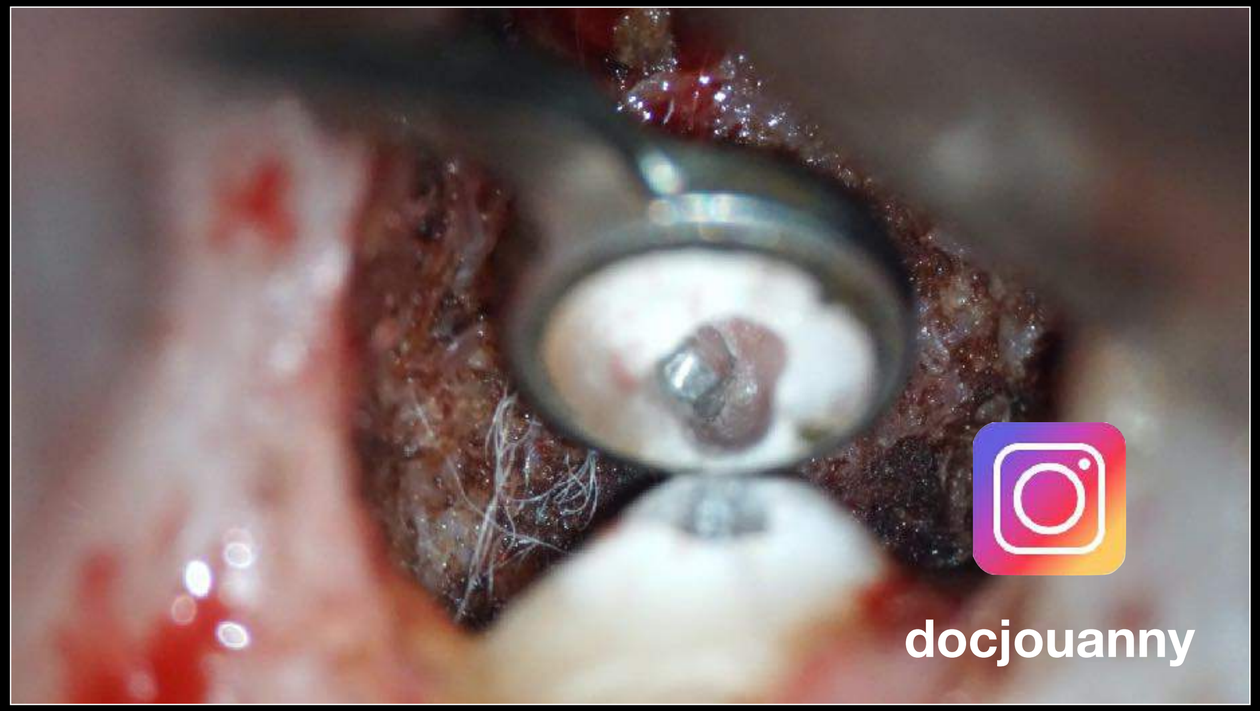
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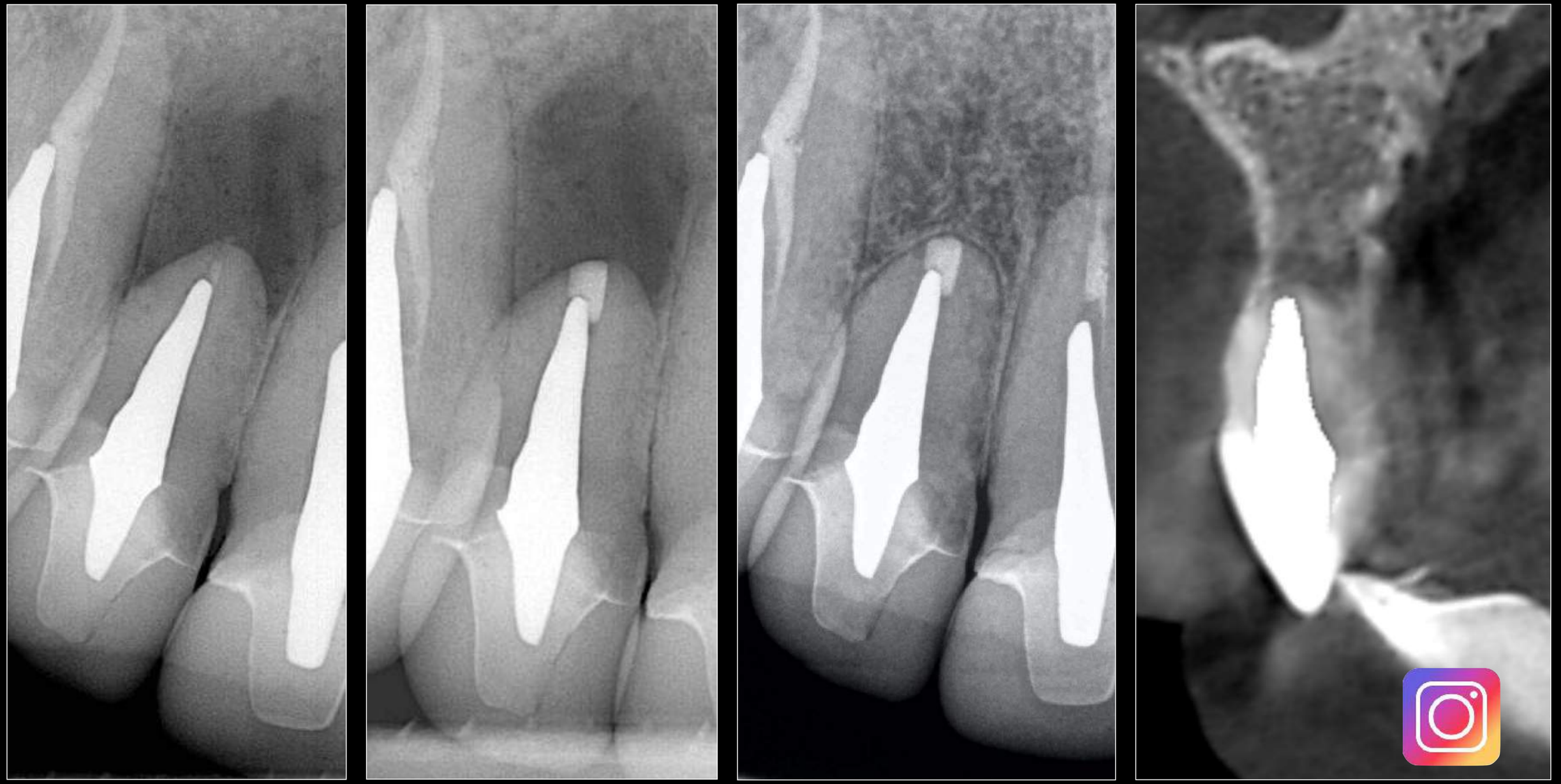

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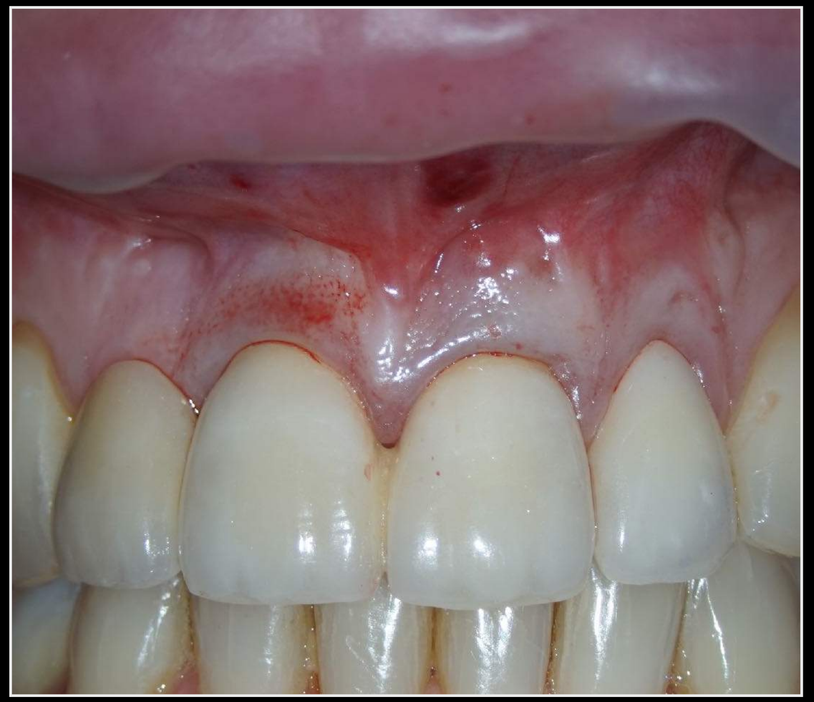
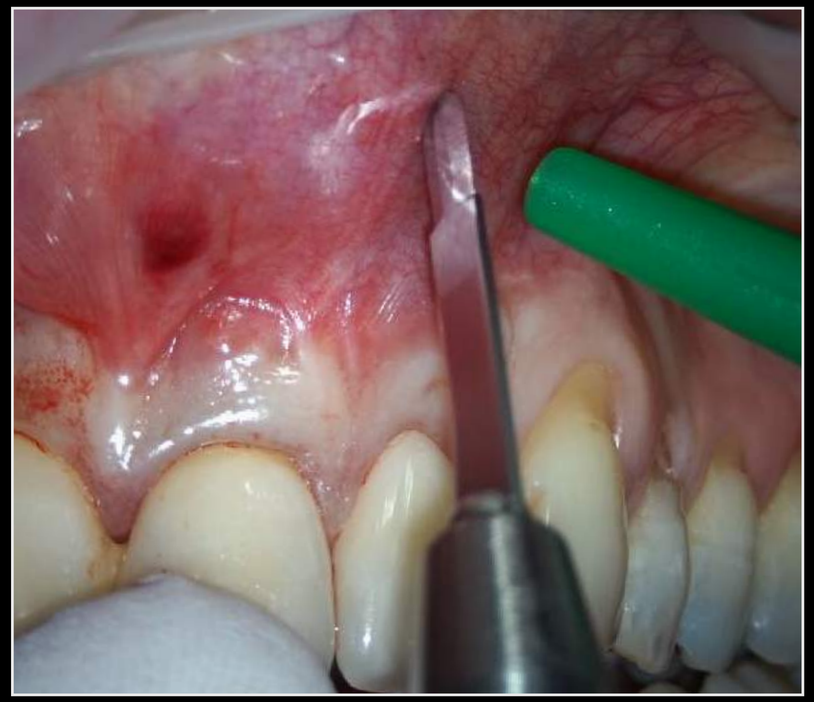

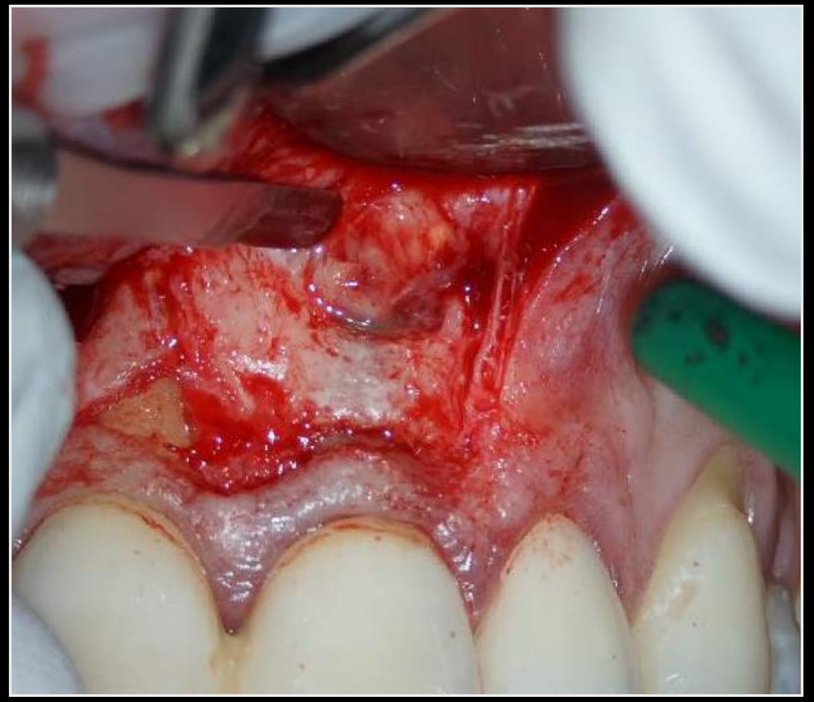
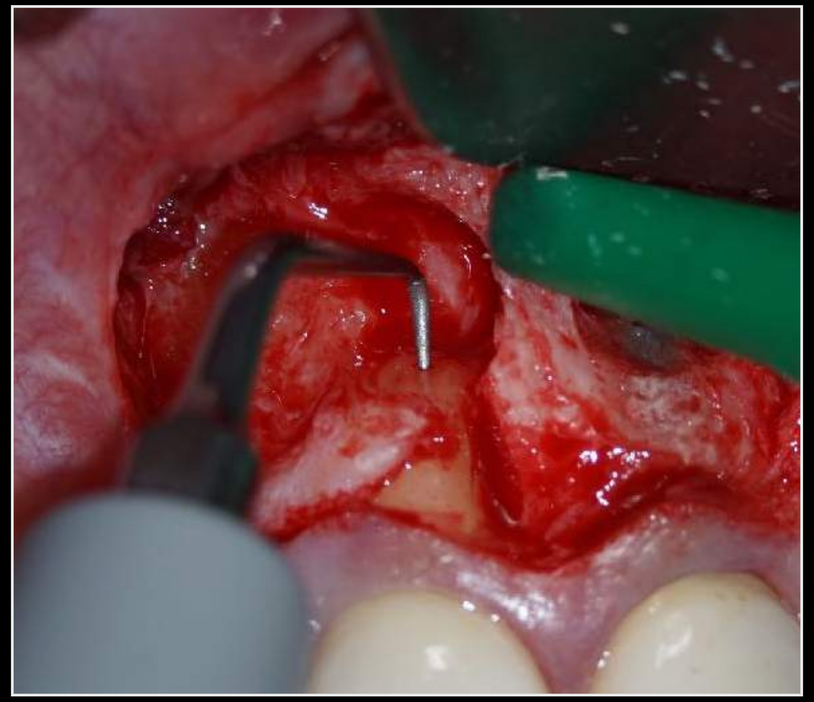
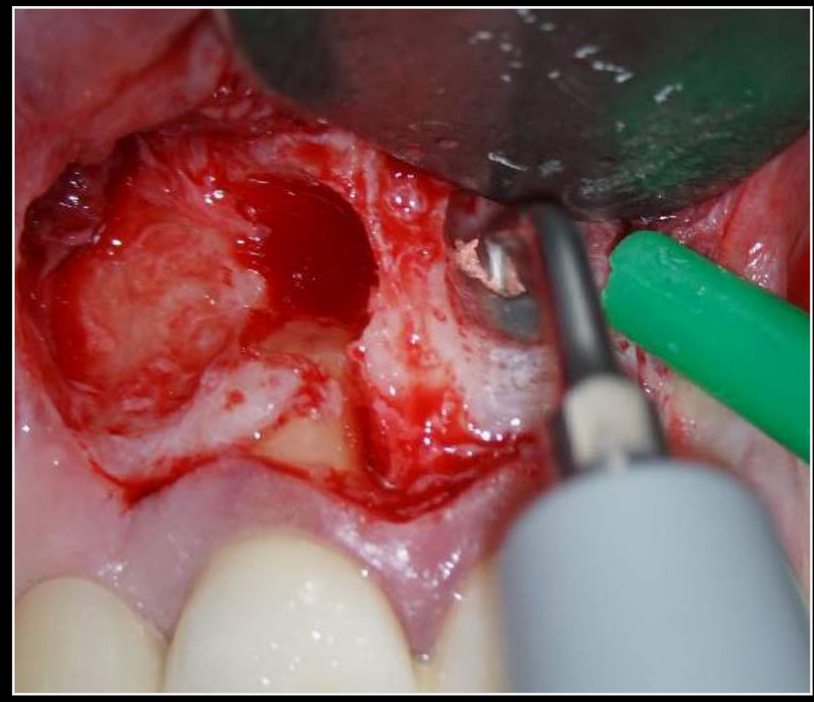

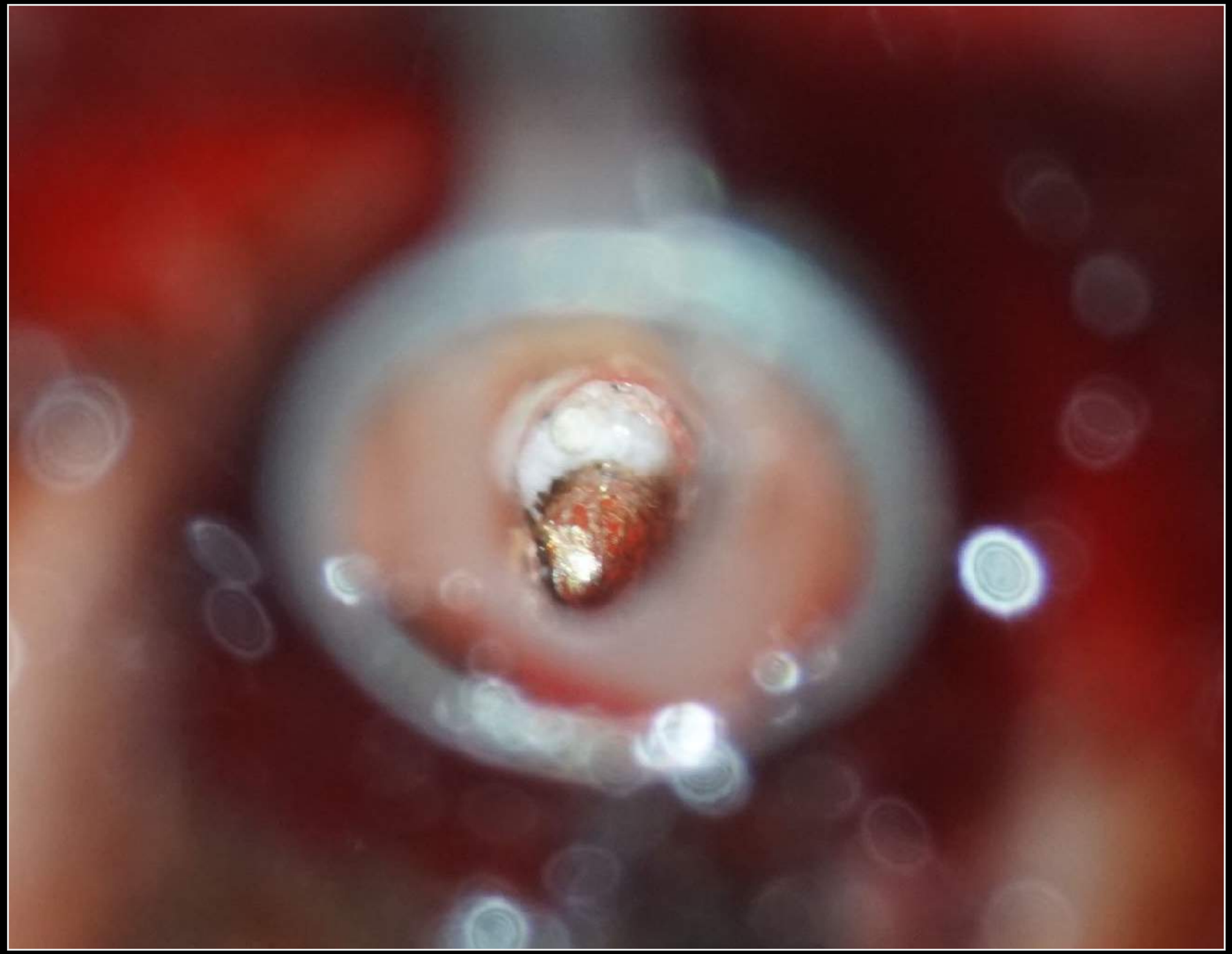

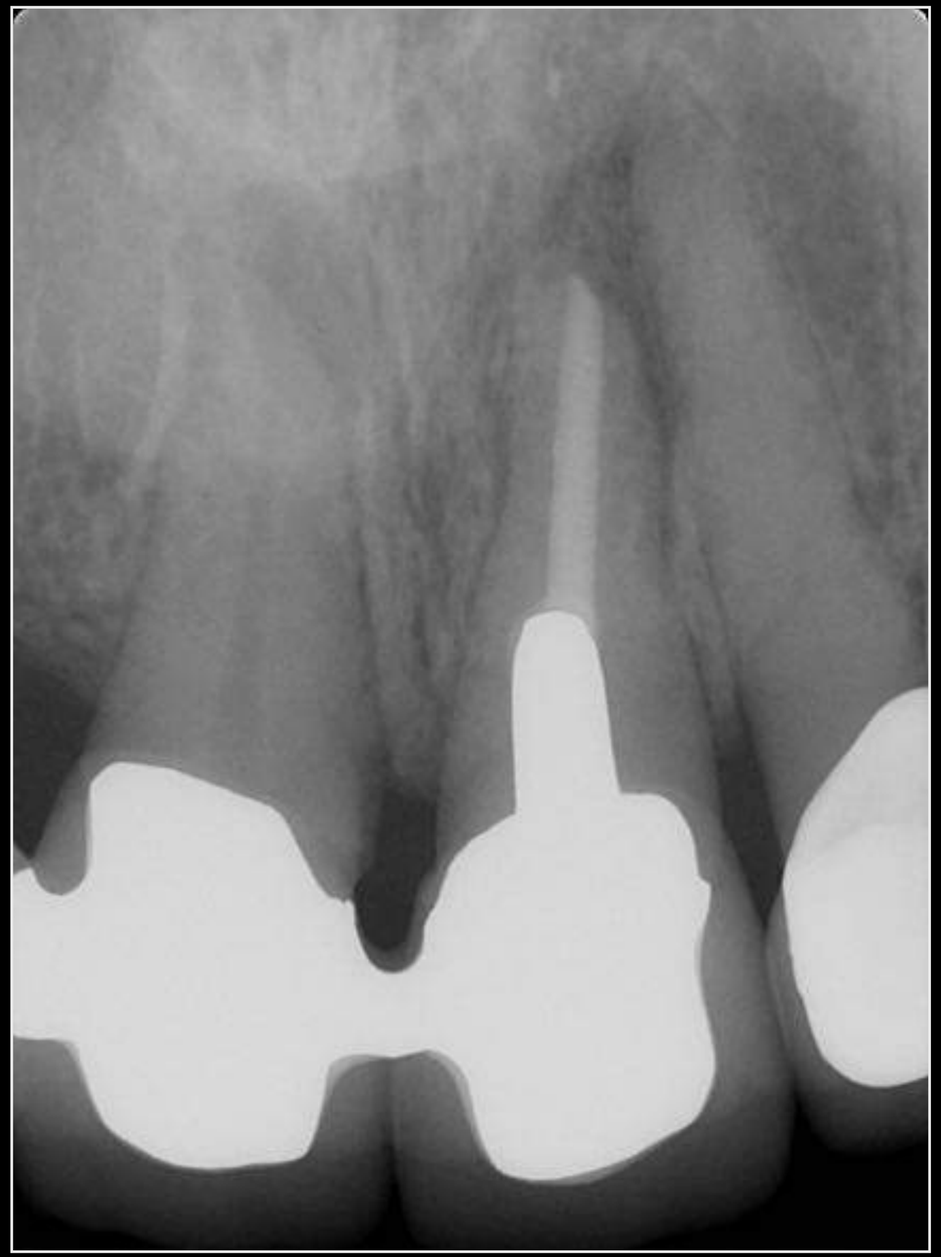

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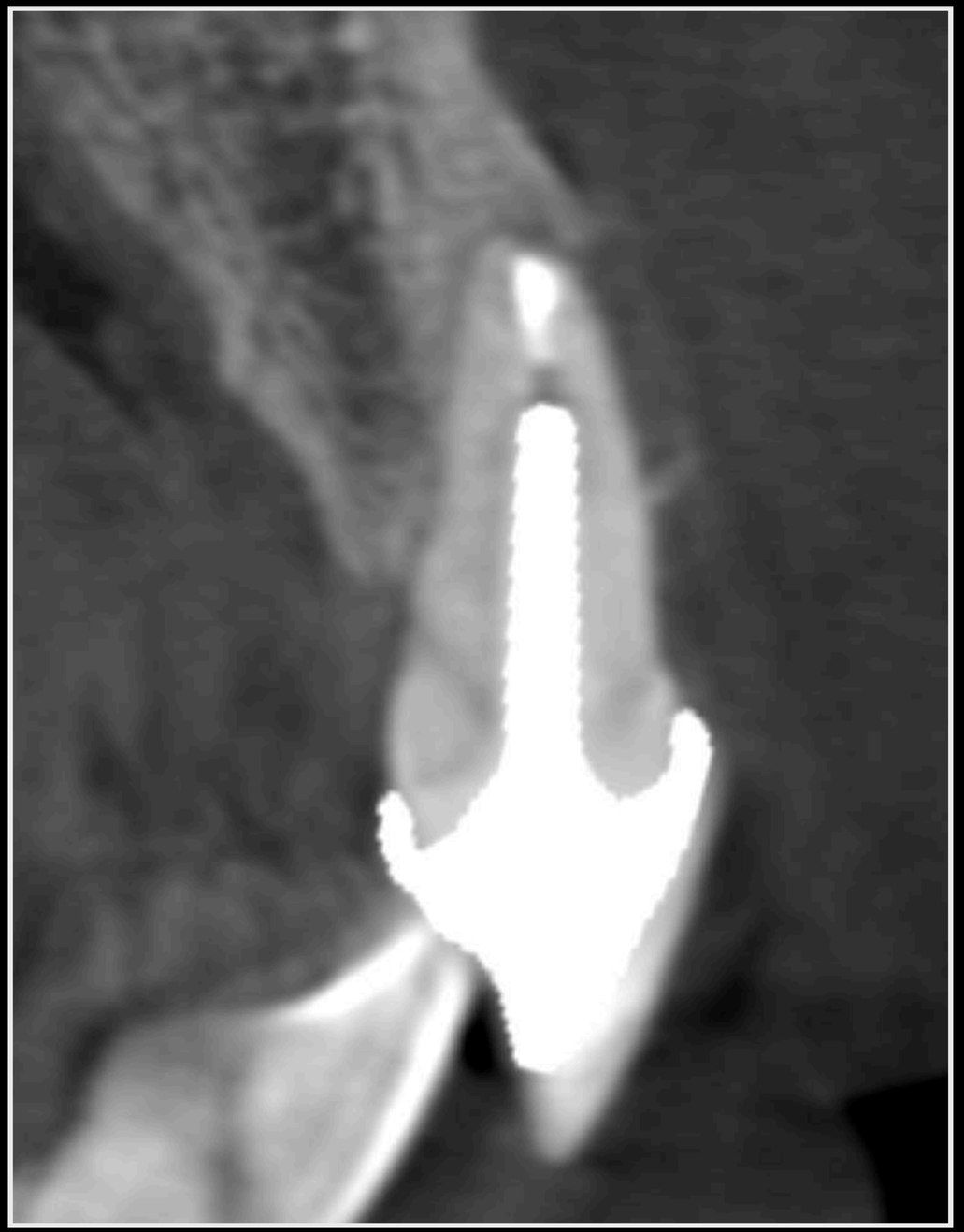
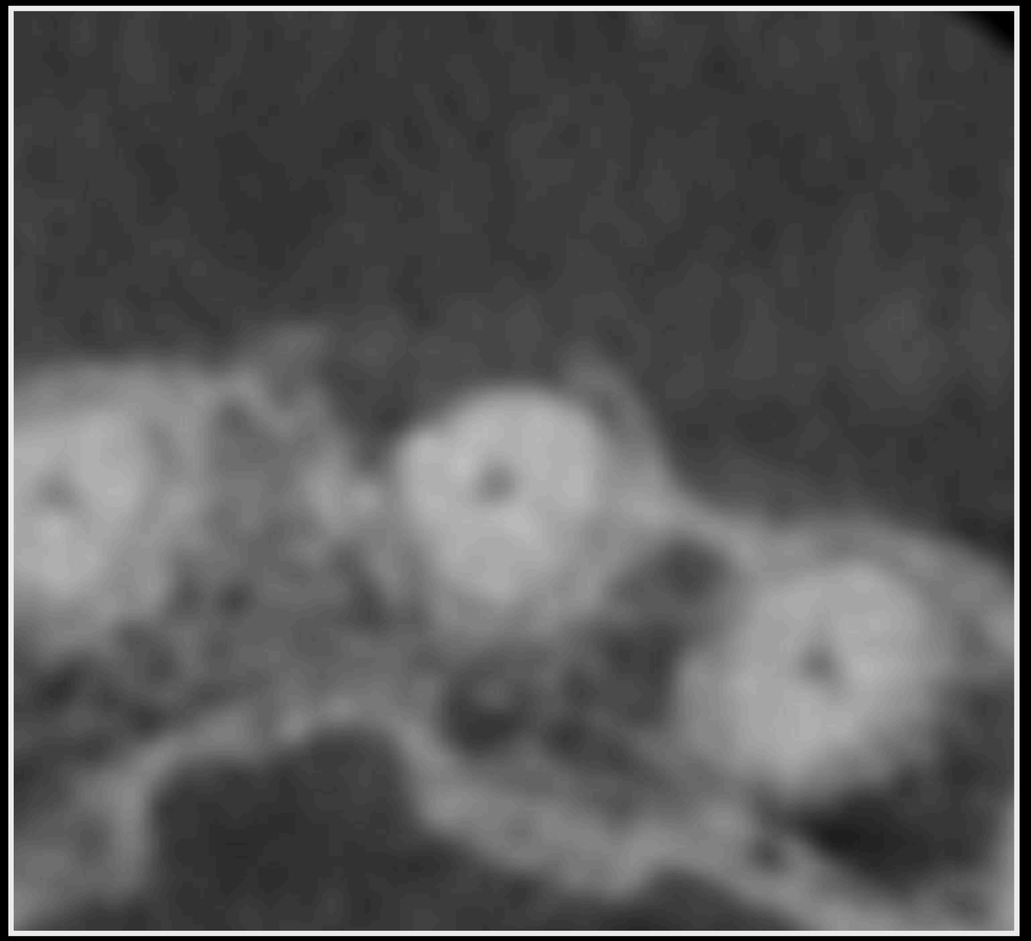
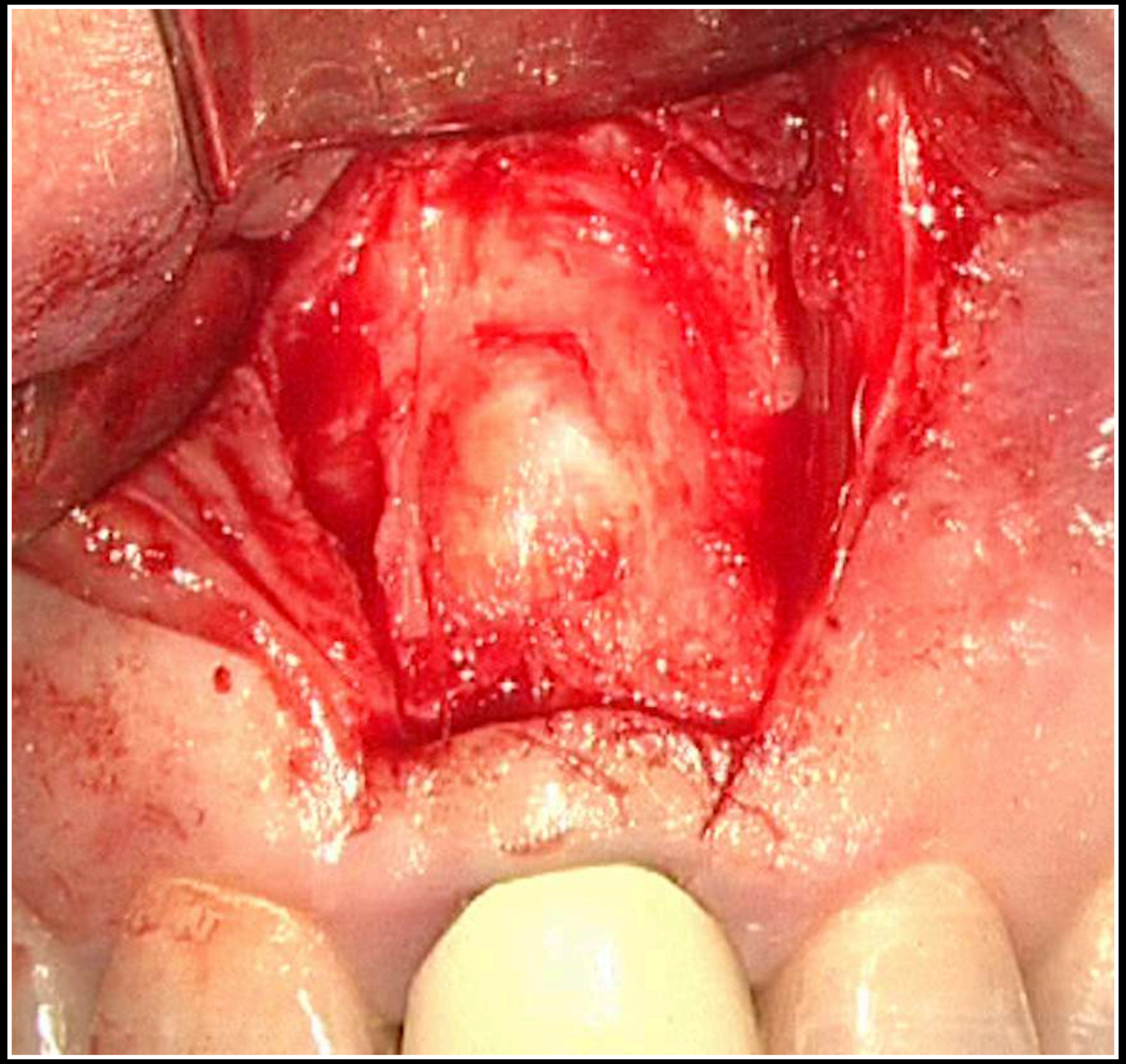
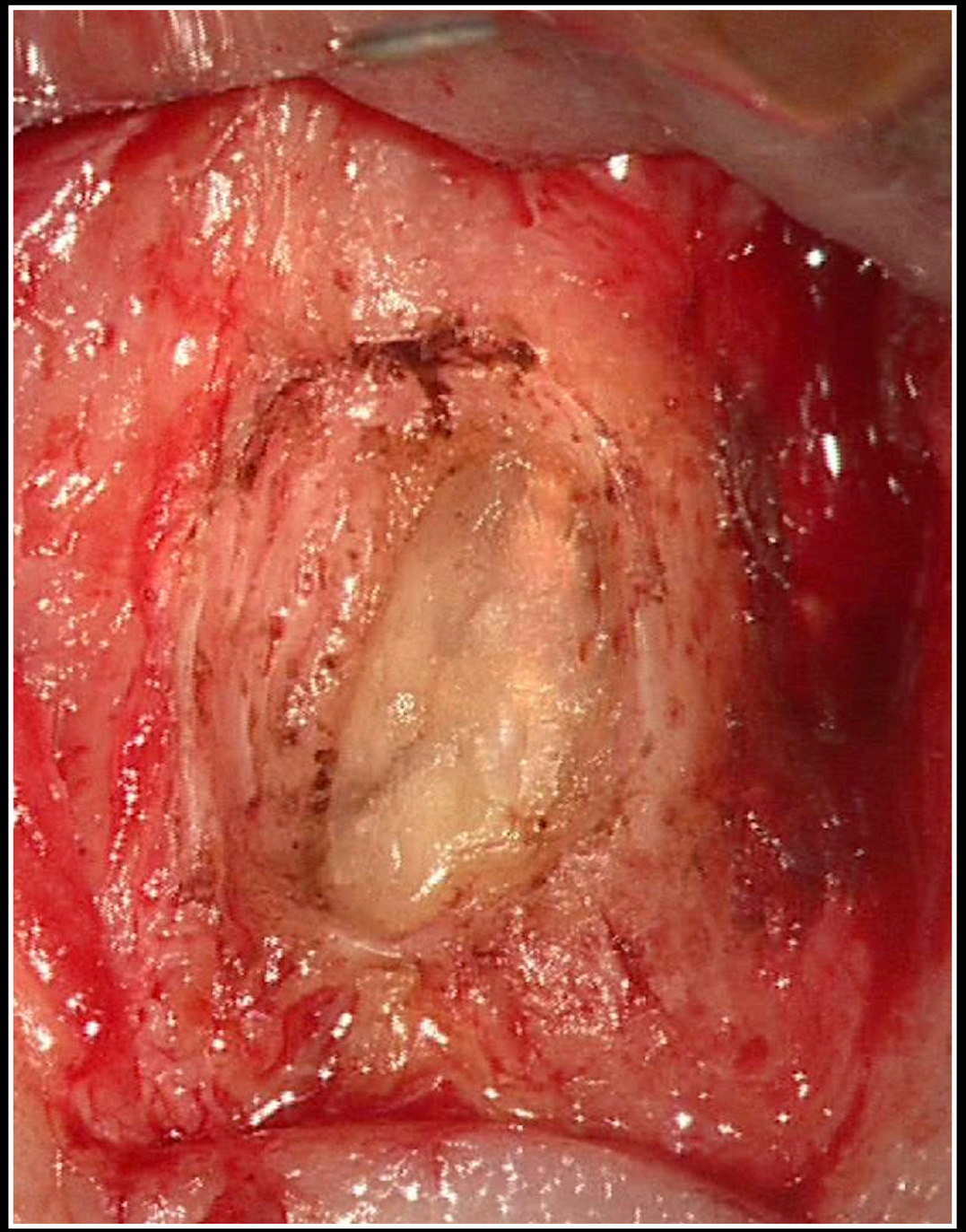
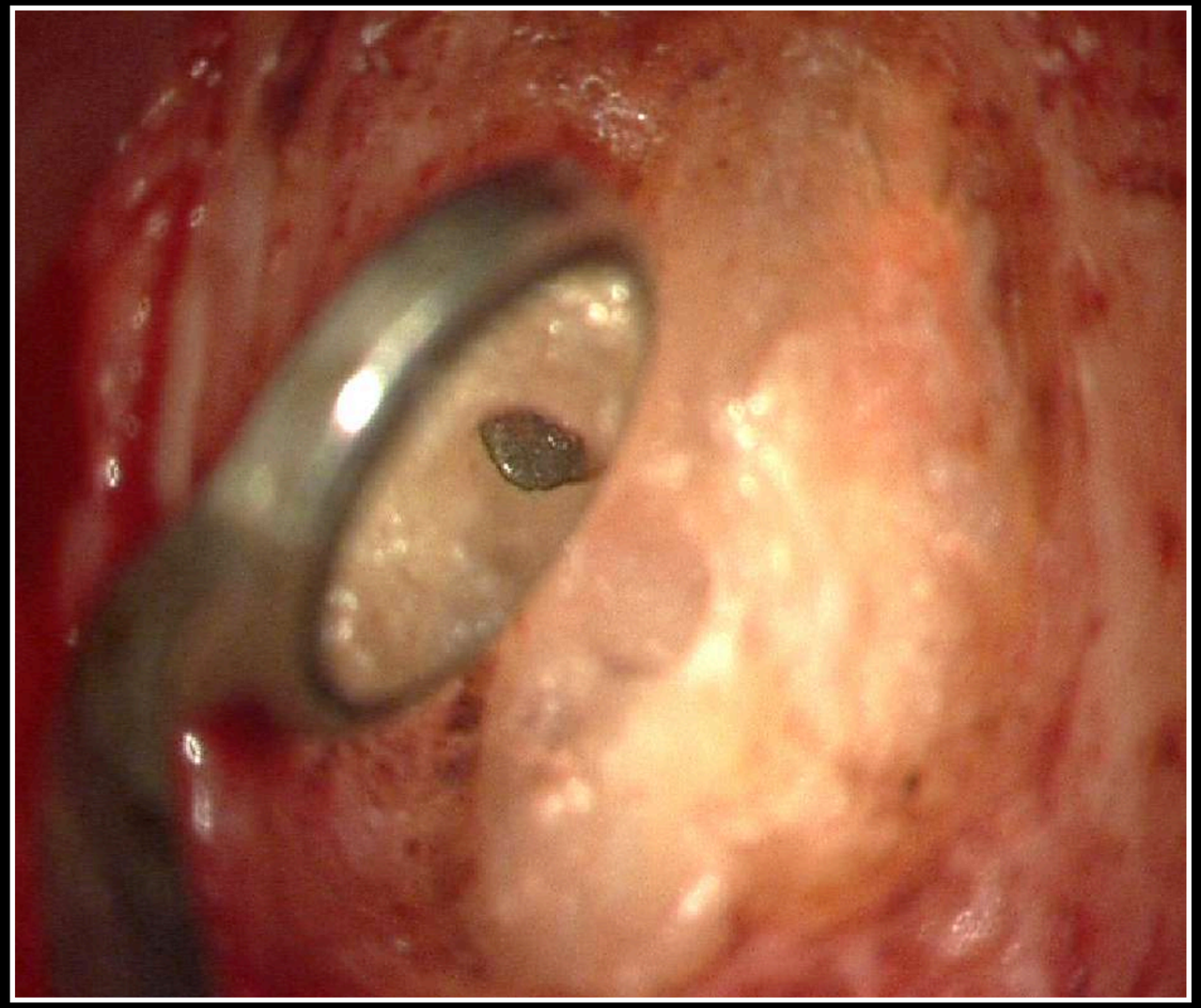
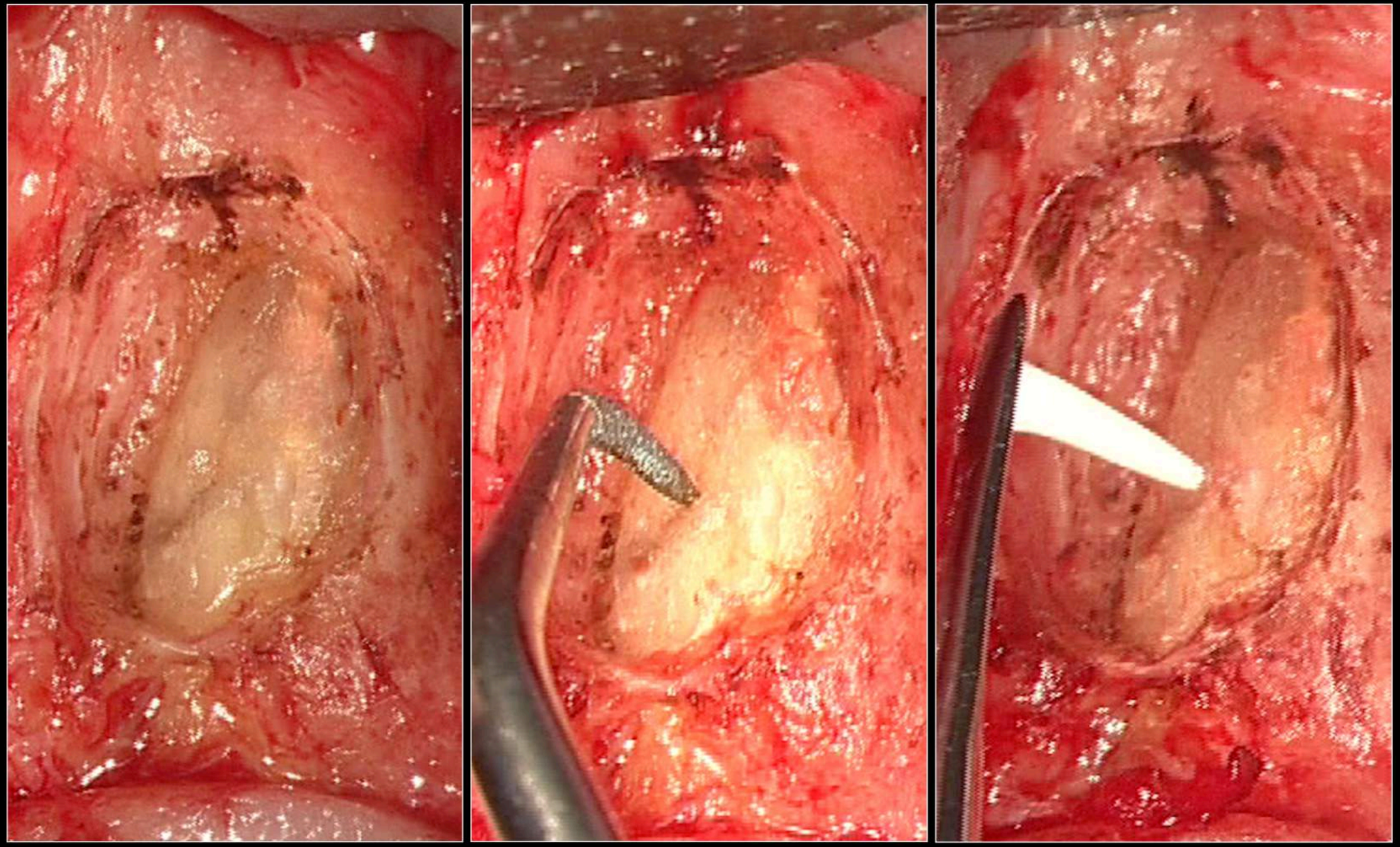


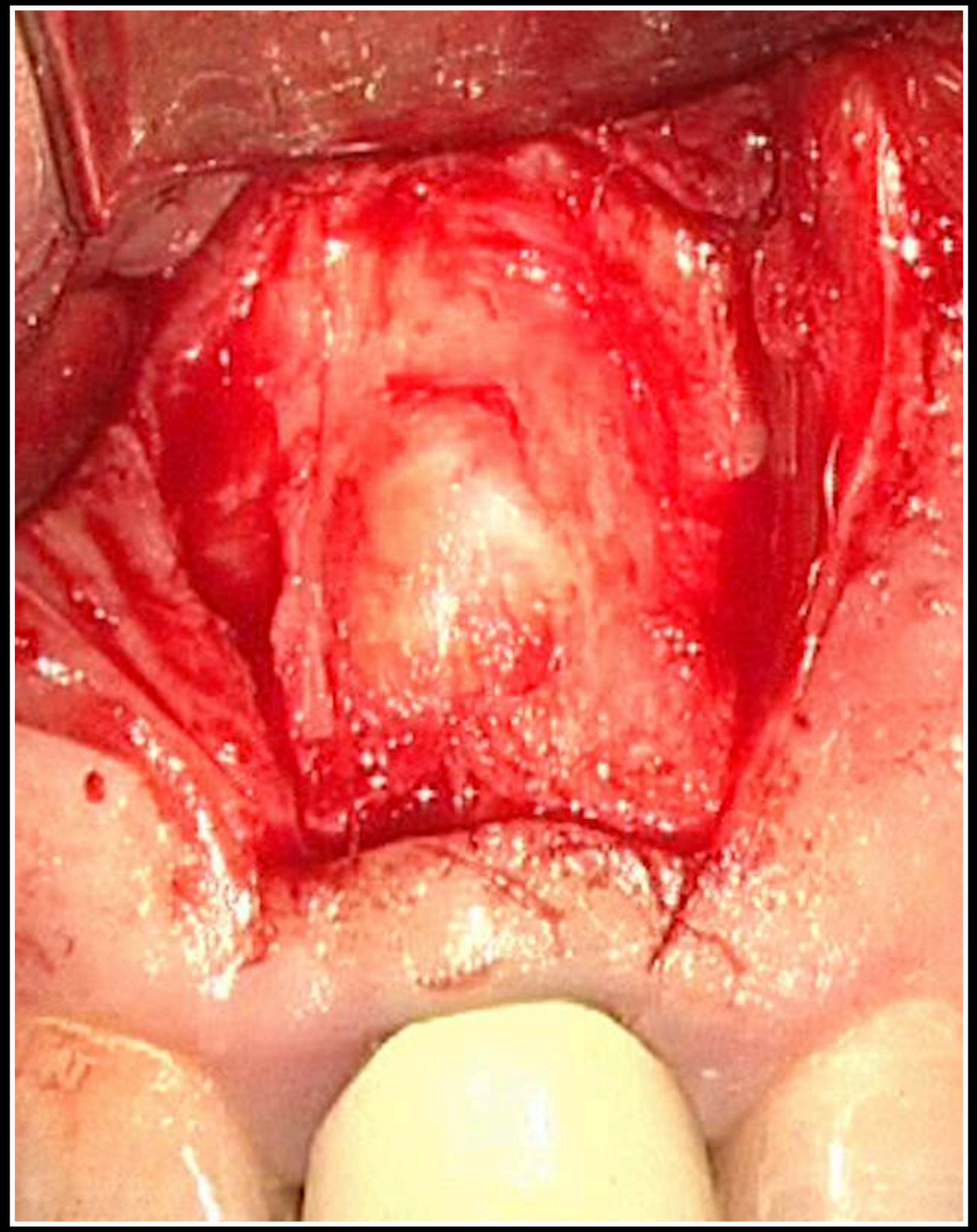






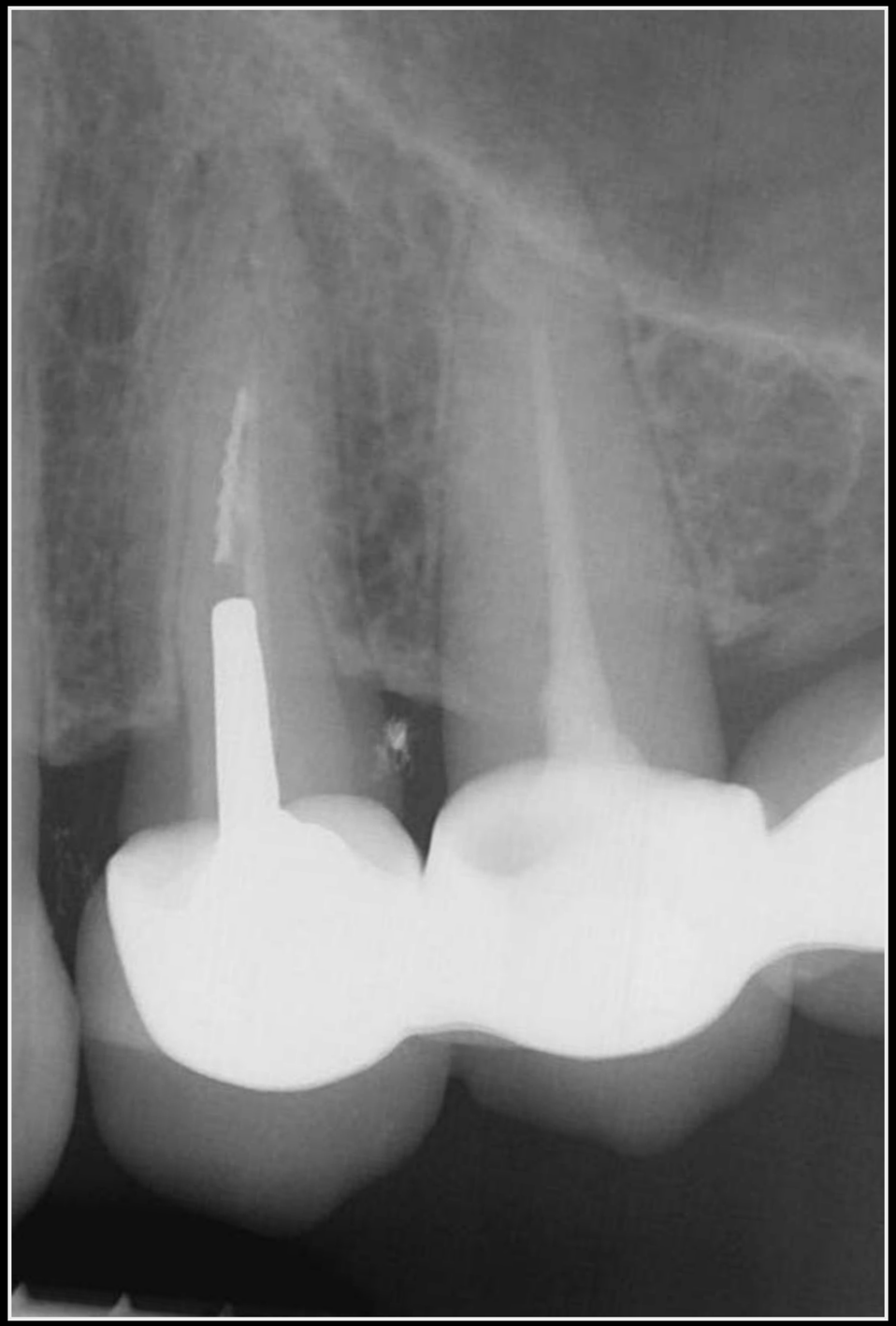


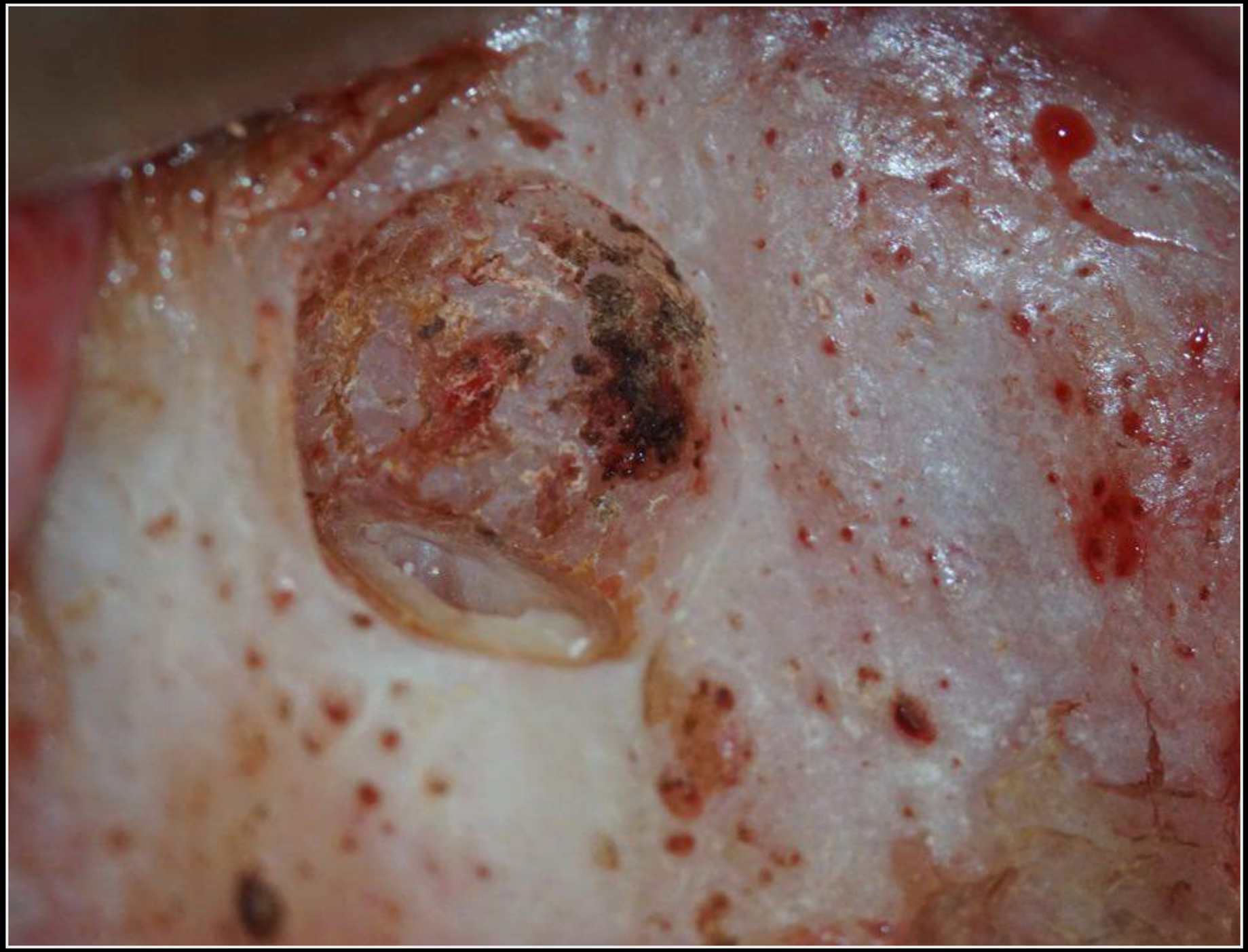


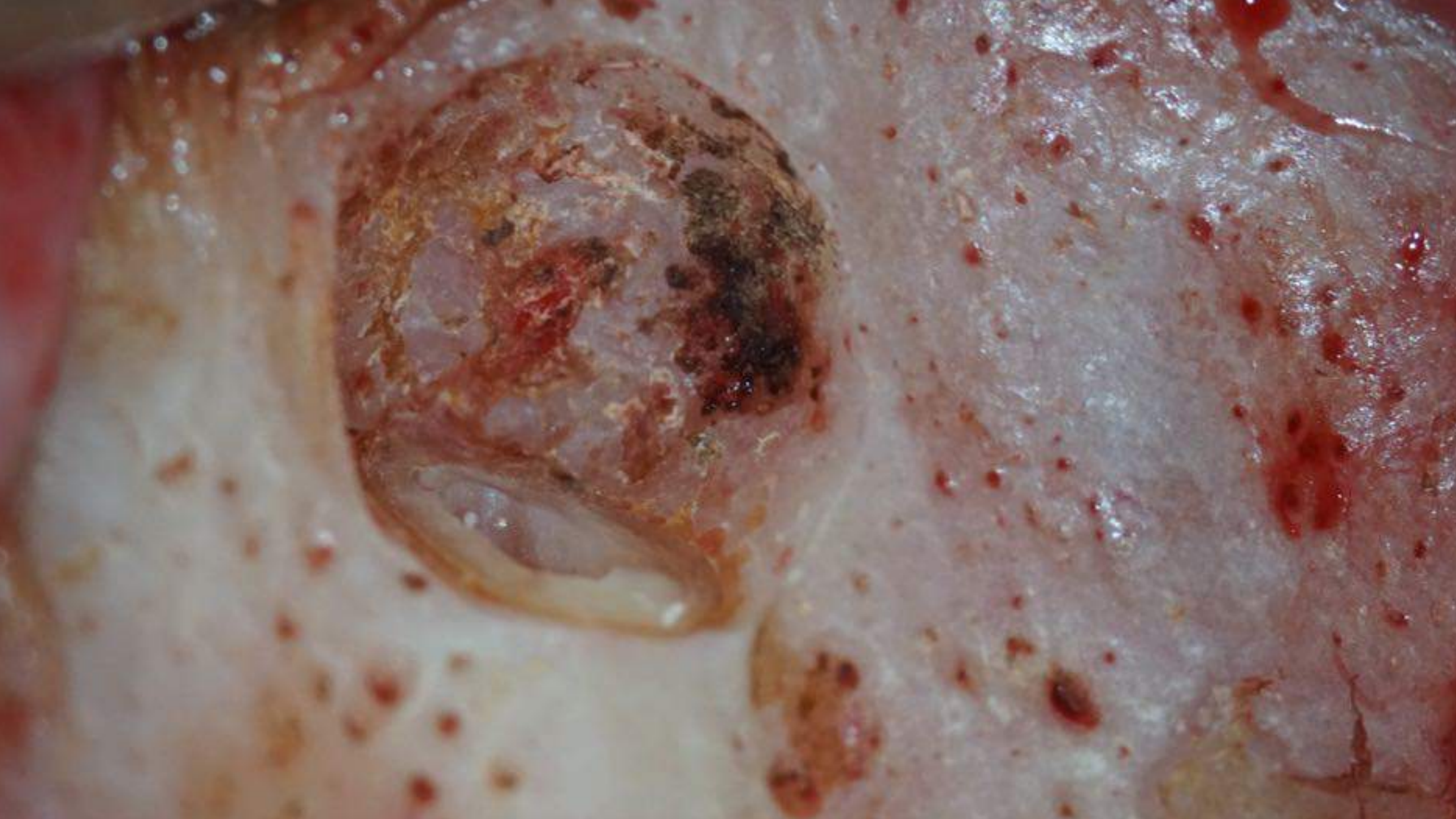


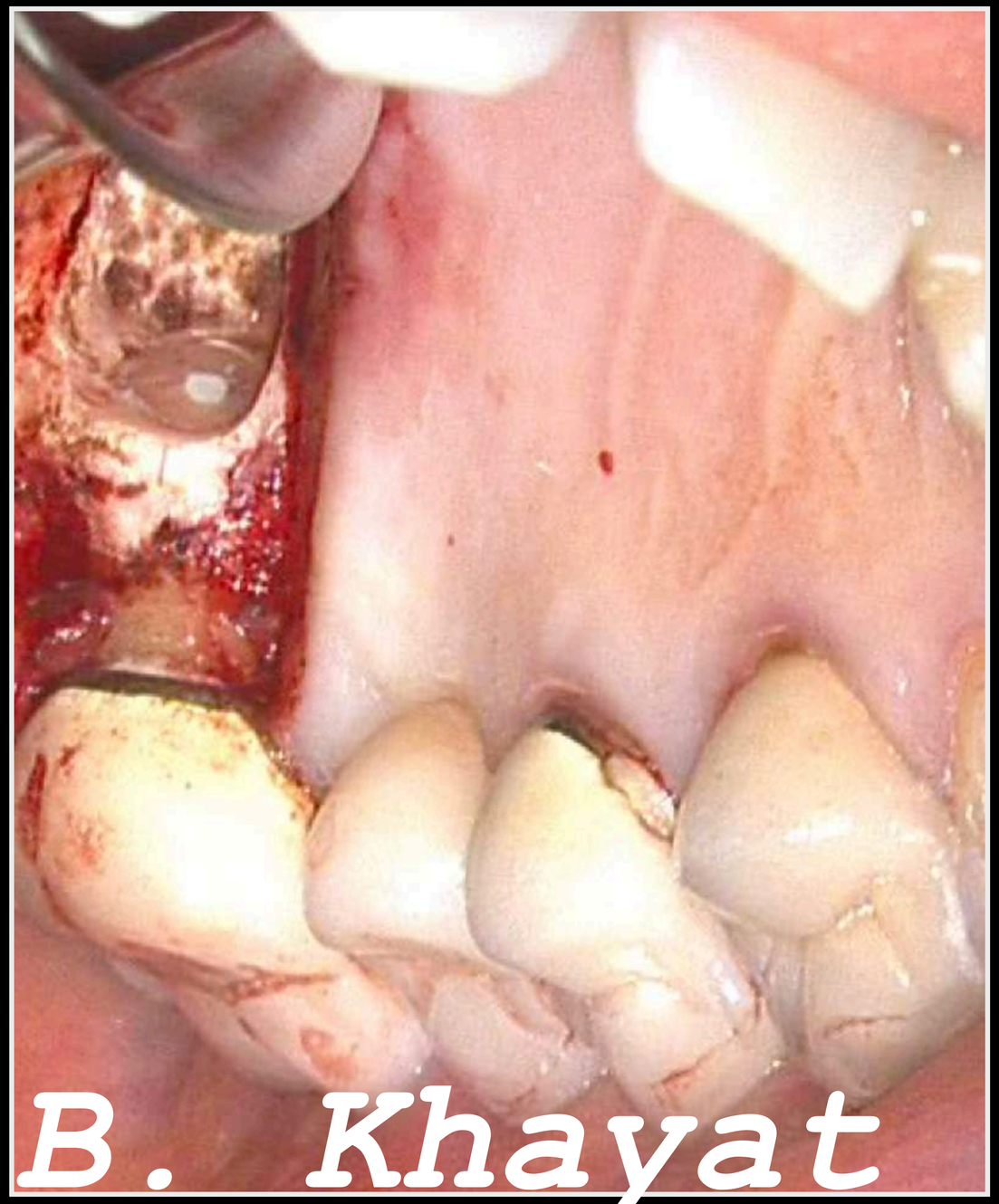

RVG 6100

Instruments Fracturés

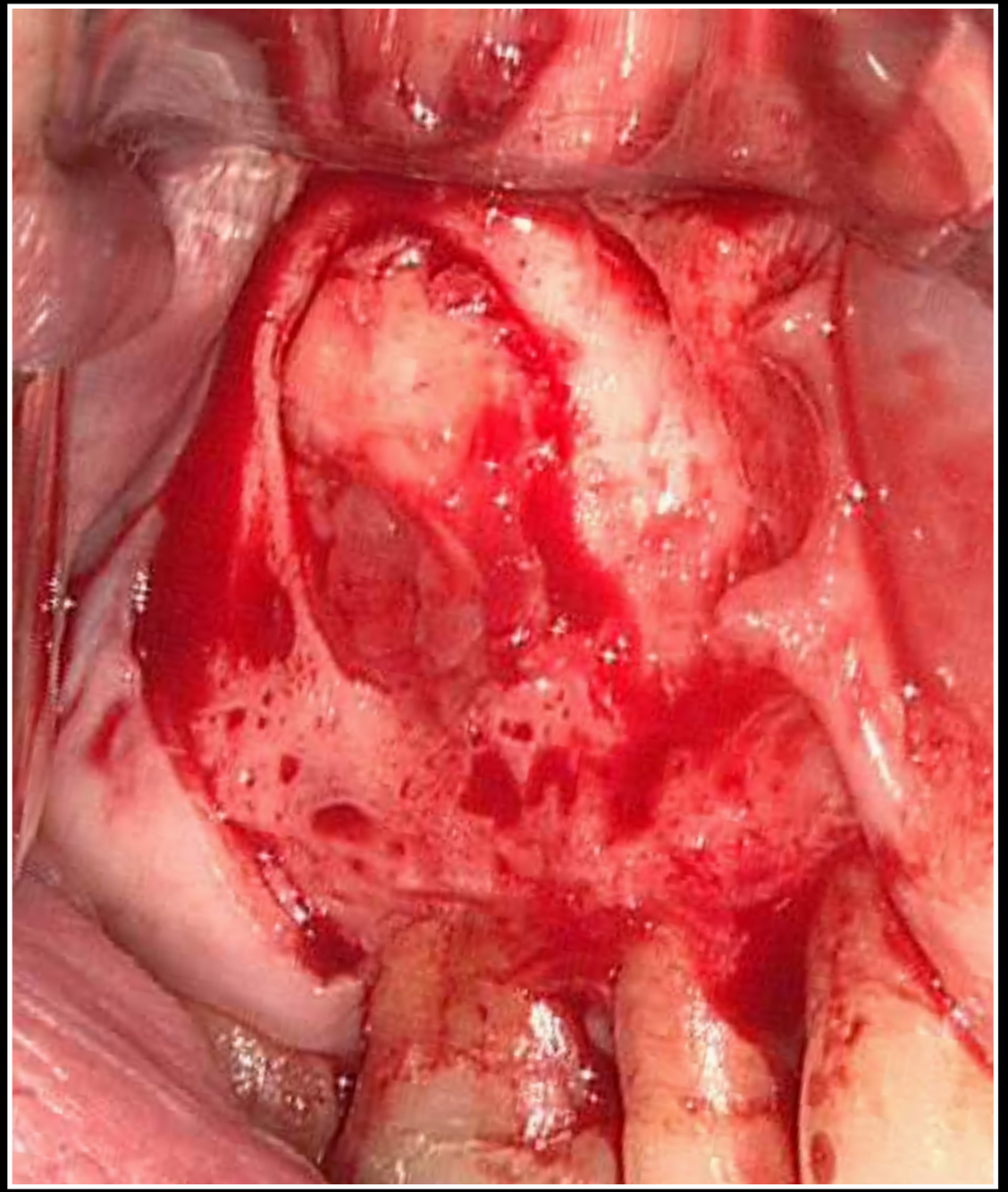


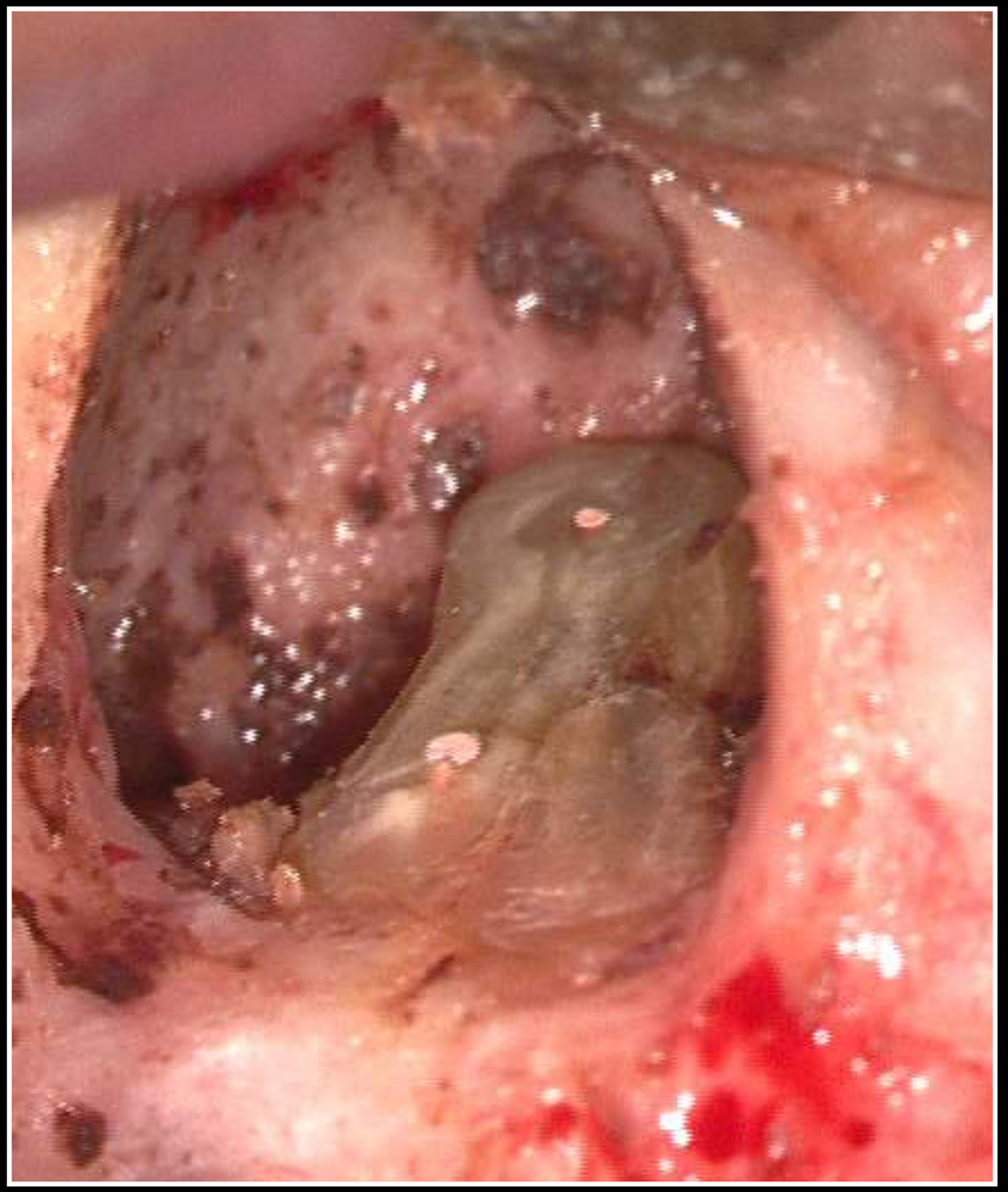


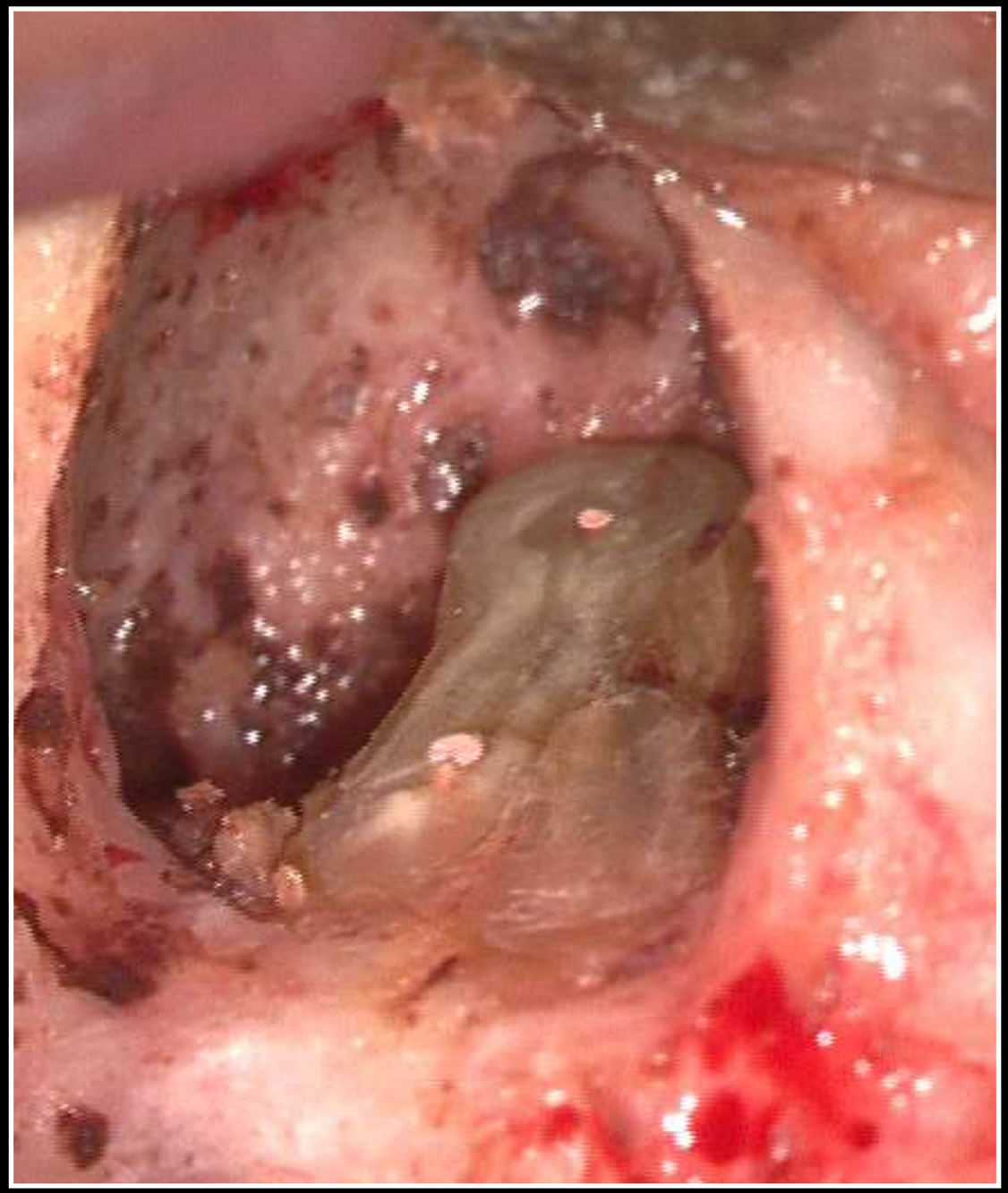


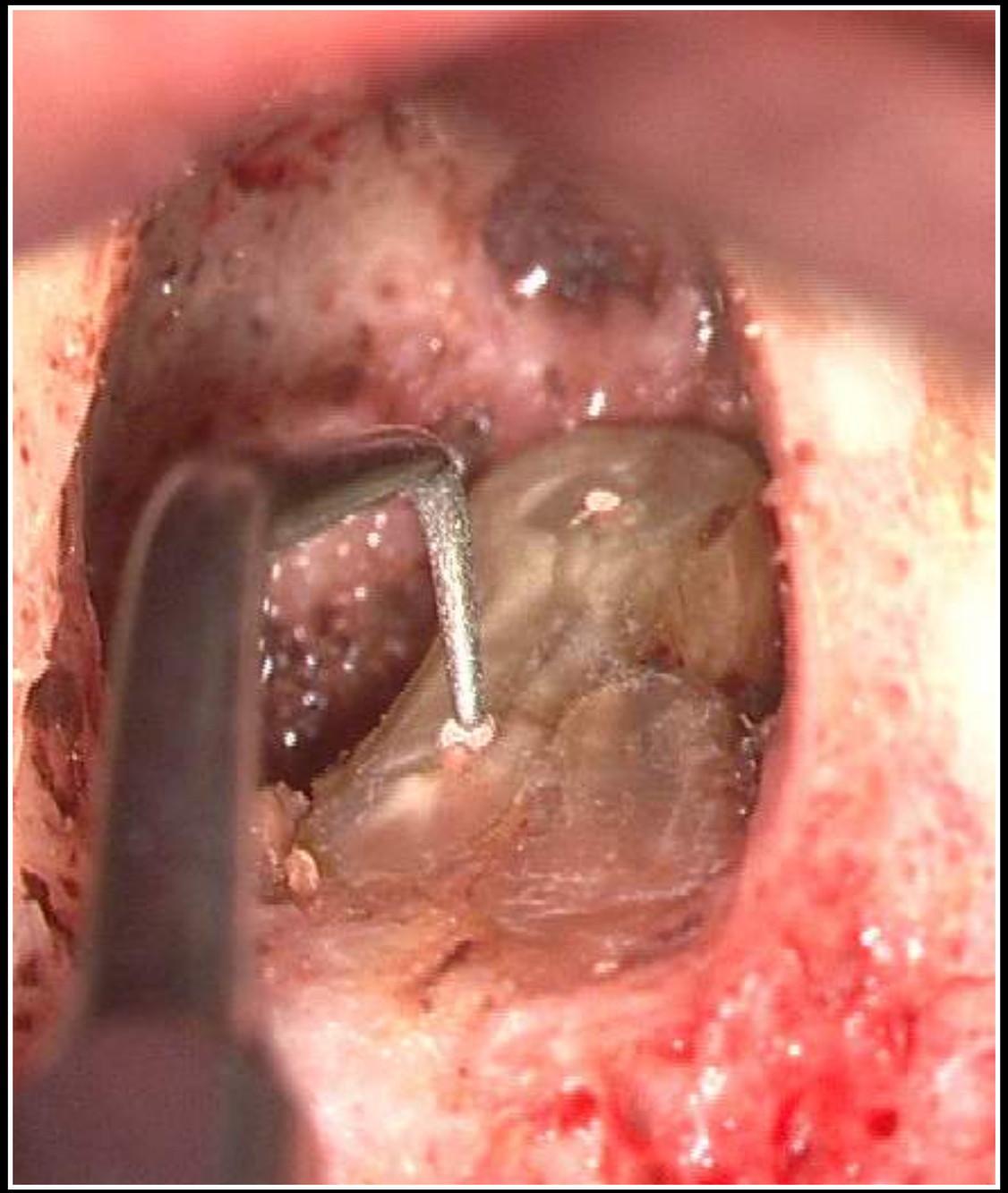


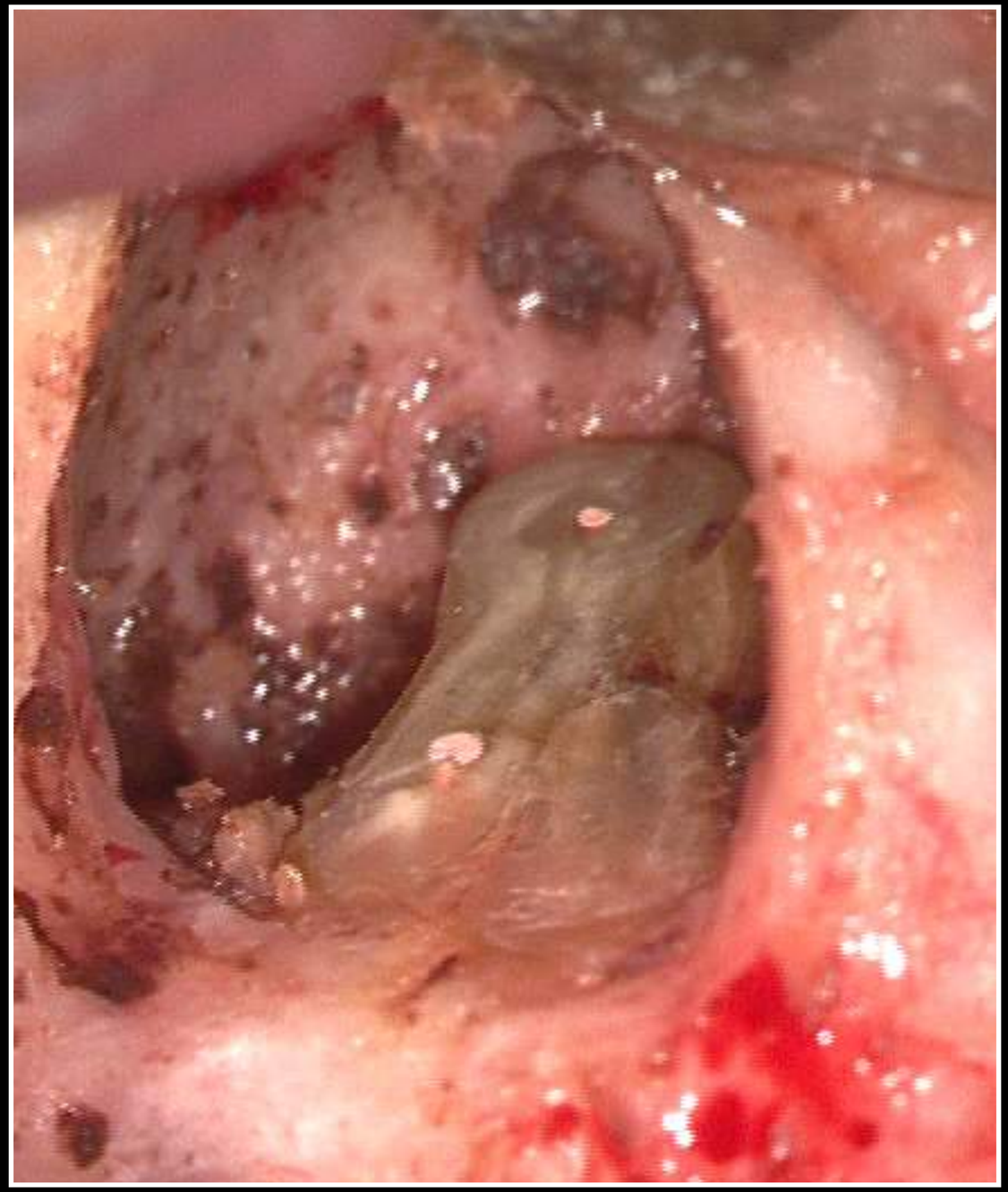
Racines Palatines

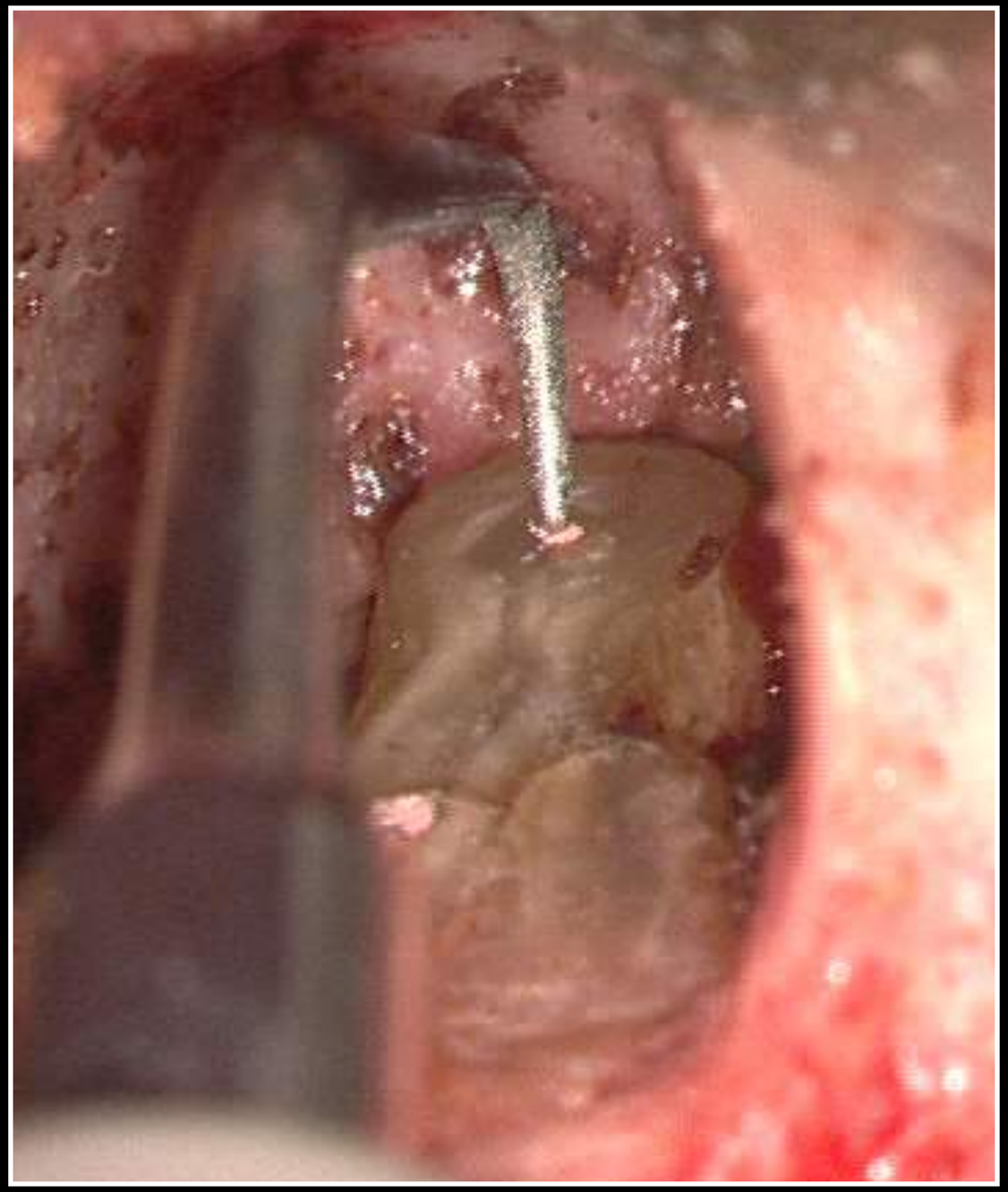


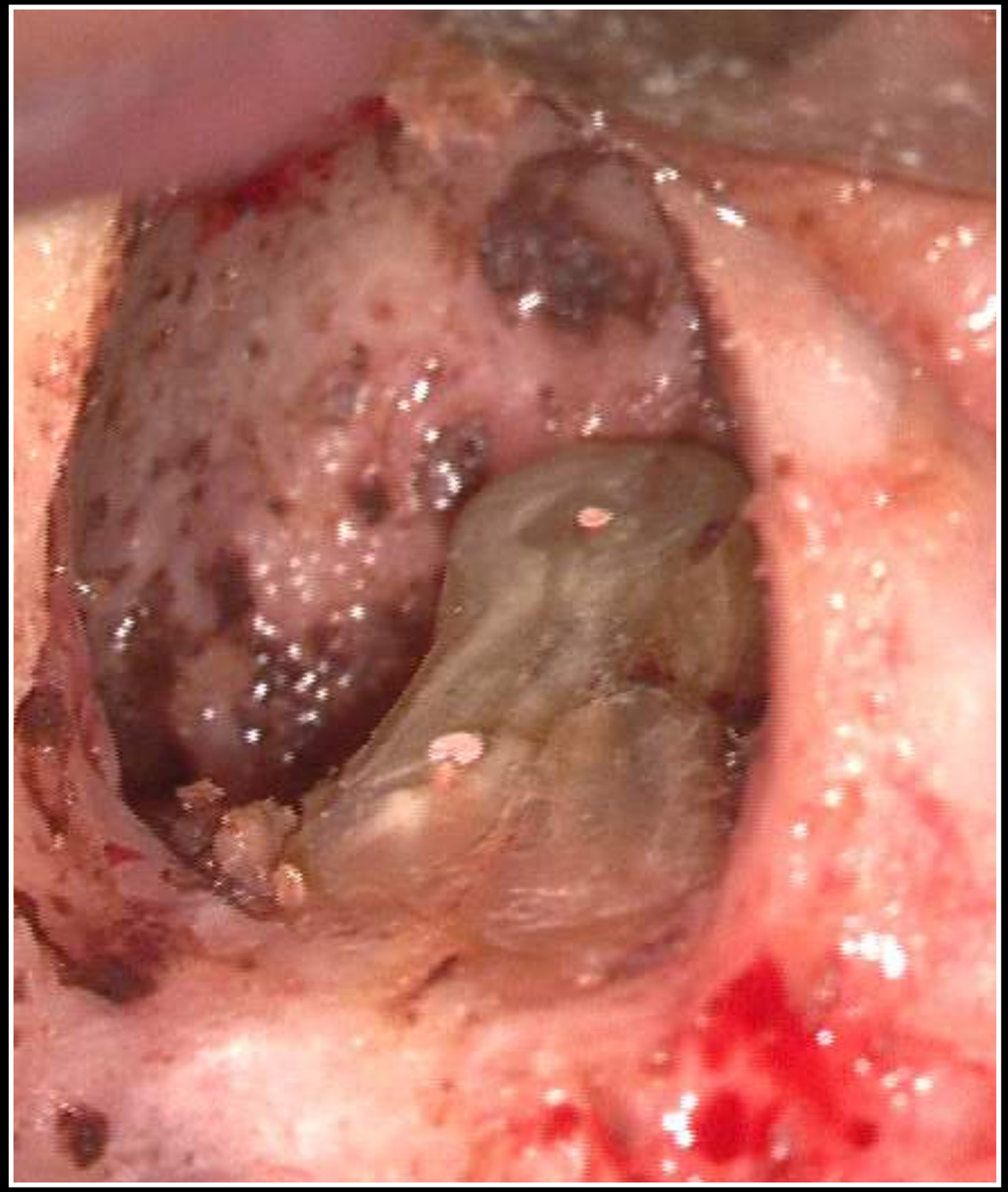


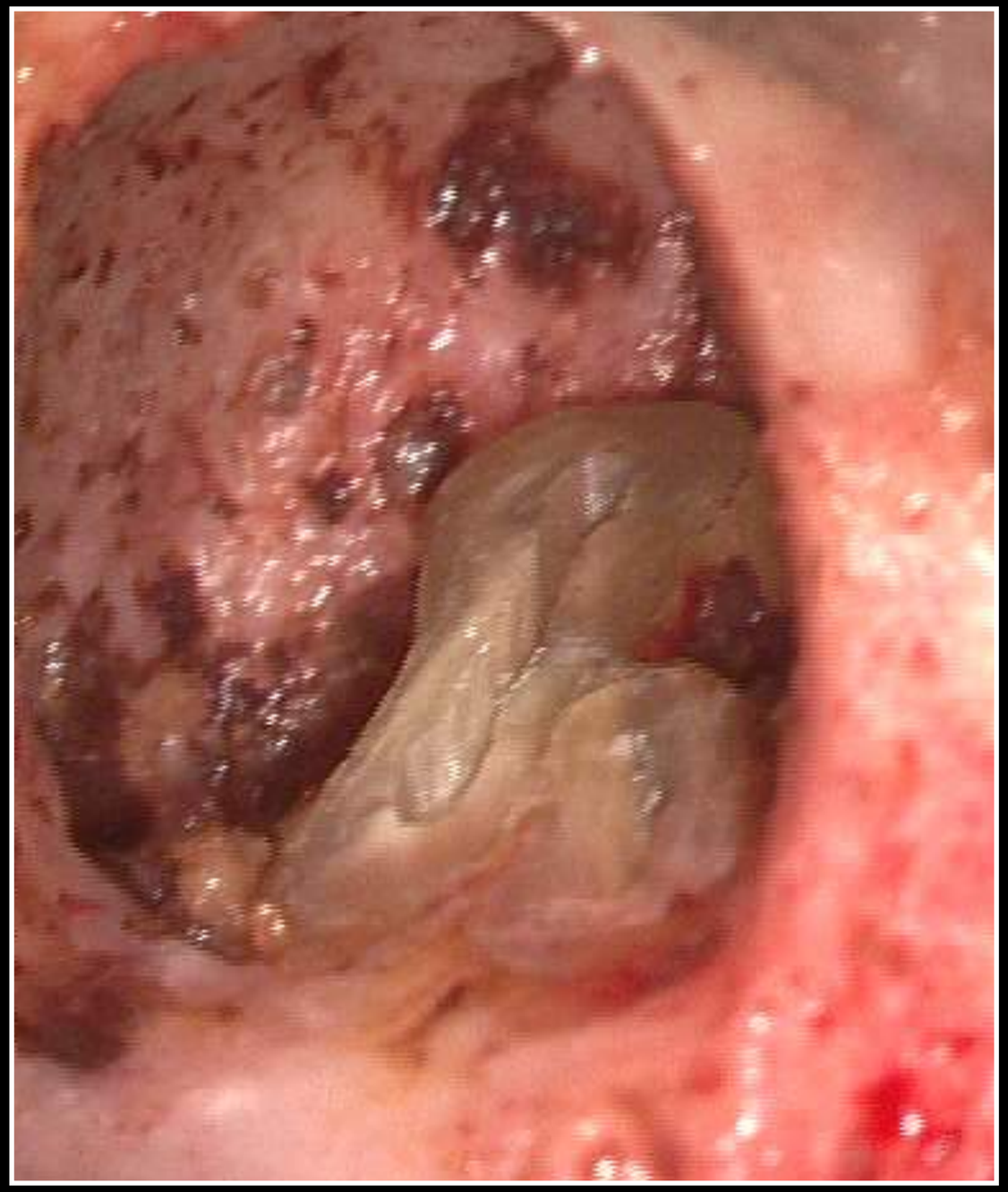


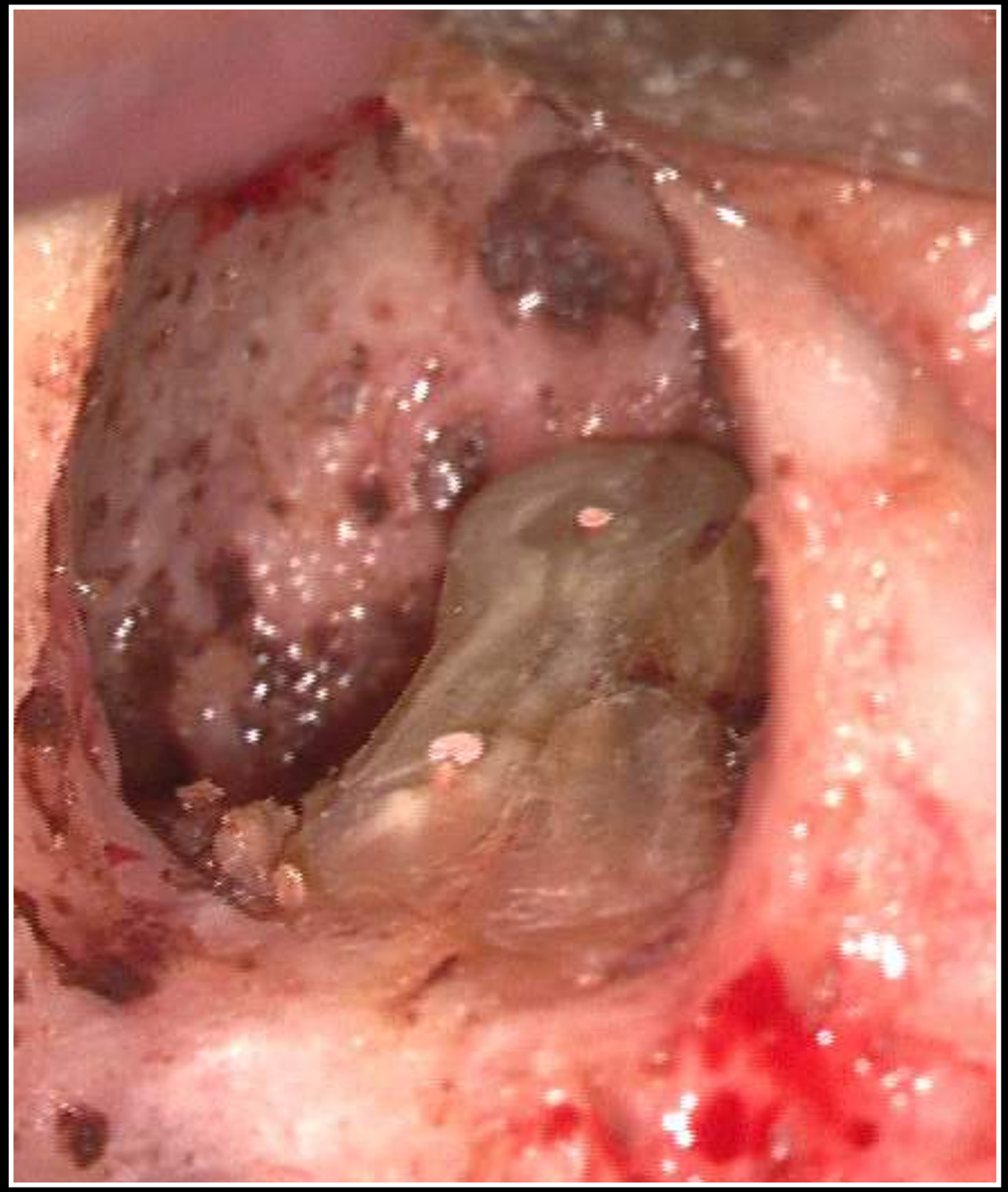


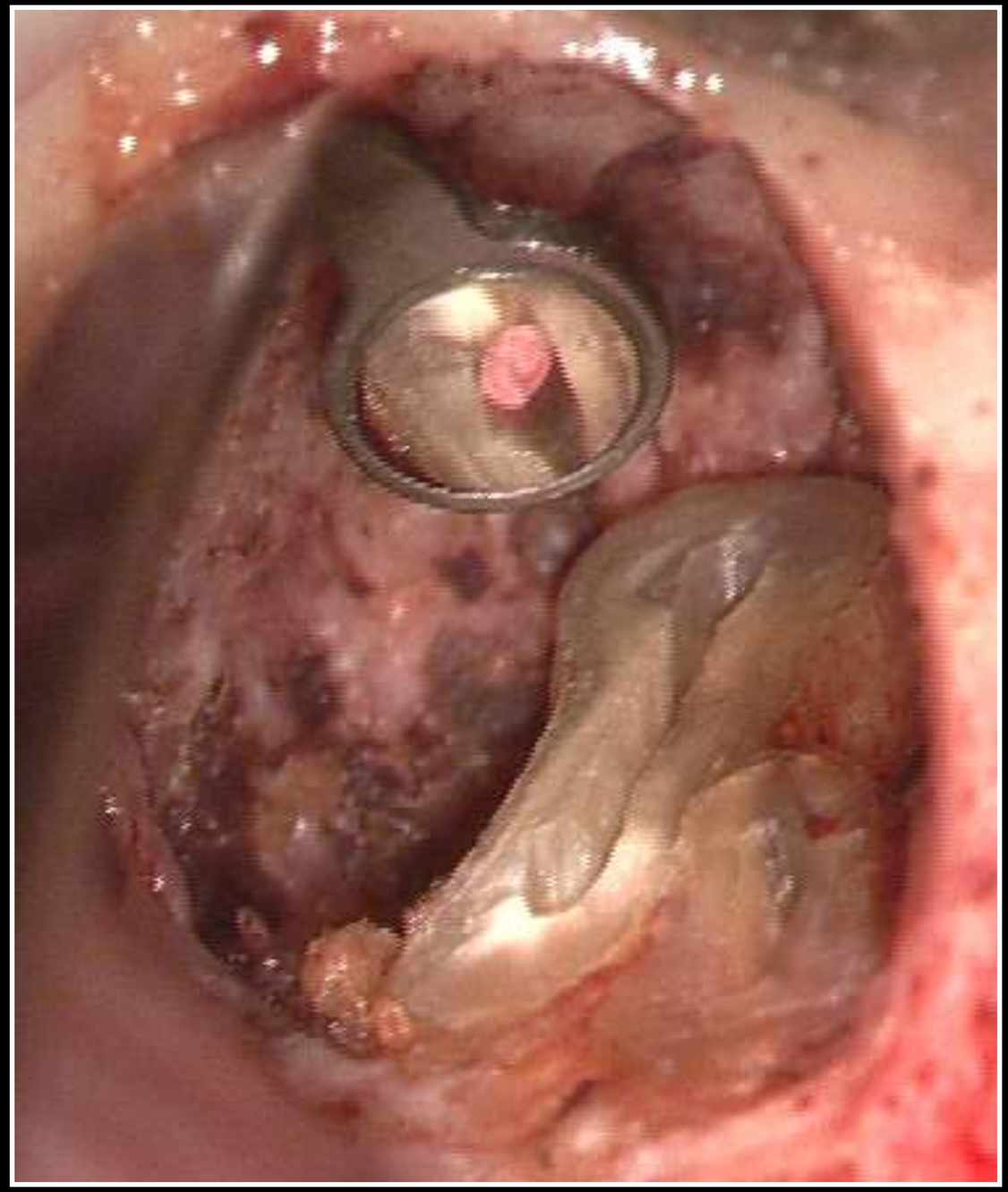


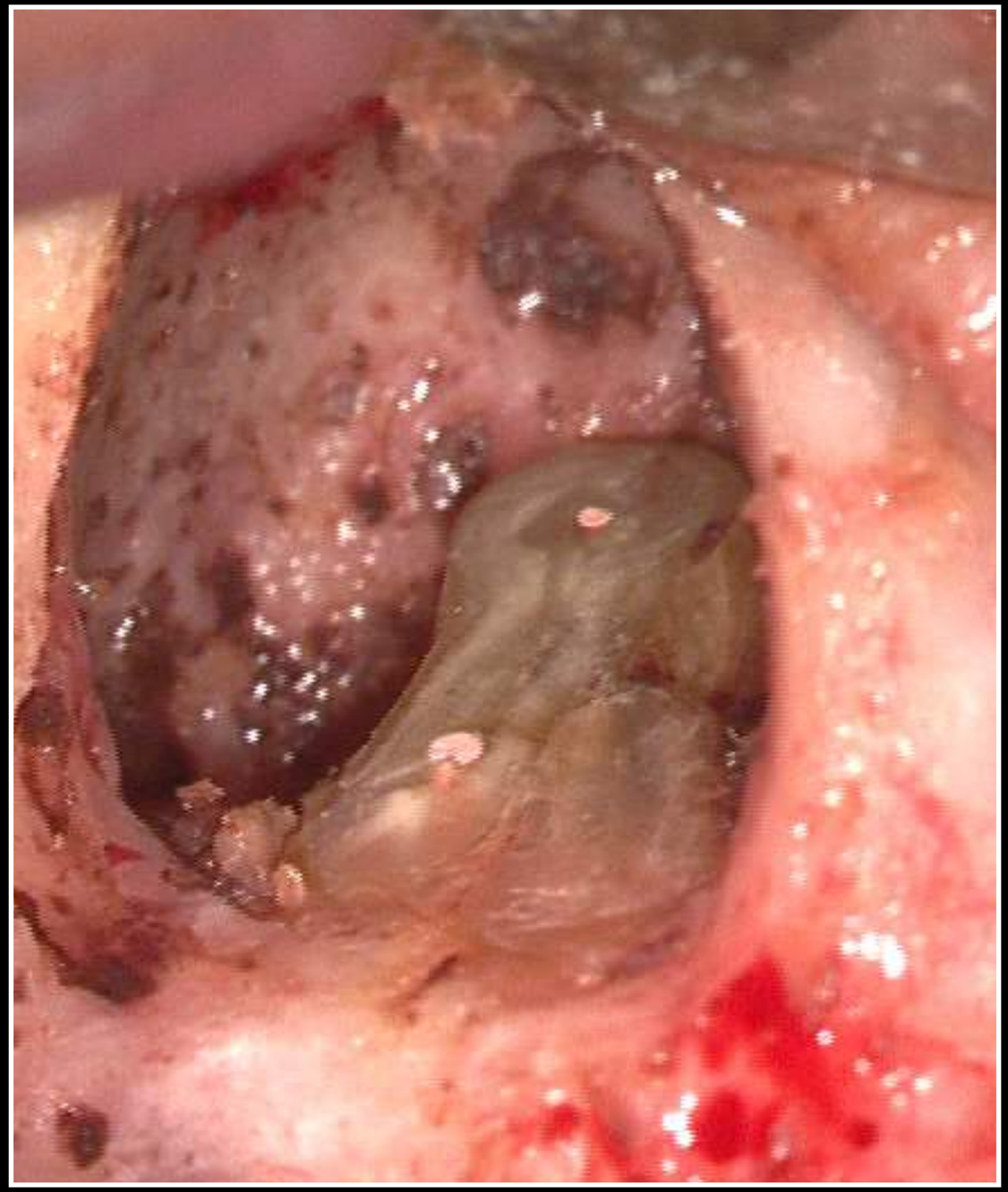


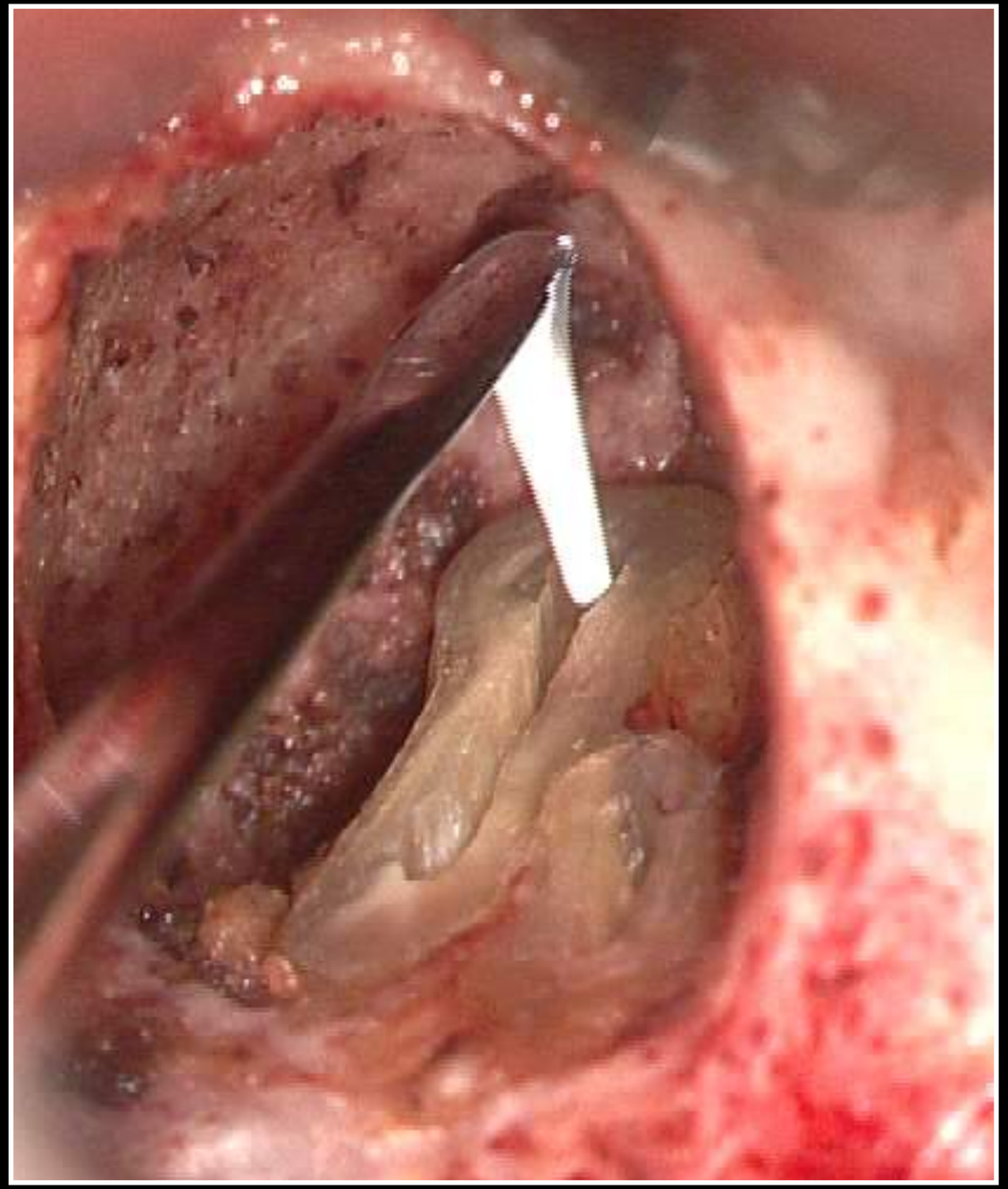


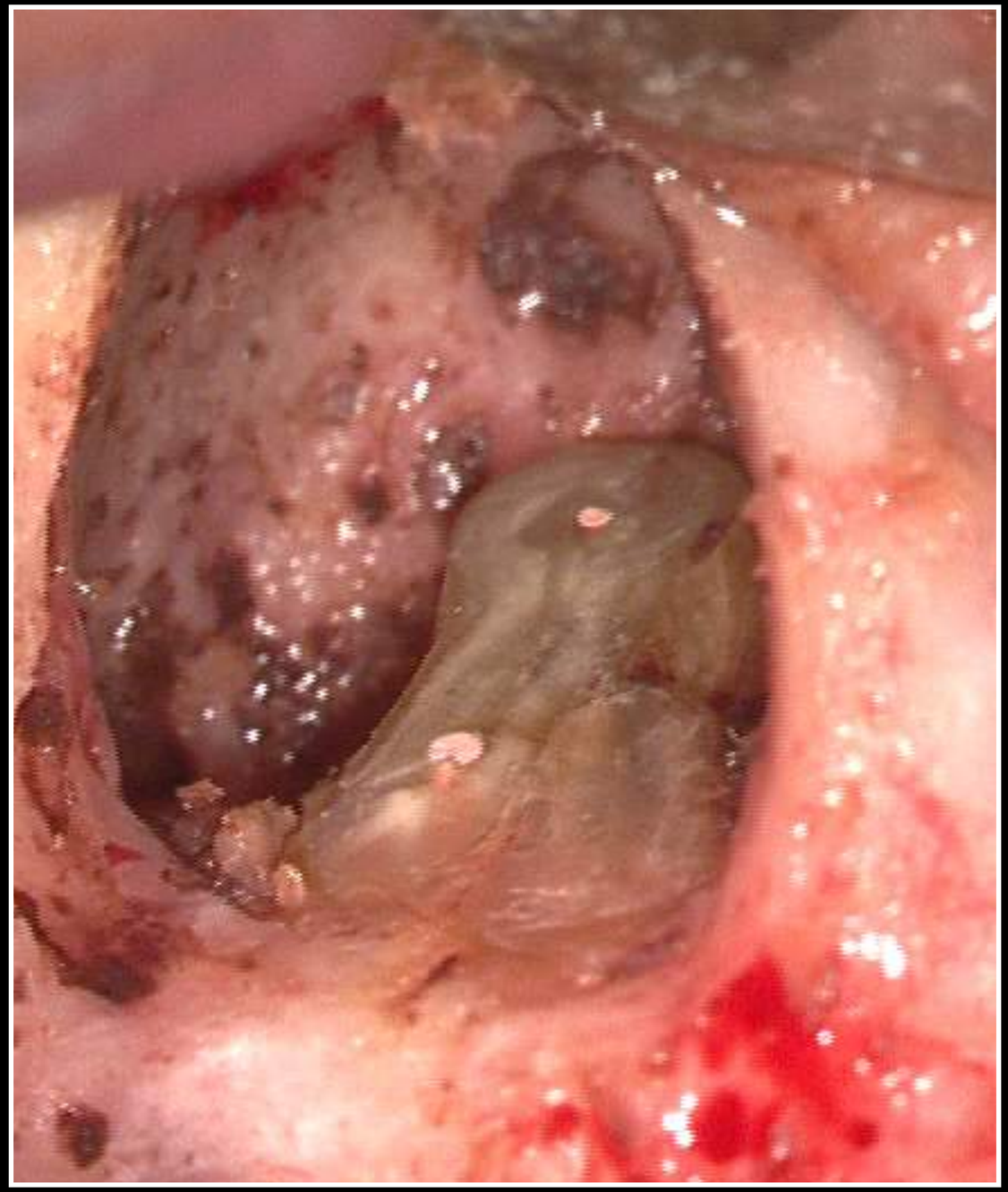


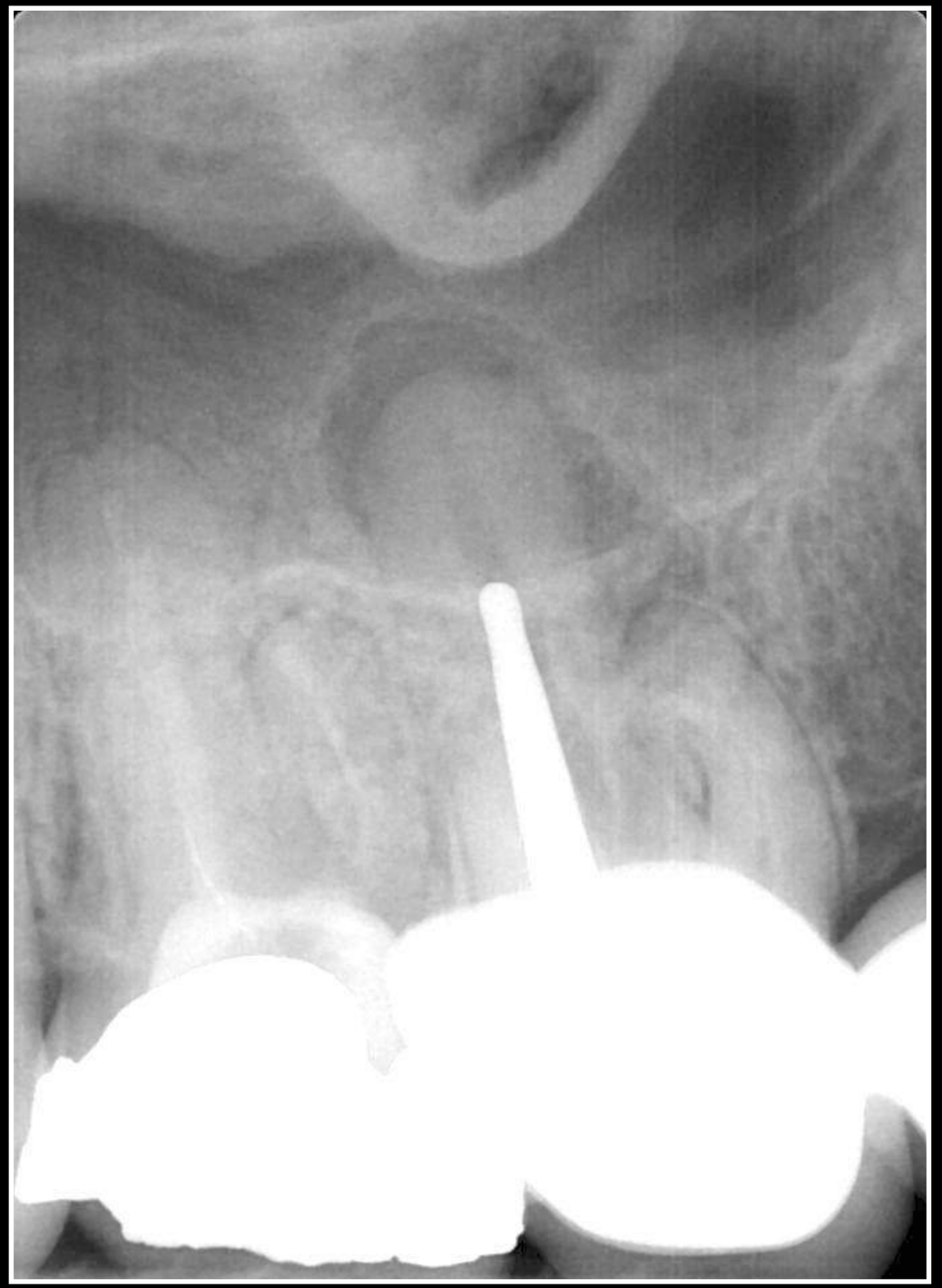


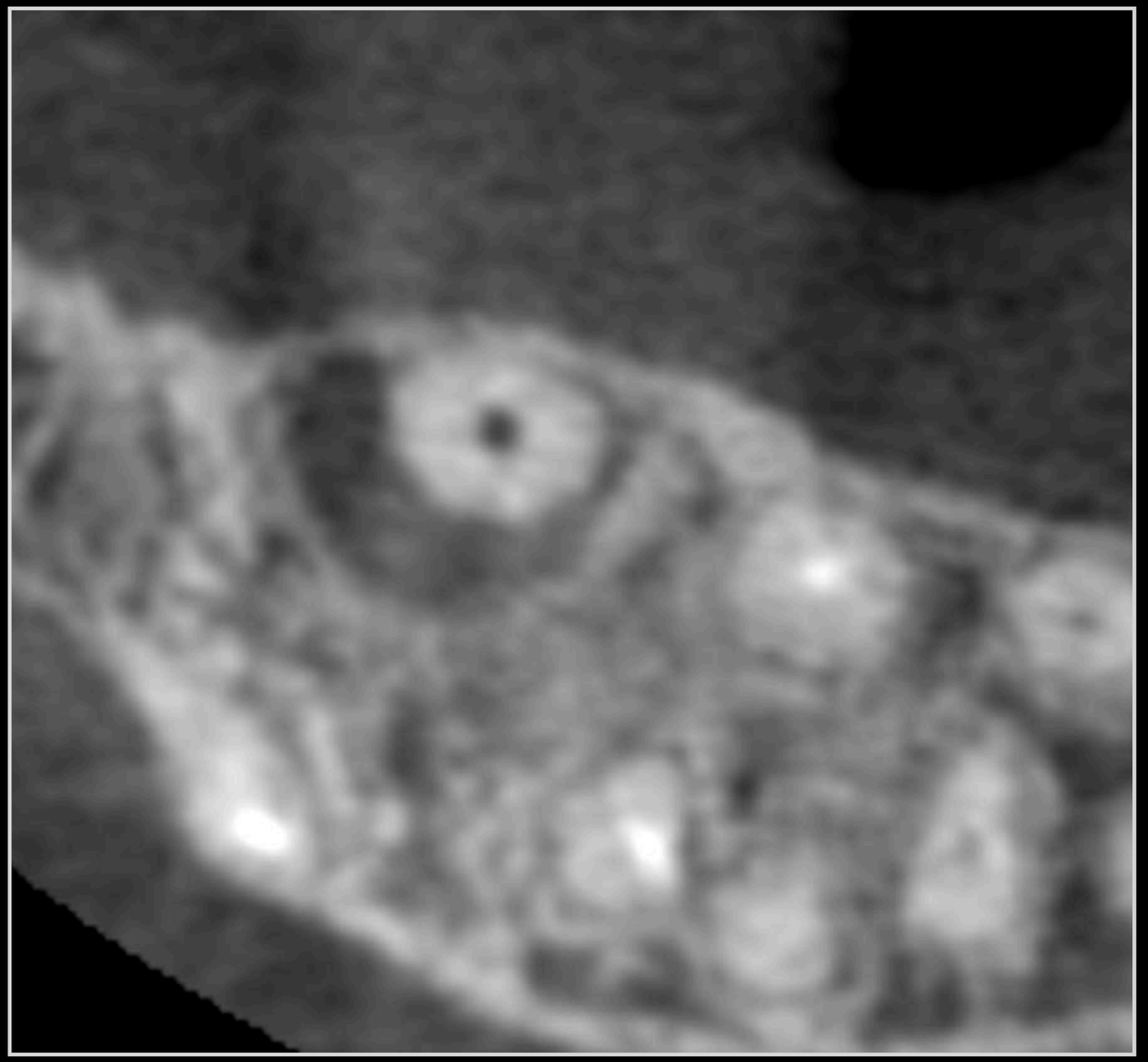


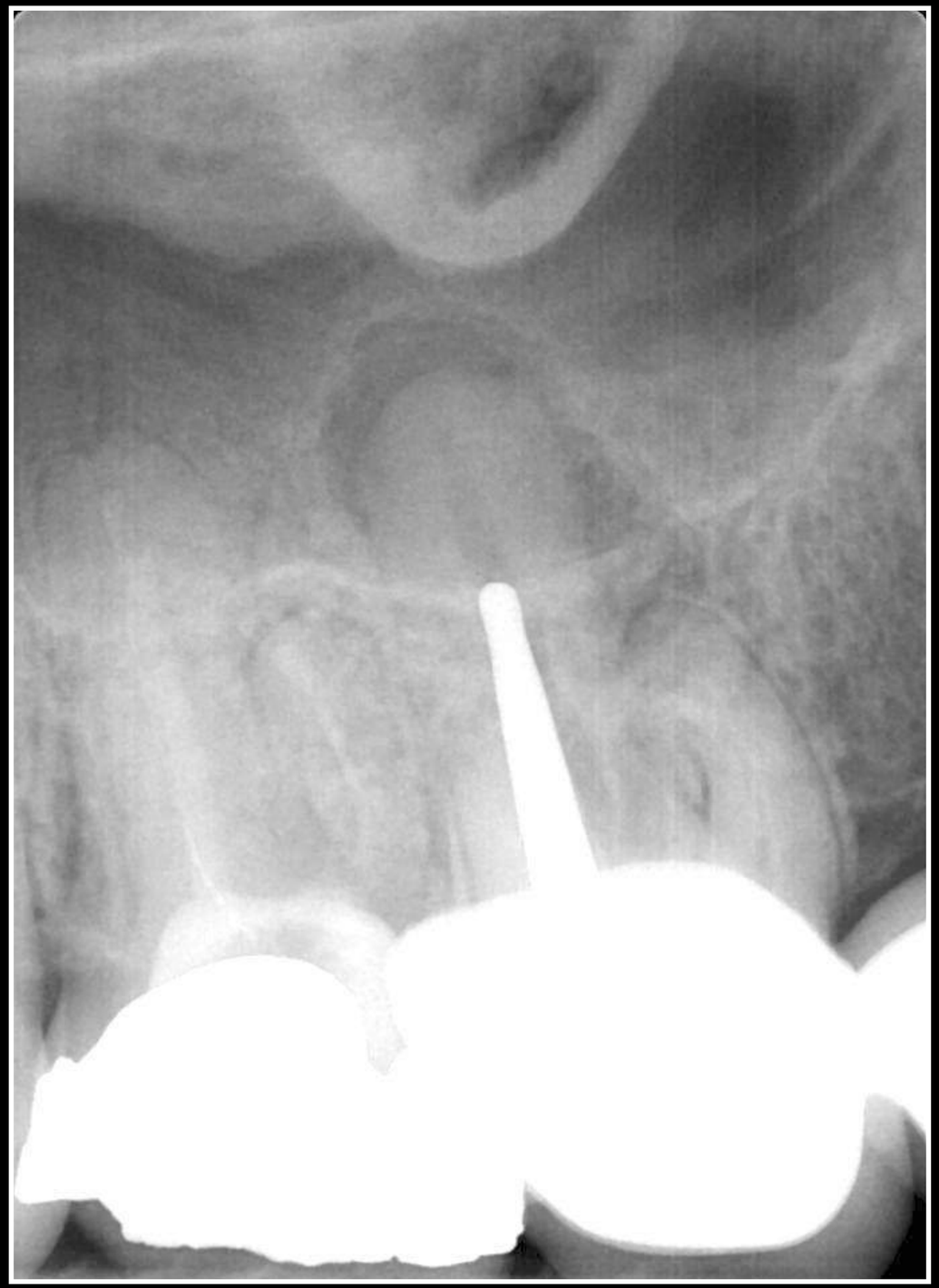


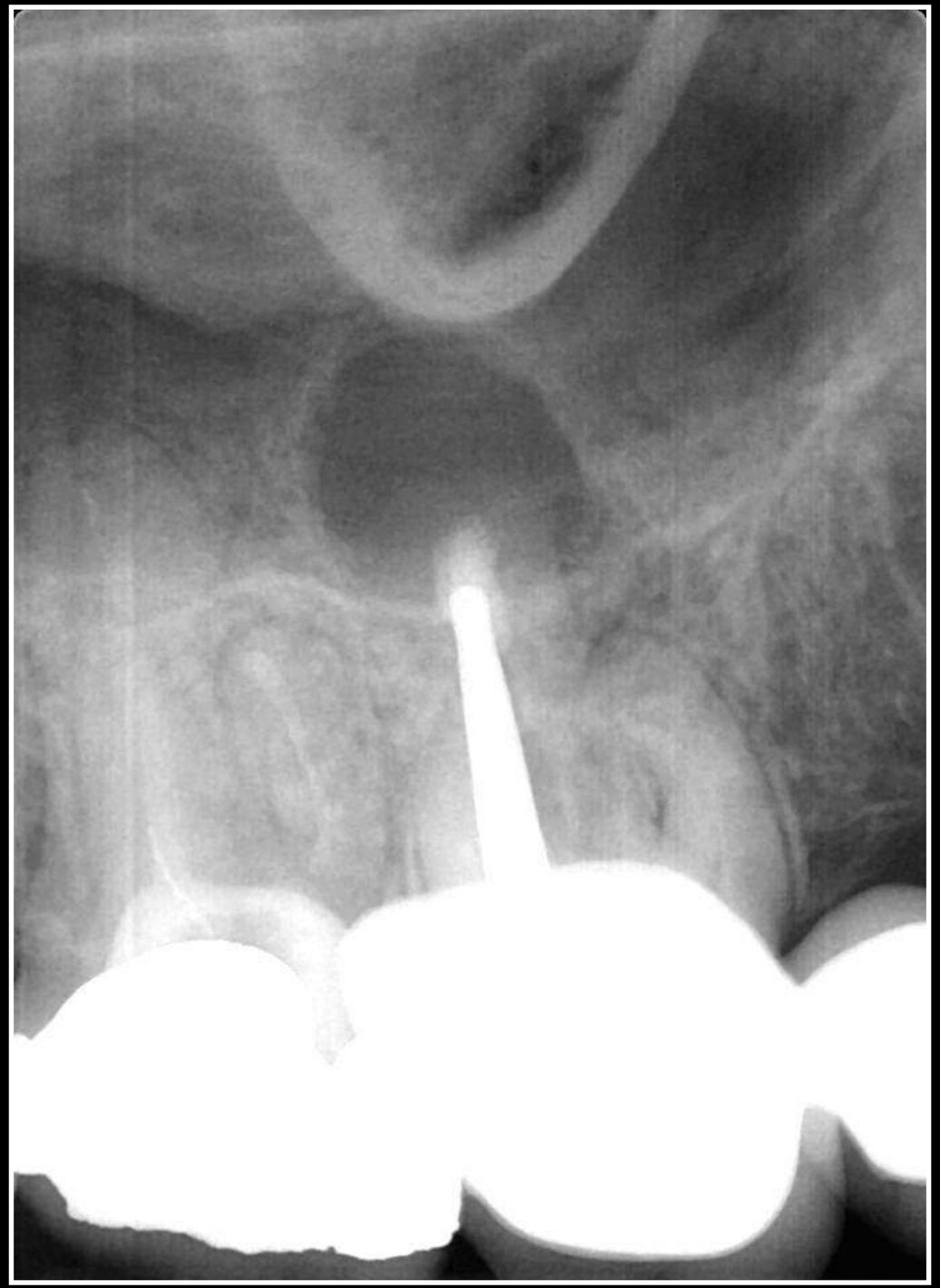


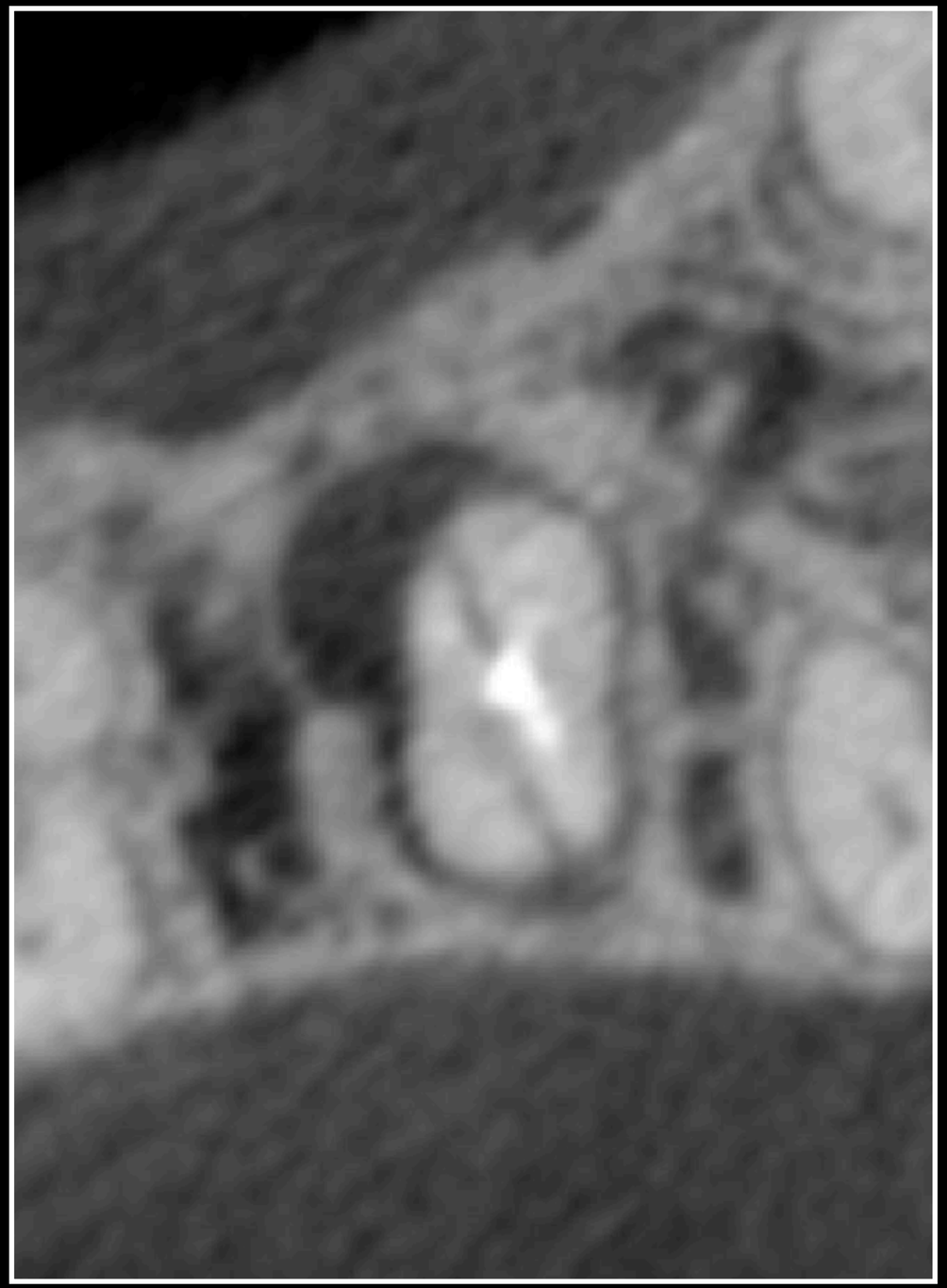












Gros Tenons

CLINICAL RESEARCH

Long-term Follow-up for Apical Microsurgery of Teeth with Core and Post Restorations

Astrid Truschnegg, MD, PhD, Petra Rugani, DDS, DMSc,* Barbara Kirnbauer, DDS, DMSc,* Lumnije Kqiku, DDS, PhD,† Norbert Jakse, MD, DDS, PhD,* and Robert Kirmeier, DDS, PhD†*

SIGNIFICANCE

Treatment of apical periodontitis with apical microsurgery on teeth with core and post restoration is a reliable alternative to root canal retreatment and eliminating the risk of post removal–related complications.

ABSTRACT

Introduction: Orthograde retreatment was recommended before apical surgery to achieve high success rates. The aim of this study was to determine the success rates of apicoectomy of core and post-restored teeth without prior root canal retreatment followed for up to 13 years. **Methods:** Seventy-three patients with 87 teeth with apical periodontitis underwent apical microsurgery from 2004 to 2006 at the Department of Dental Medicine and Oral Health, Medical University of Graz, Graz, Austria. After 1.5–5 years and 10–13 years, 85 and 49 teeth, respectively, were followed up by 4 independent, calibrated examiners. Absolute and relative frequencies of the dichotomous outcome (healed vs nonhealed) were analyzed considering patient-, tooth-, and treatment-related factors. The significance of the obtained values was determined with the chi-square and Fisher exact tests. **Results:** All of the 85 (100%) investigated teeth were *in situ* 1.5–5 years after surgery, whereas only 49 of 62 analyzed teeth (79%) remained after 10–13 years. Radiologically documented periapical healing was 97.6% (83/85 teeth) for the first follow-up period but decreased to 75.8% (47/62 teeth) by the second follow-up. Smokers showed significantly worse results after 10–13 years. None of the other investigated potential influencing factors significantly affected results. **Conclusions:** This clinical study showed that apical microsurgery on teeth with core and post restoration using Intermediate Restorative Material (Dentsply Caulk, Milford, DE) as filling material achieves excellent results after 1.5–5 years (97.6%) and still shows good results after 10–13 years (75.8%). Accordingly, it is a reliable alternative to root canal retreatment, eliminating the risk of post removal–related complications. (*J Endod 2020;46:178–183.*)

KEY WORDS

Apical microsurgery; chronic apical periodontitis; core and post restoration; follow-up; radiograph

Because persistent periradicular pathosis after endodontic treatment is usually a result of insufficient disinfection of the root canal system[1,2], conservative retreatment to exclude microorganisms as the source of the infection is the treatment of choice[3,4]. However, apical microsurgery (AMS) has been introduced as an alternative approach. Even though AMS only confines microorganisms within the root canal, several factors may demand a surgical intervention. Among these are obstructed root canals, extruded material, or perforations impossible to treat from within the pulp cavity[5].

Apical root resection has undergone profound changes in recent decades. Success rates have improved considerably, thanks particularly to the minimally invasive technique of retrograde filling under a dental operating microscope[6–8]. Several studies have evaluated the short-term success of AMS[9–21]. These publications were complemented by long-term studies confirming the high success rate of this approach. Rubinstein and Kim[22] reported a 91.6% success rate, von Arx et al[23] a 76.9% success rate, Song et al[23] 99.3% and[24] 87.6% success rates, and Çalışkan et al[25] an 90% success rate. The follow-up period of these studies ranged from 4–10 years.

Because orthograde retreatment has been proven to enhance the results of apical surgery significantly[3], it has been recommended preoperatively in order to promote high success rates[3]. When confronted with a post and core restoration, this might be technically difficult or even unacceptable to the patient. The removal of a post is a time consuming and challenging procedure, especially if hard metal alloys were applied. Special care has to be taken to spare the remaining dentin to avoid further weakening of the structural integrity of the root. Obviously, new restorative rehabilitation required after successful orthograde retreatment also places a further financial burden on the patient.

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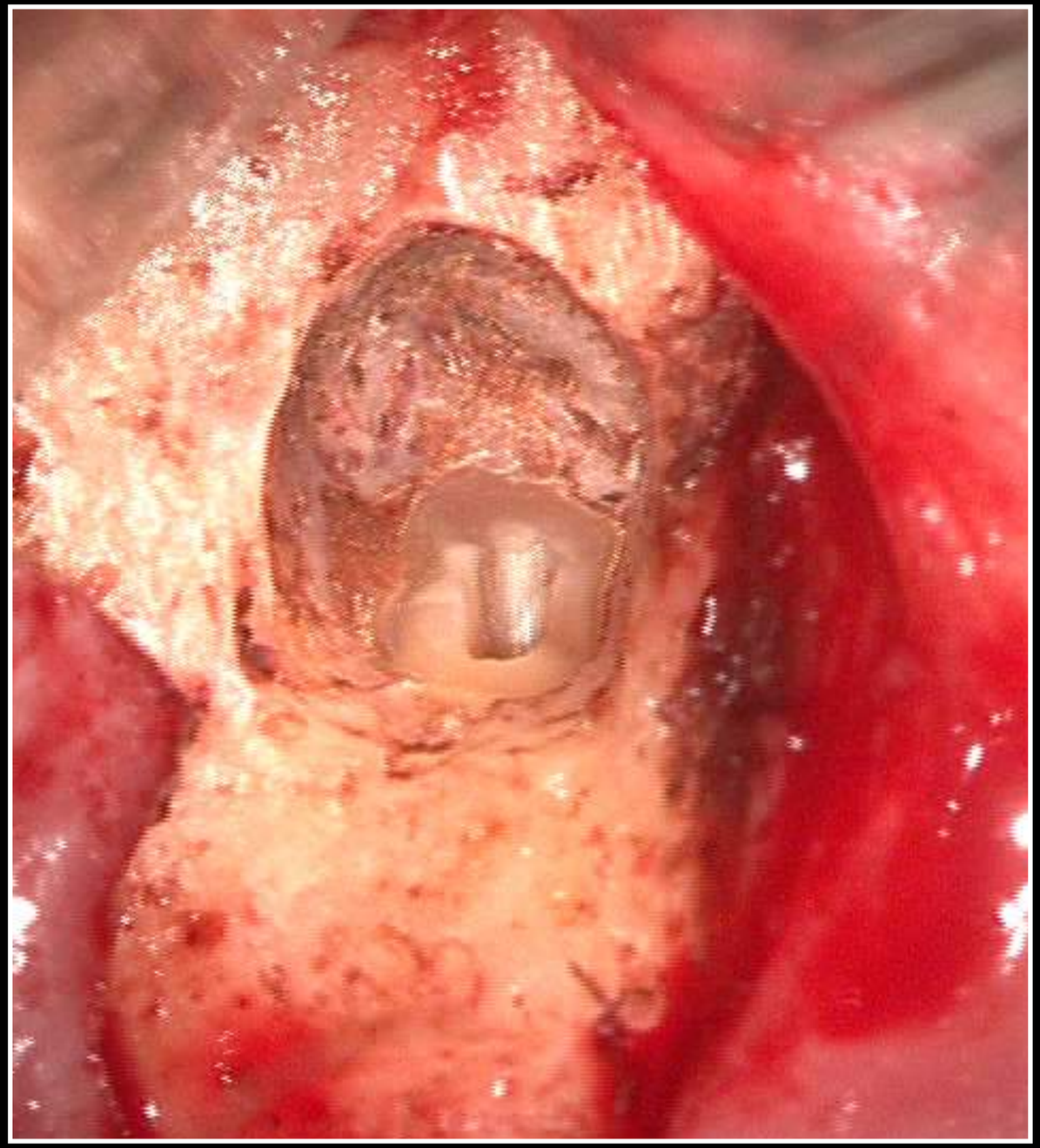
0099-2399/$ - see front matter

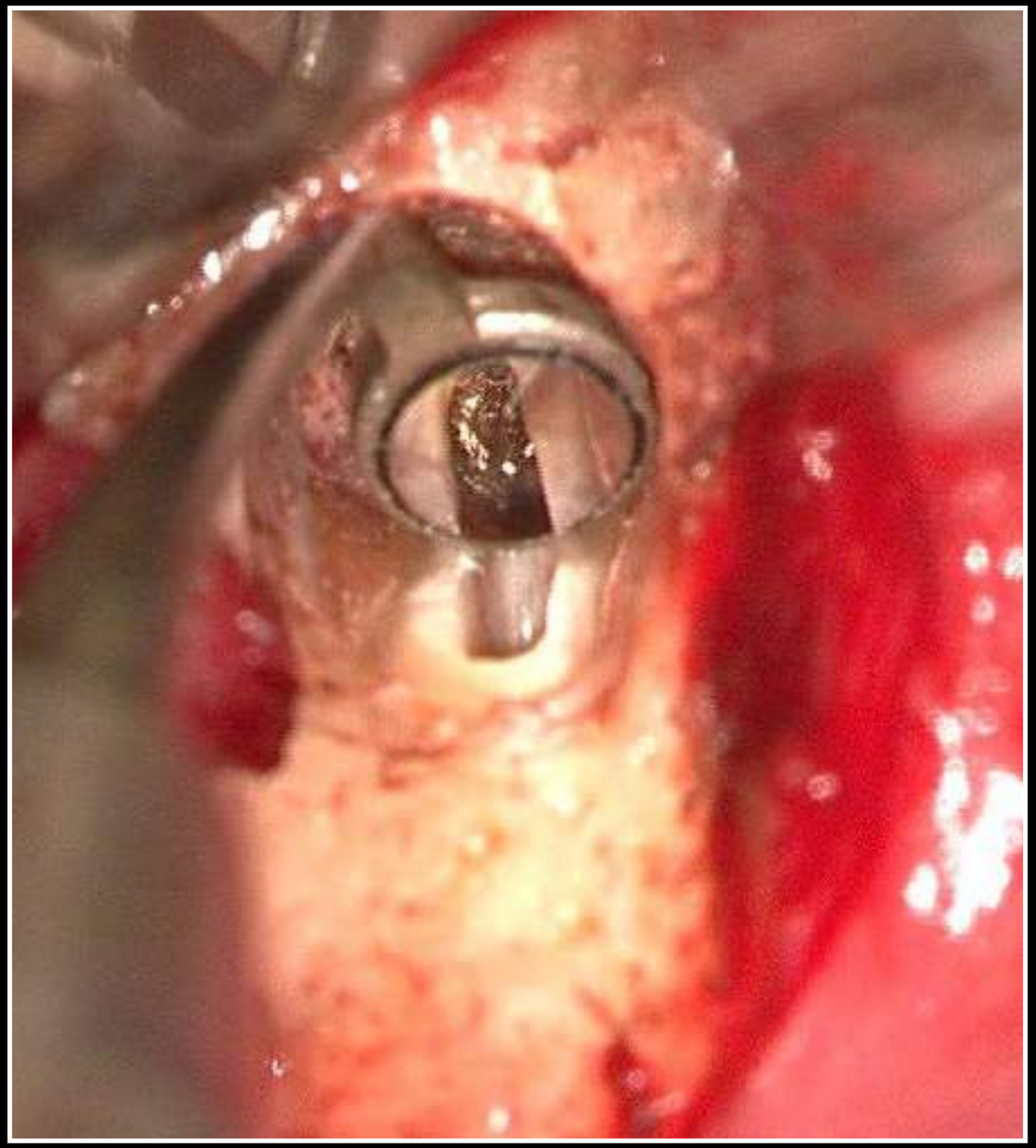
https://doi.org/10.1016/j.joen.2019.11.002

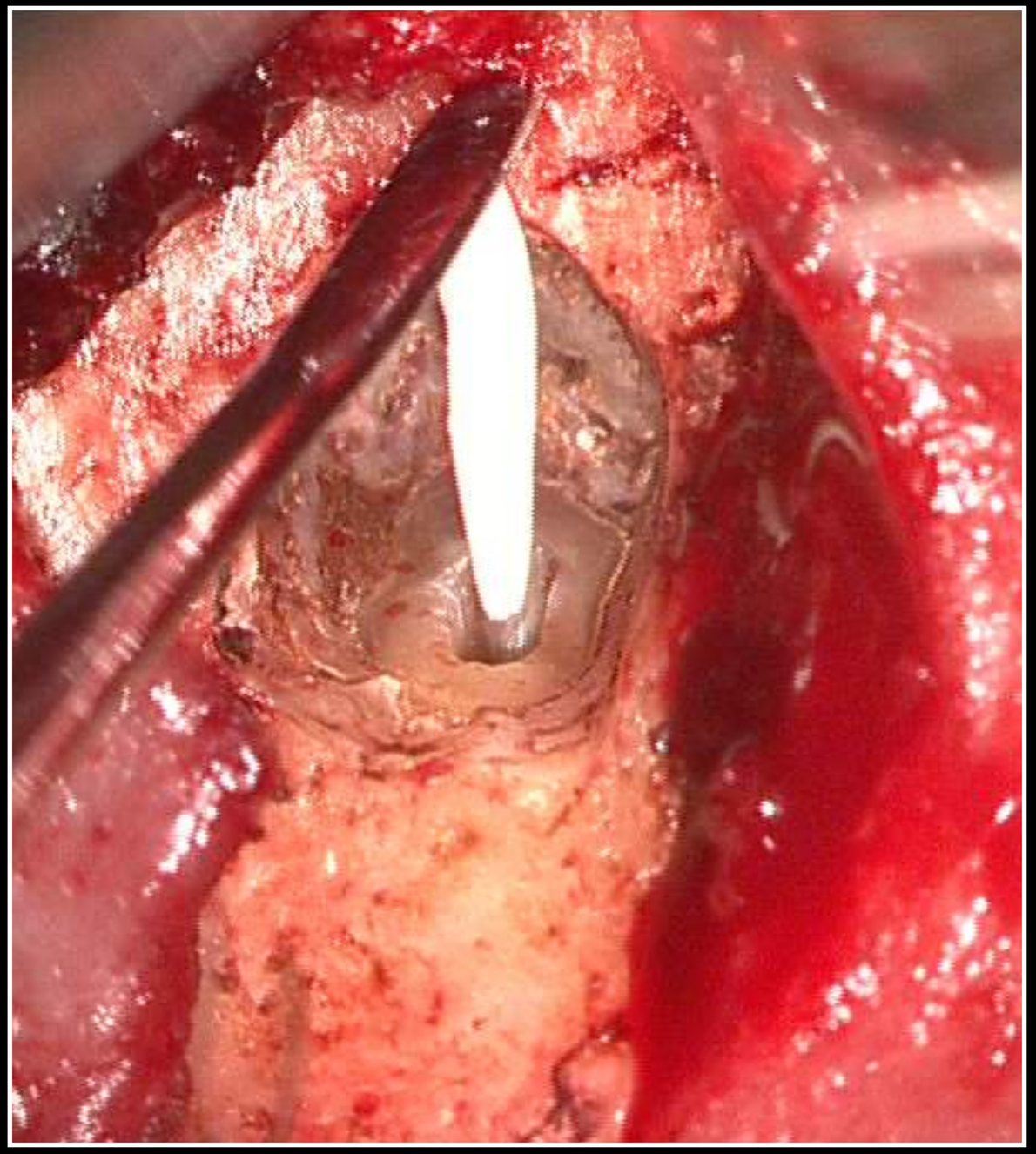
Long-term Follow-up for Apical Microsurgery of Teeth with Core and Post Restorations

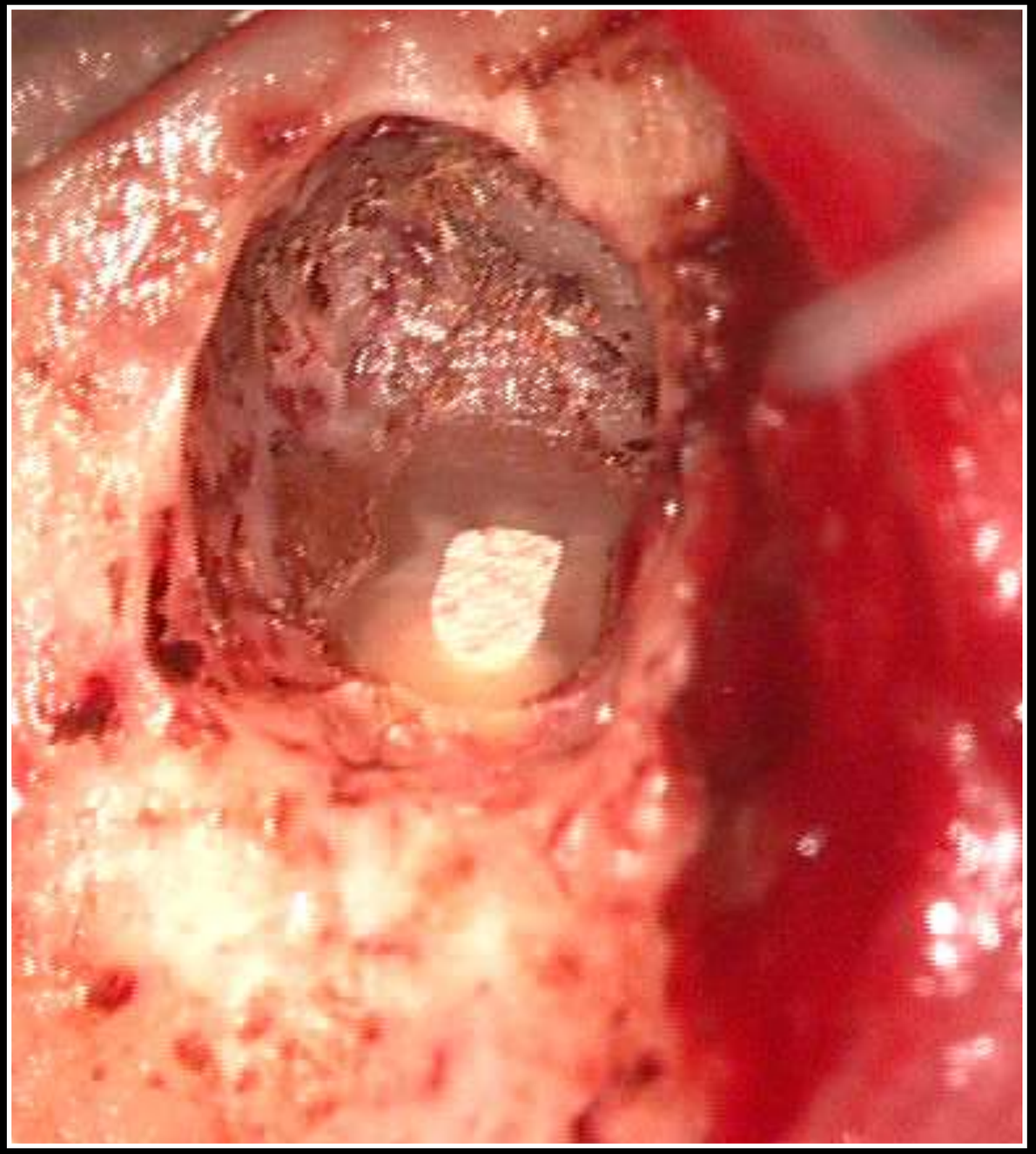
Taux de survie à 1,5 - 5 ans 100%

Taux de survie à 10-13 ans 79%

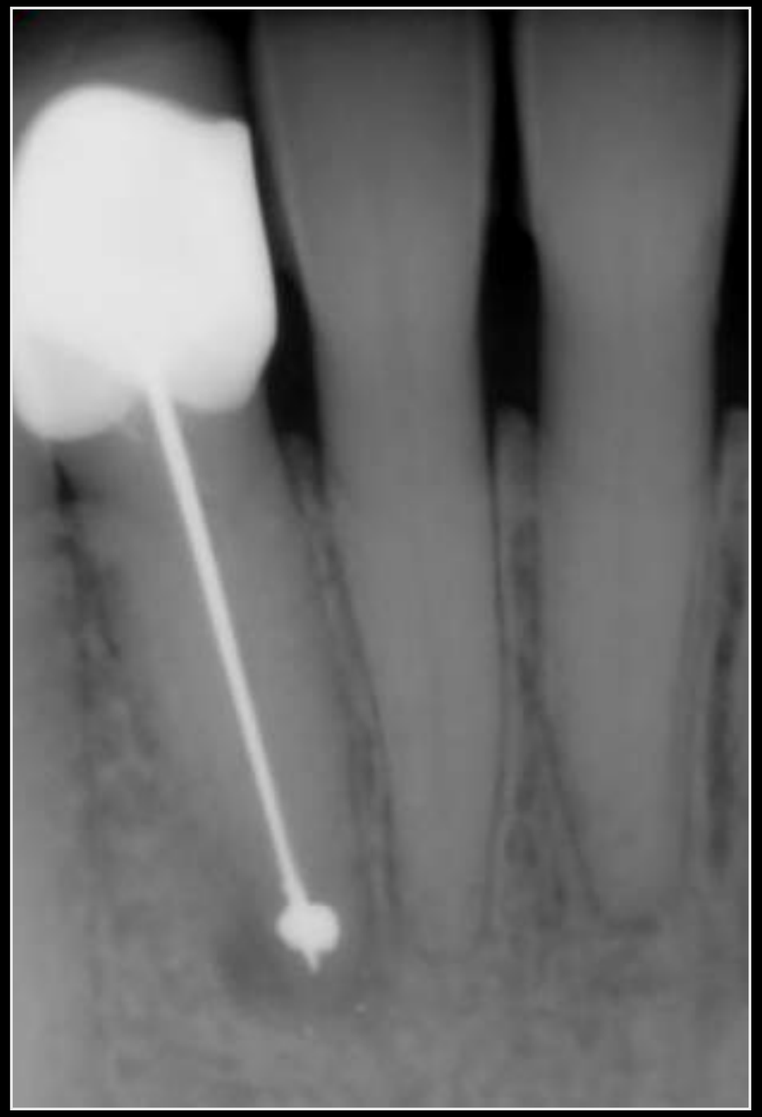


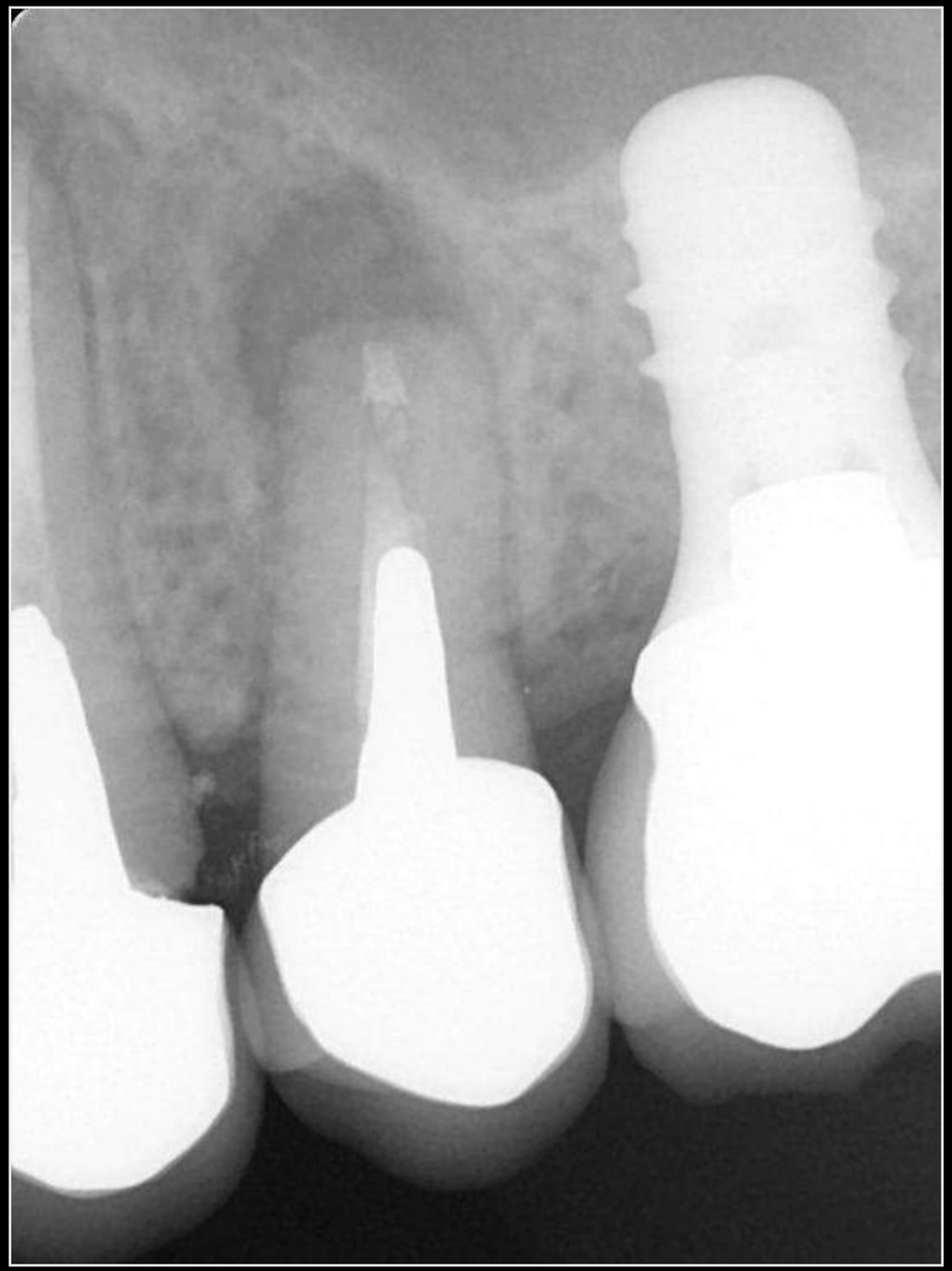


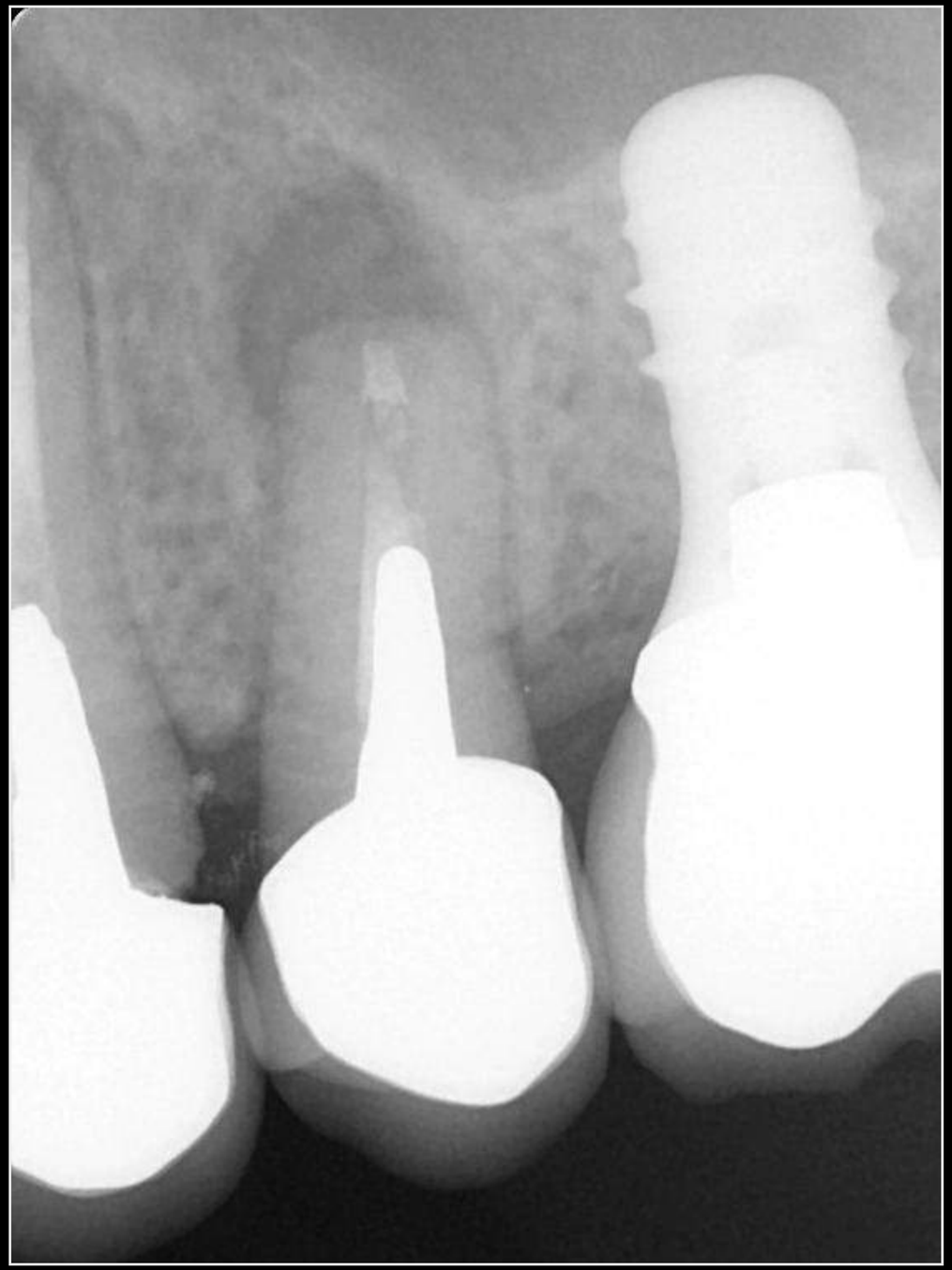


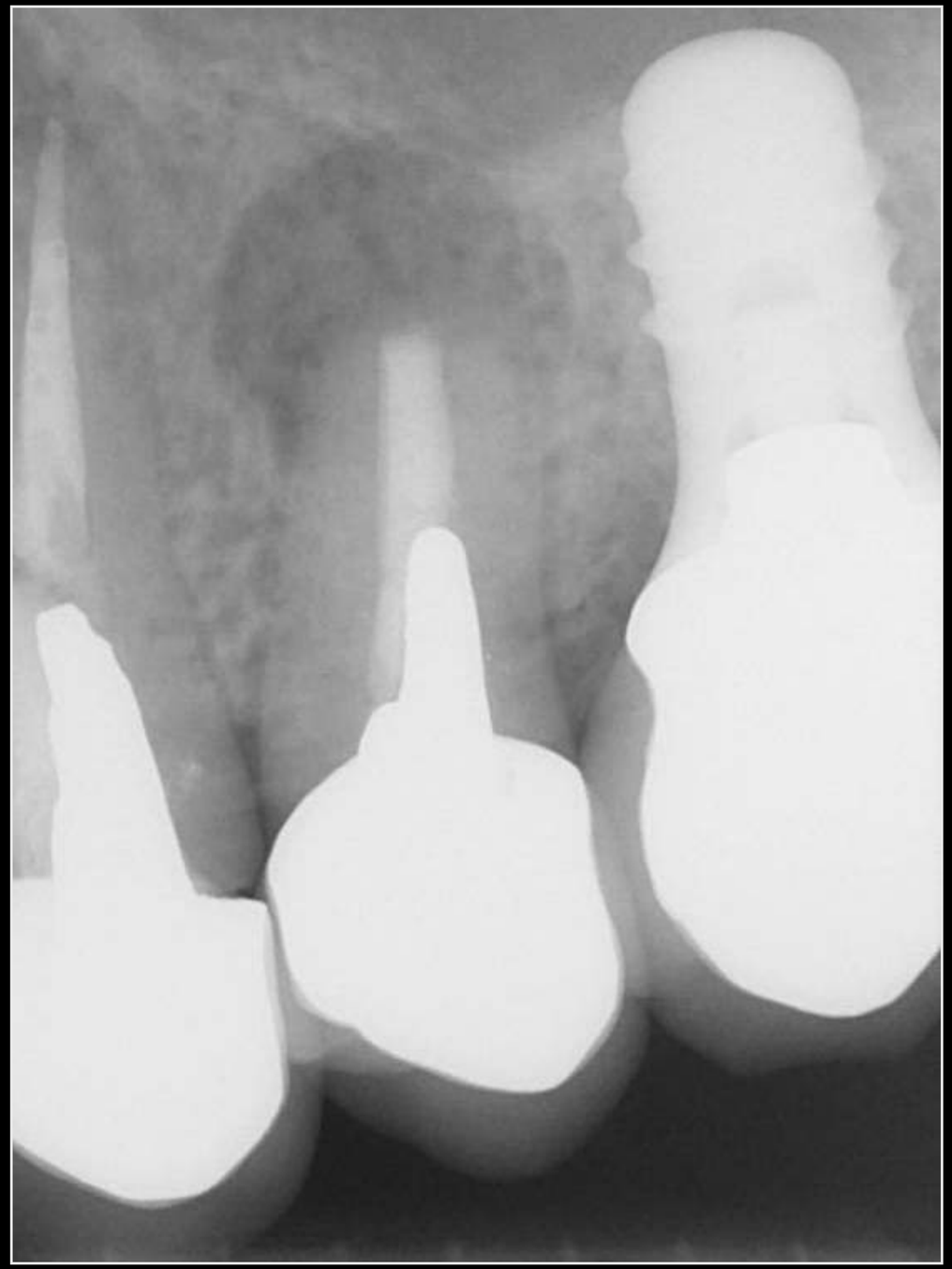


Echec d'une précédente chirurgie

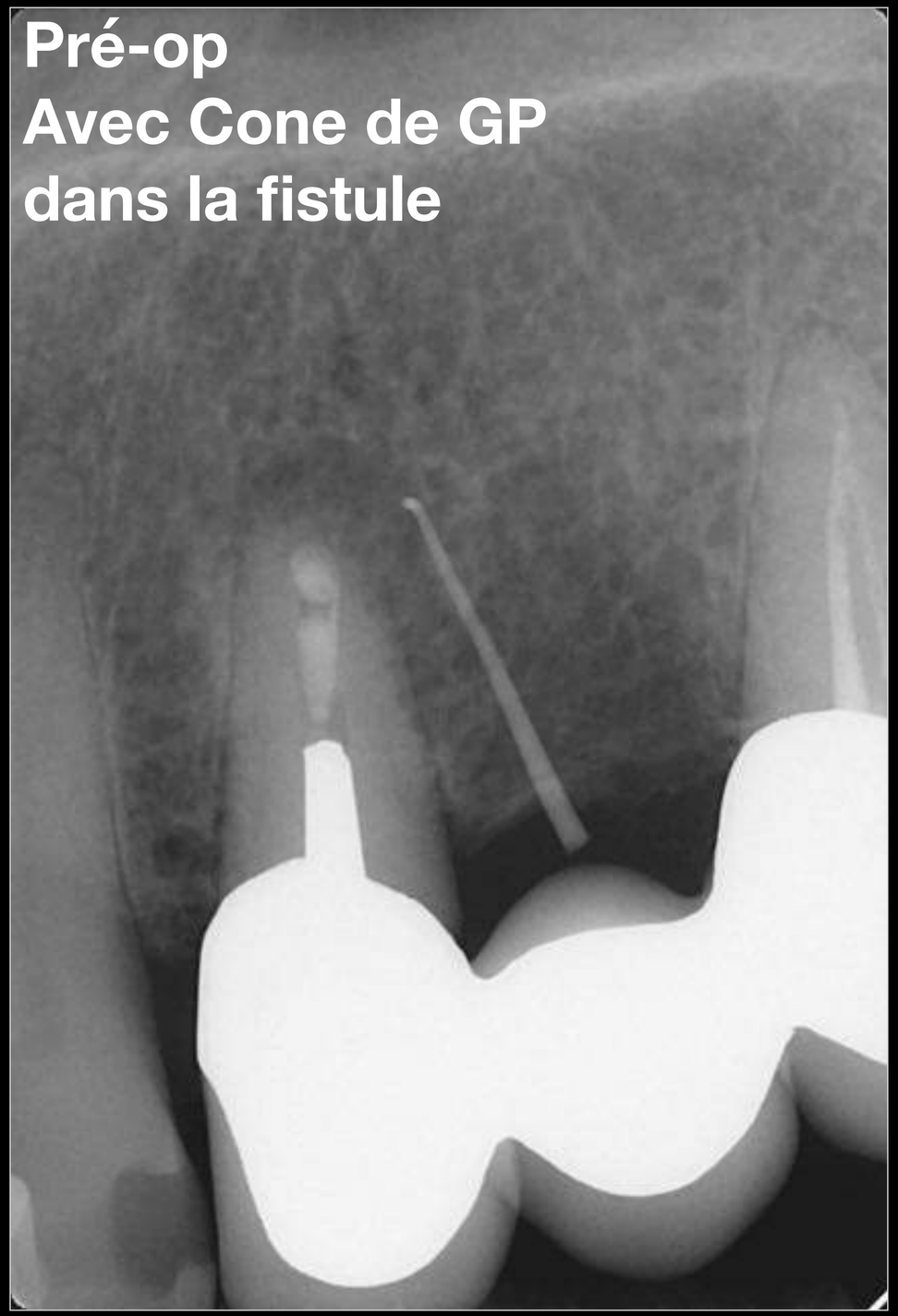


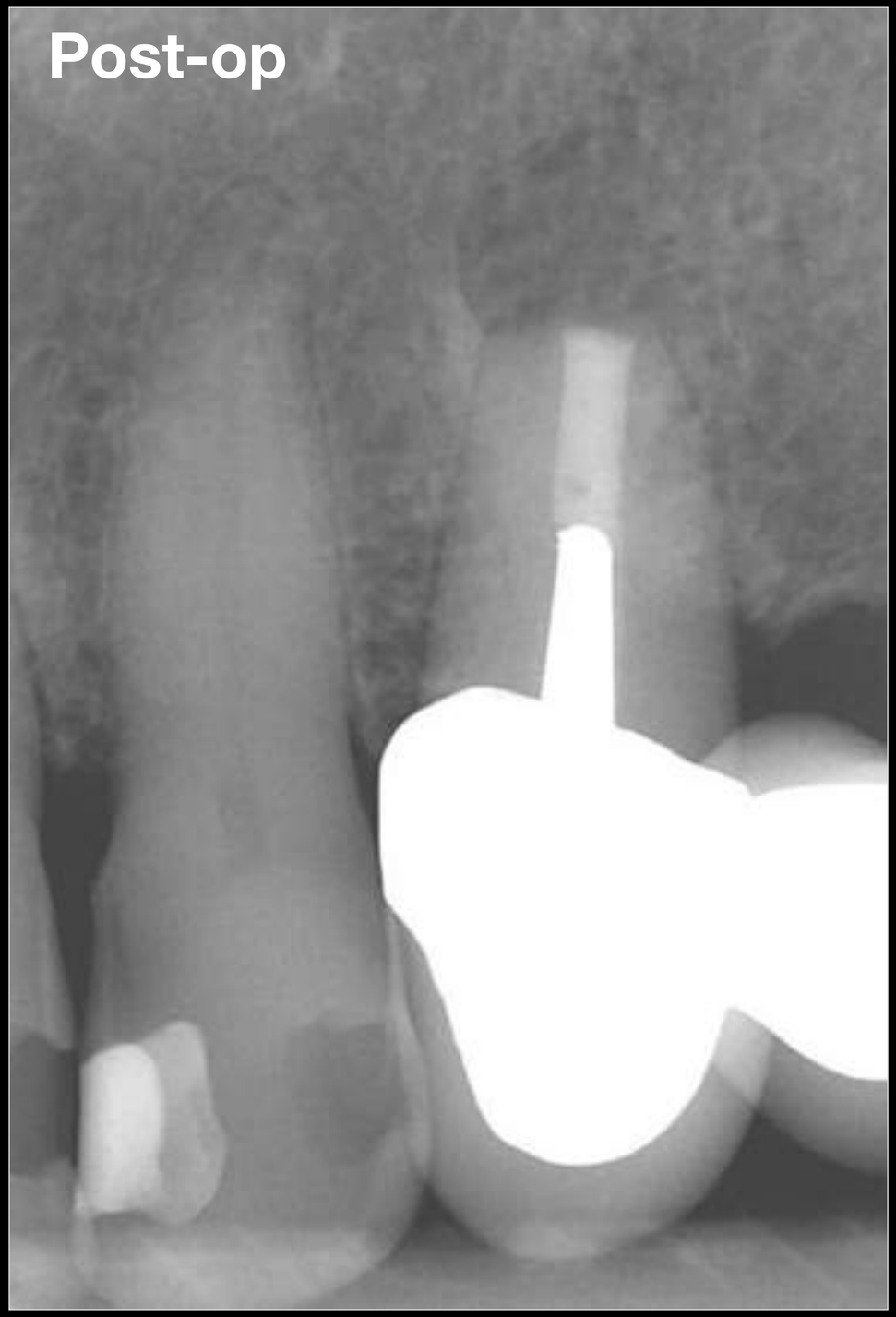







Pré-op


Pré-op
Avec Cone de GP
dans la fistule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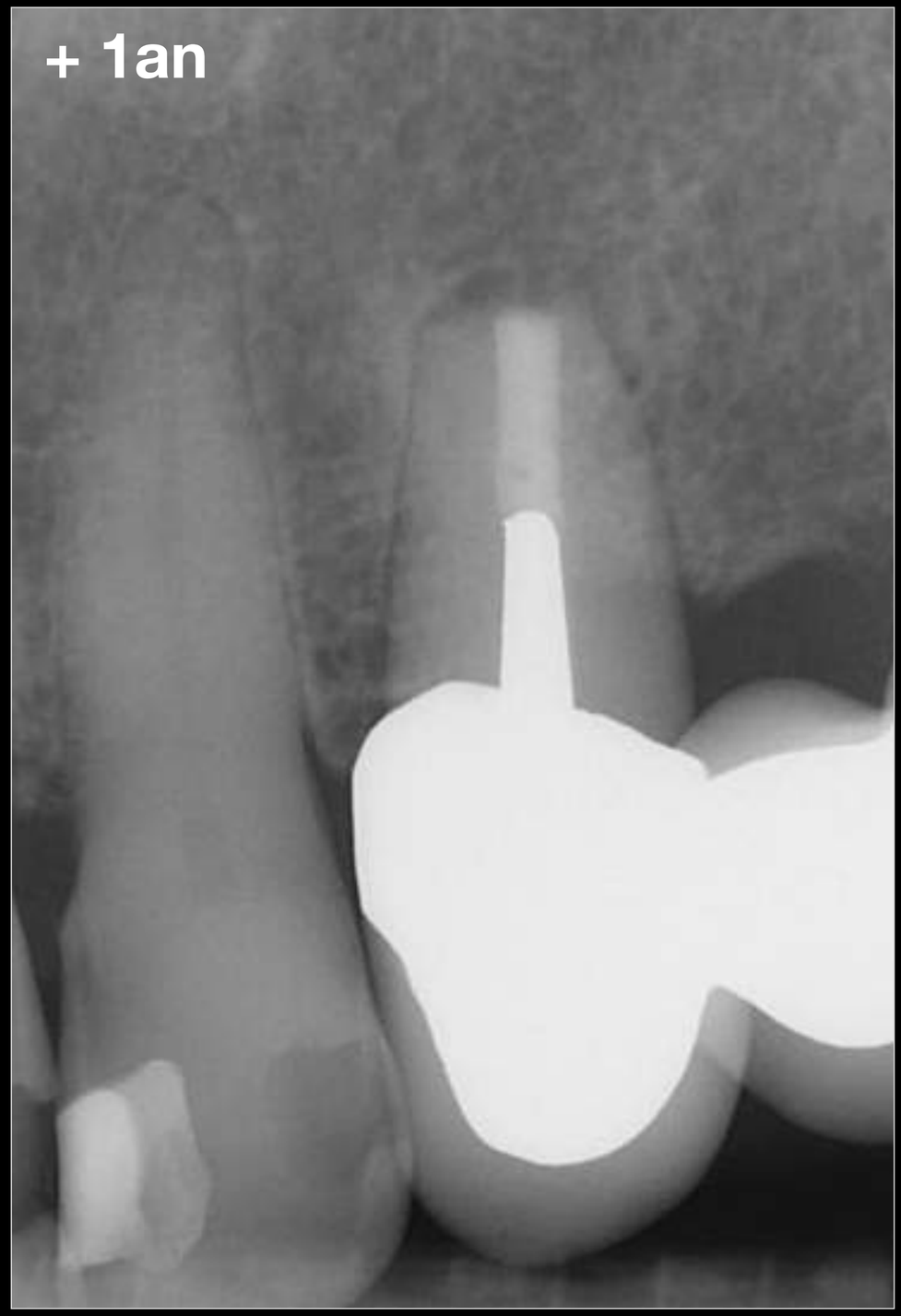
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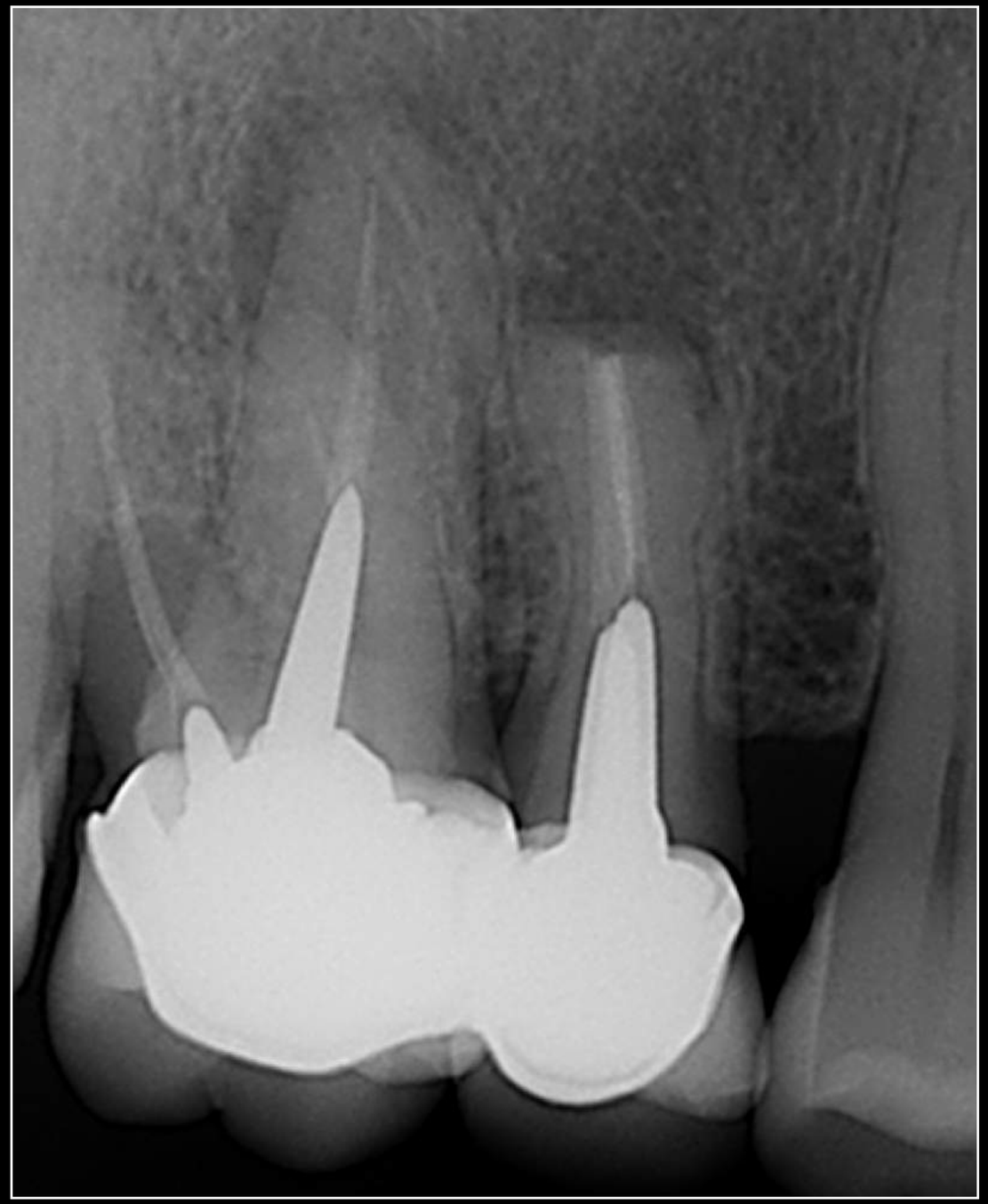
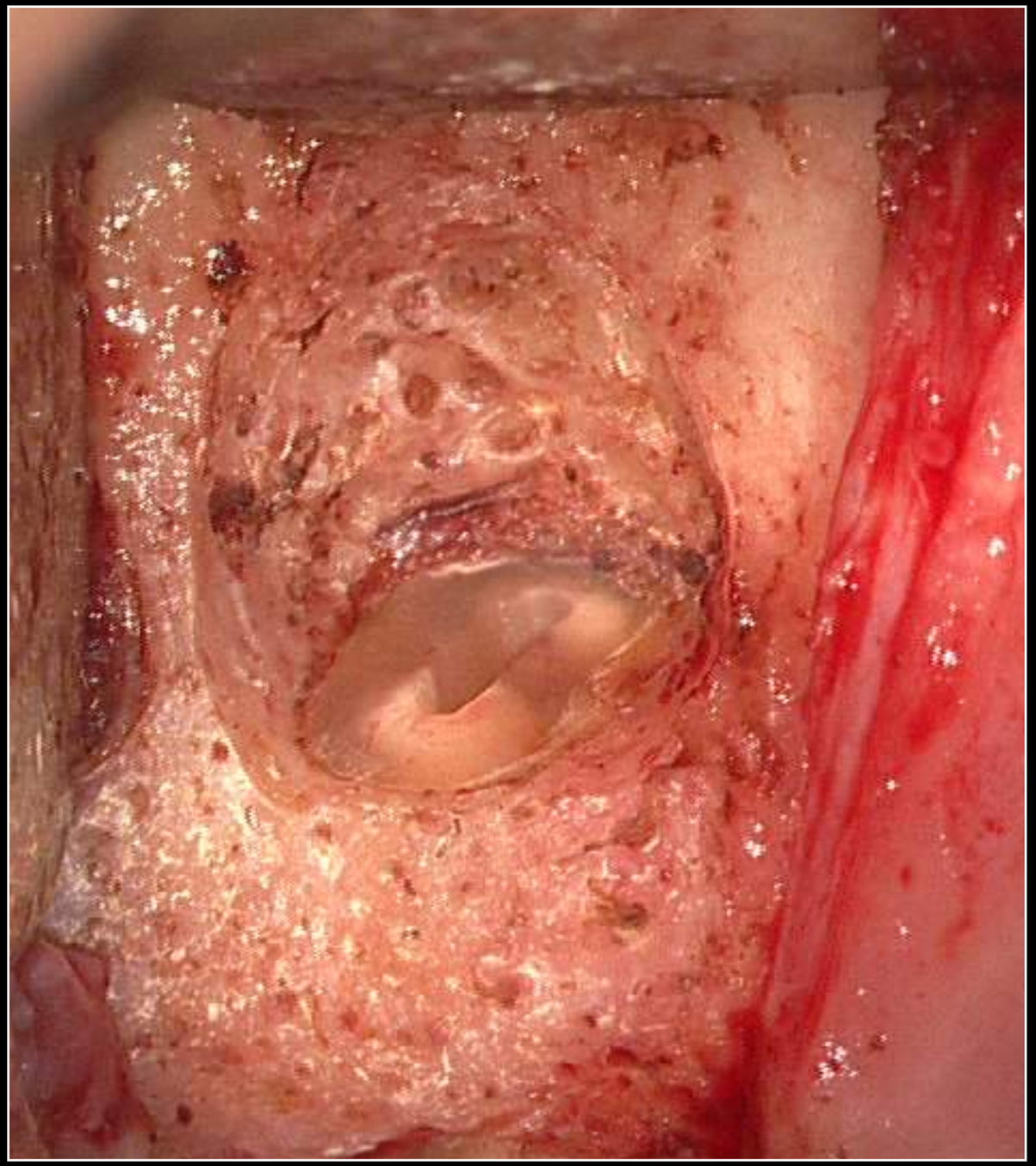
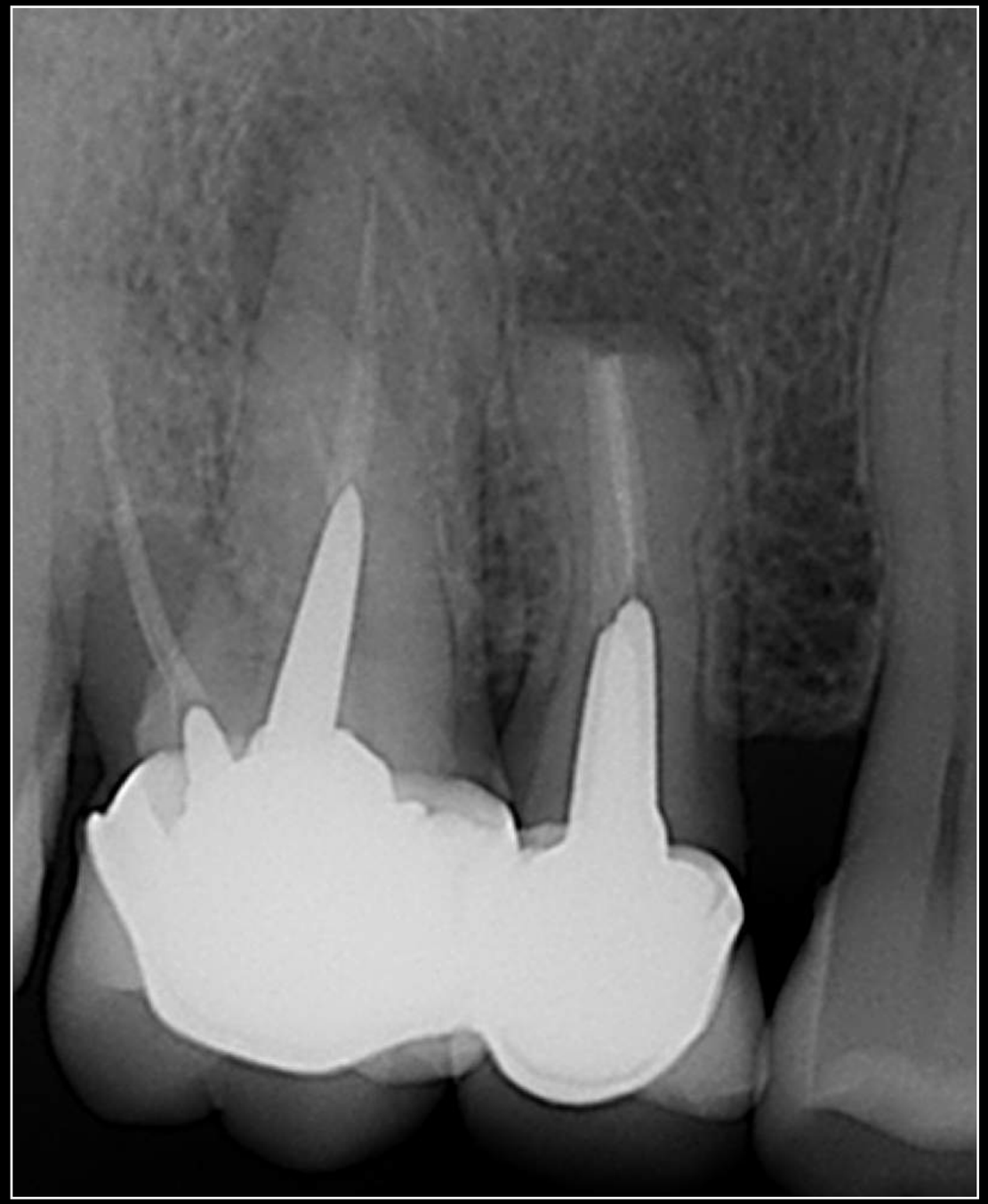
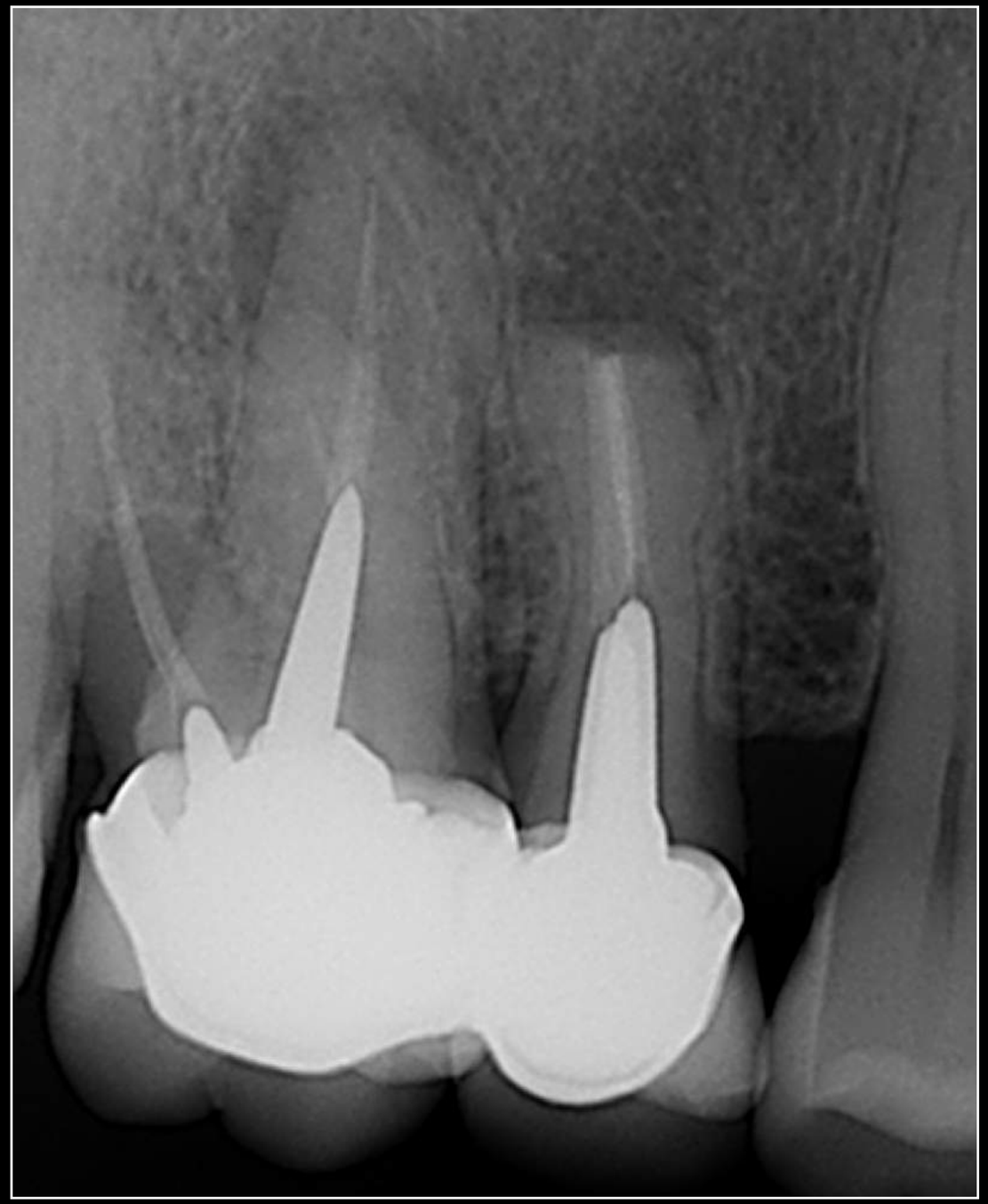
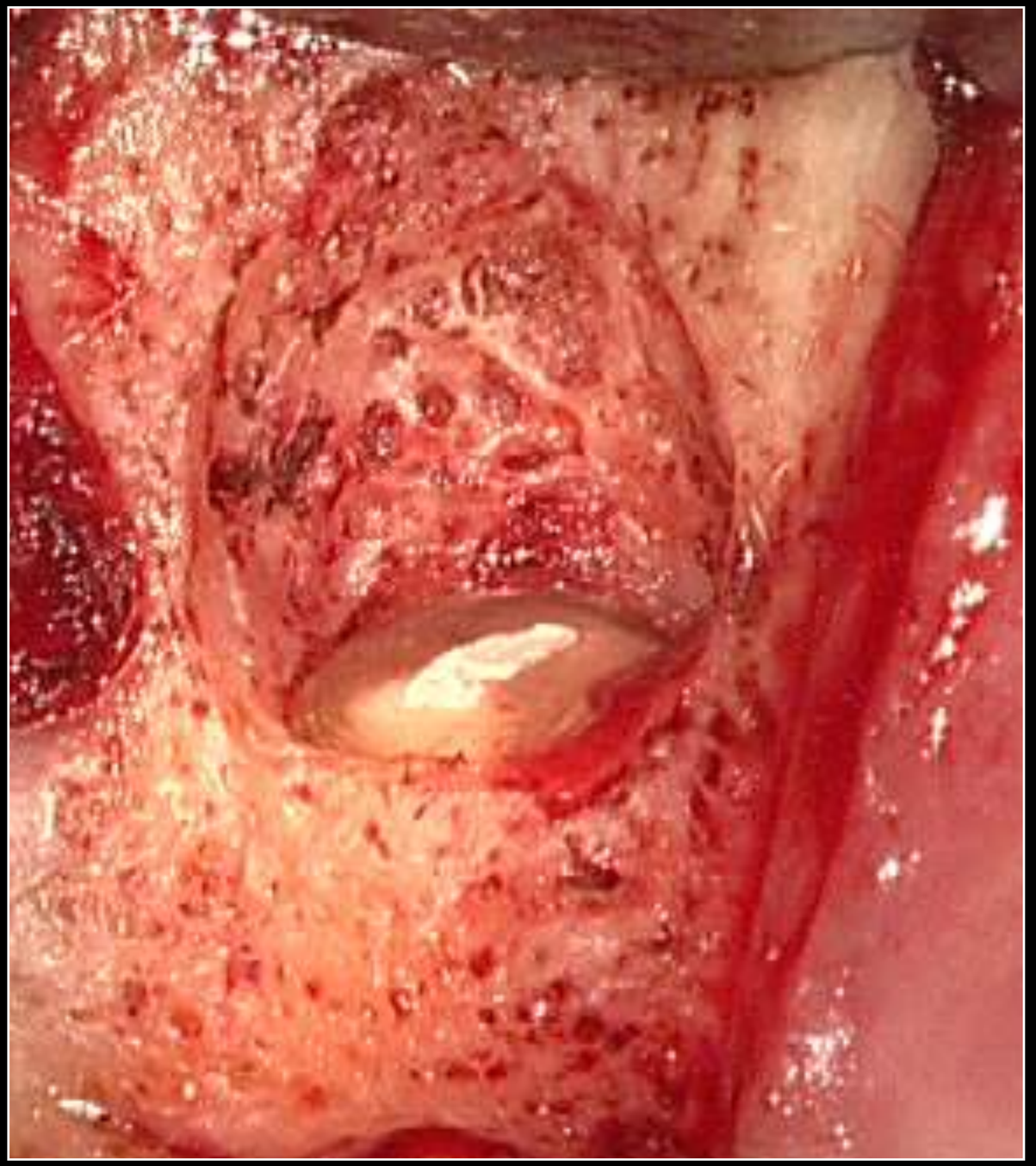
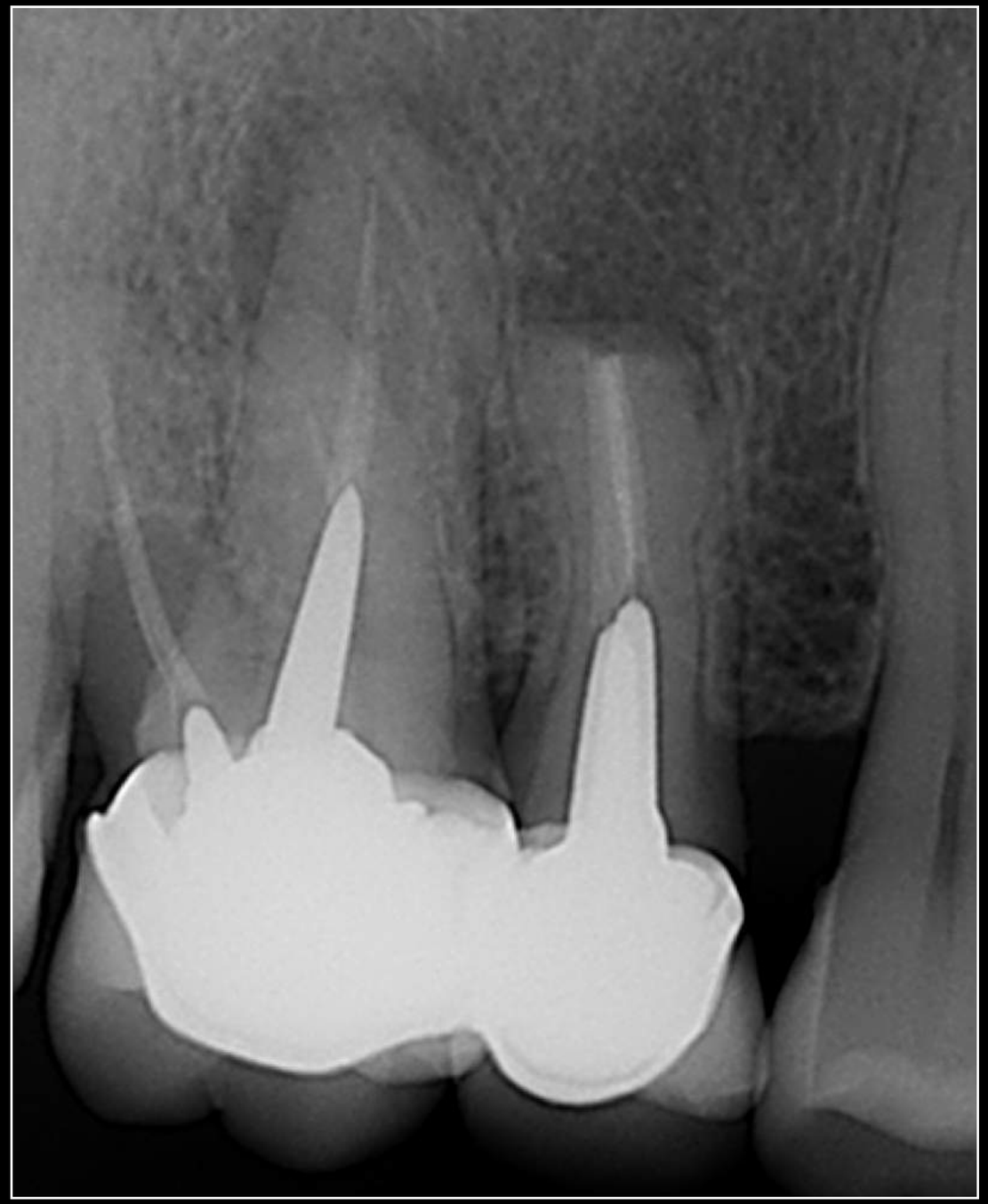


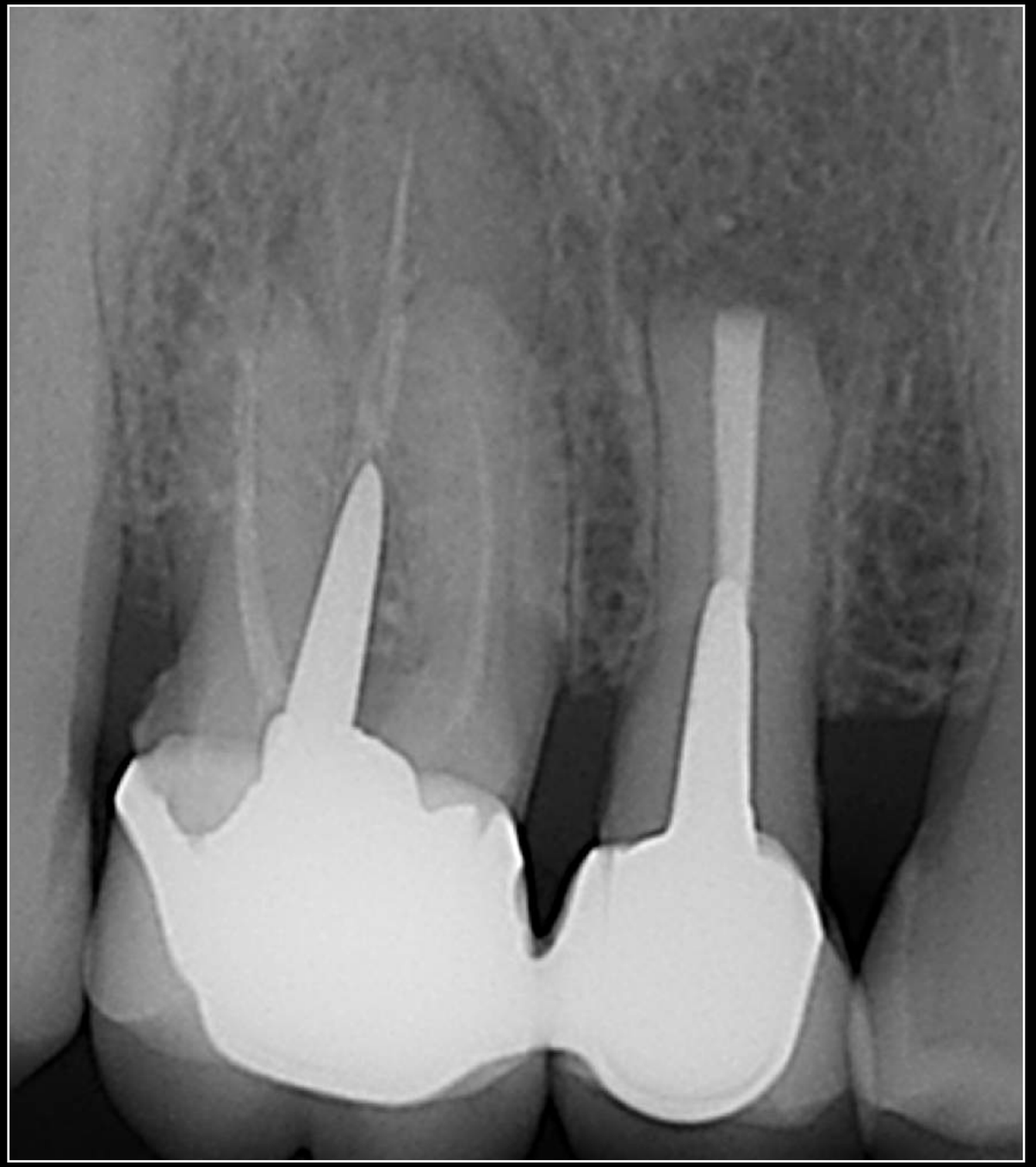




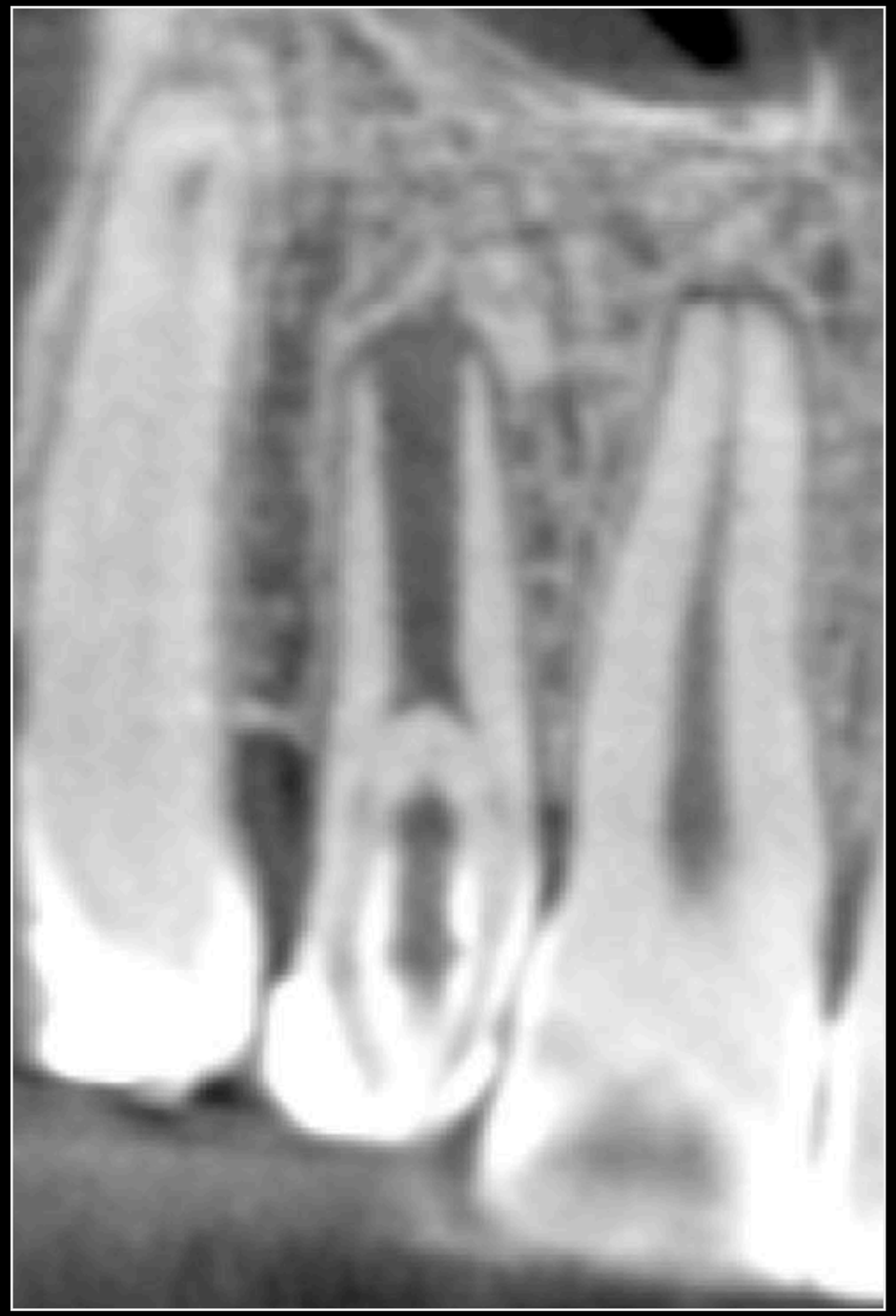


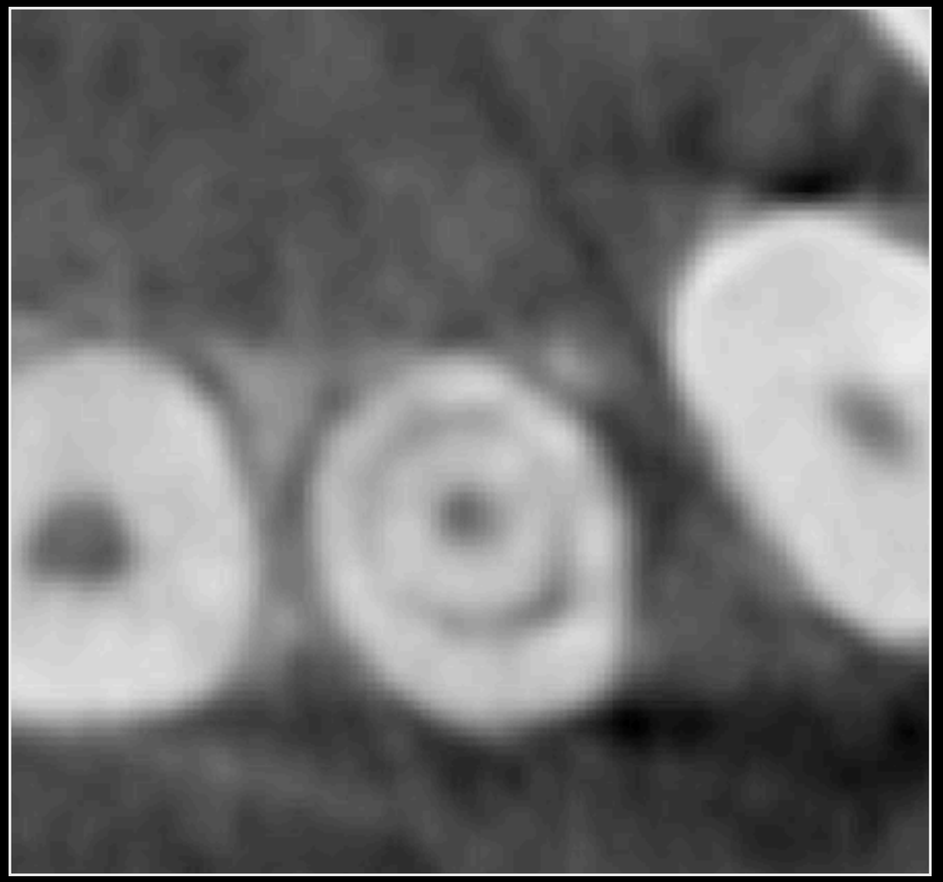


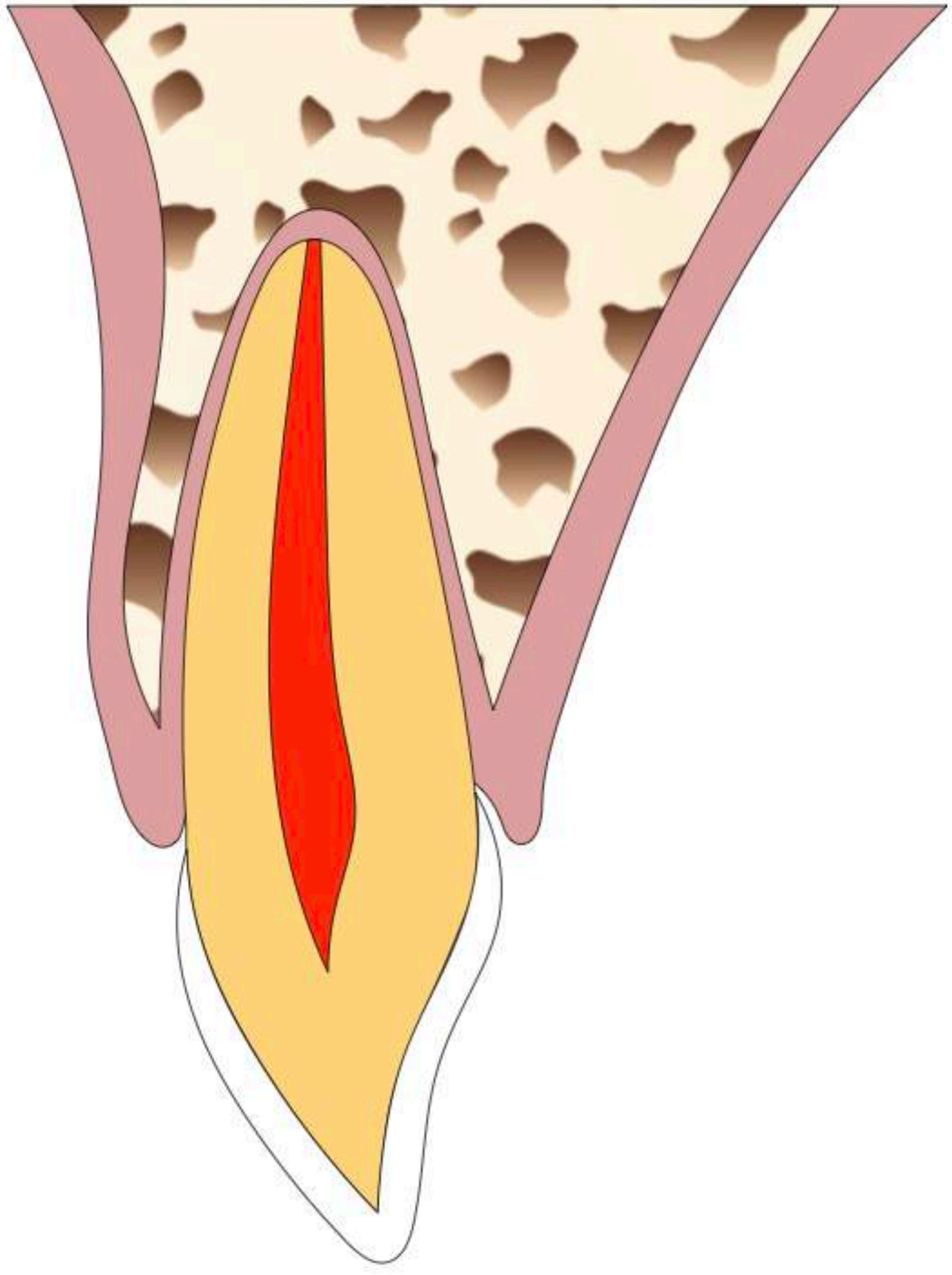


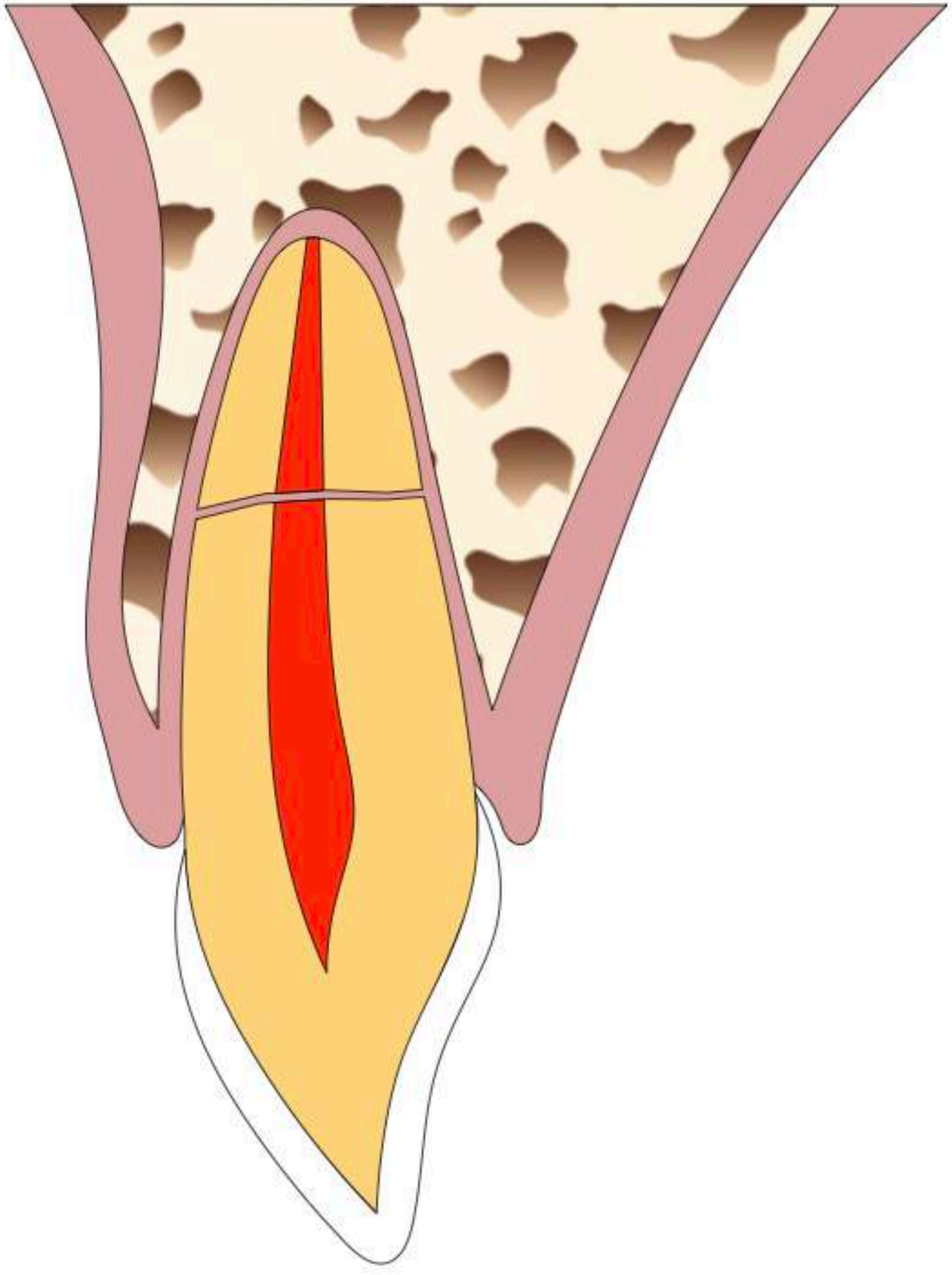


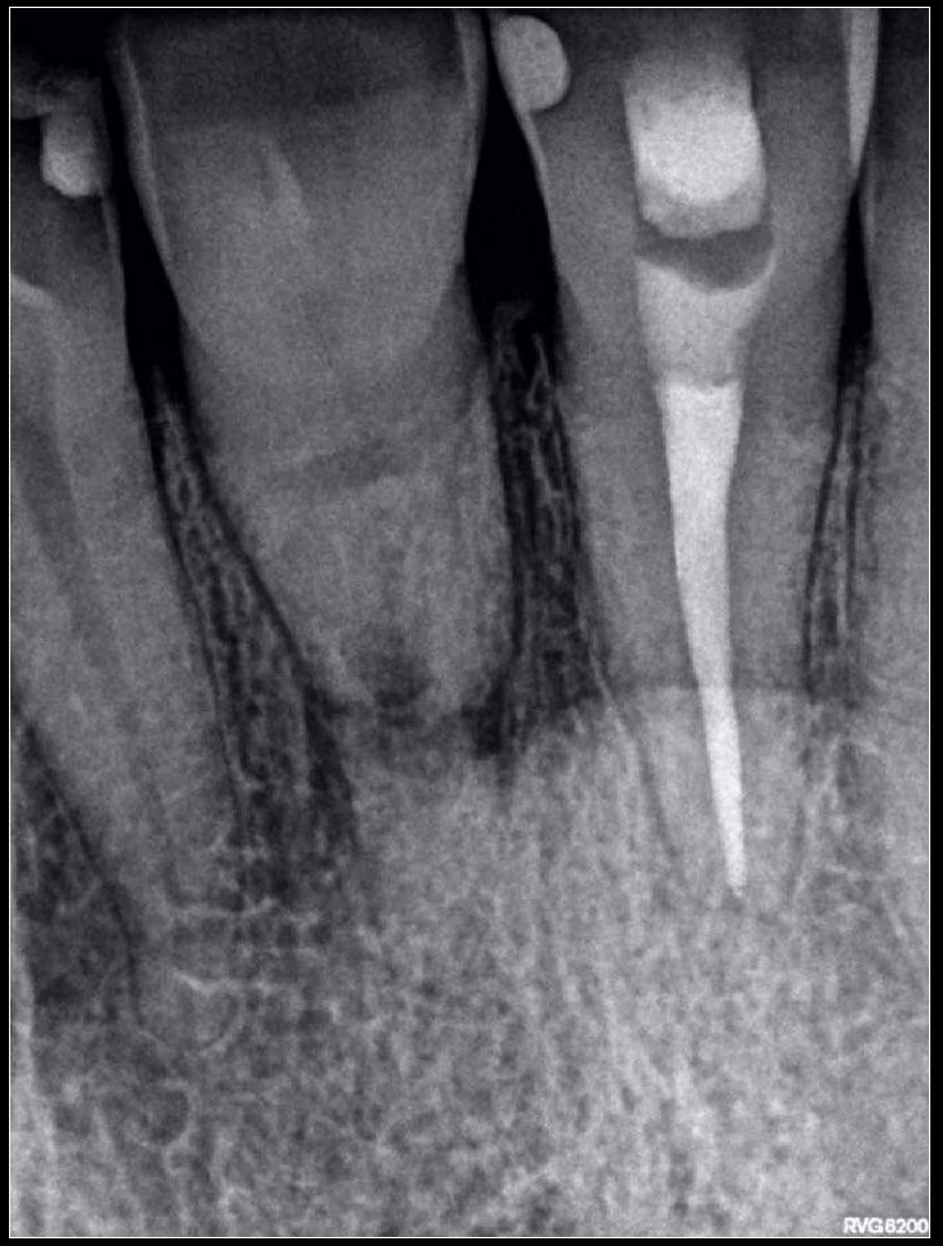
Chirurgie de première intention







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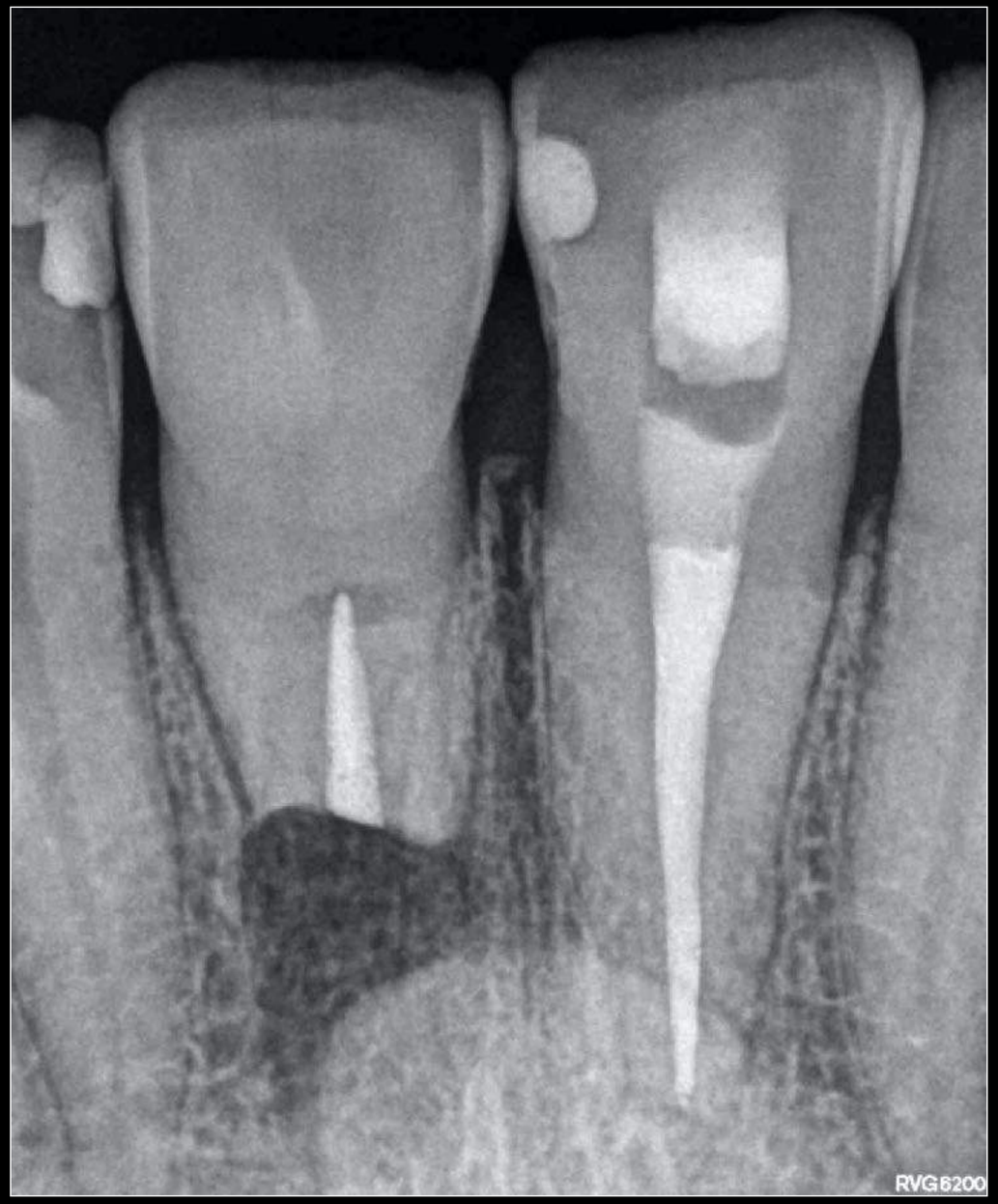
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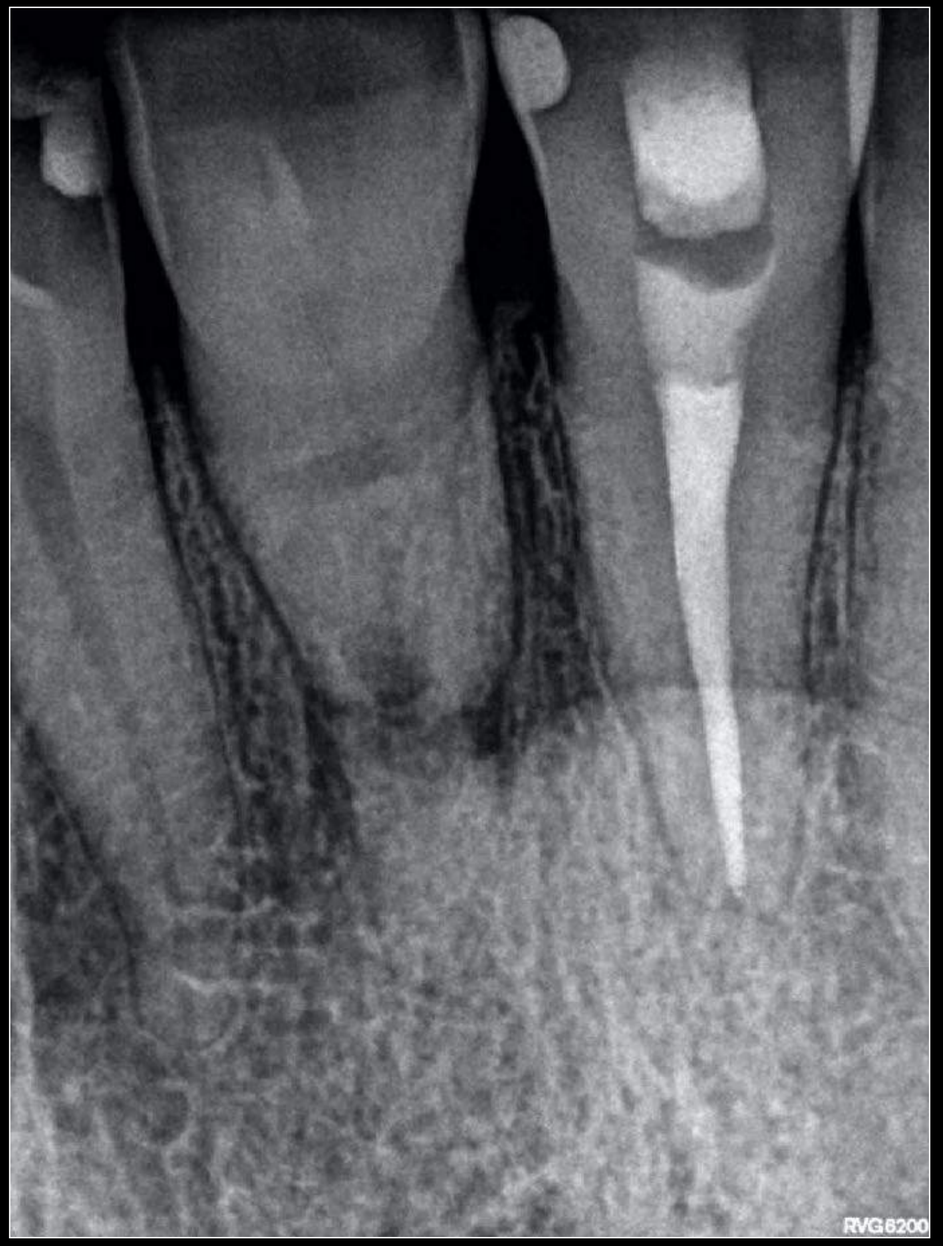
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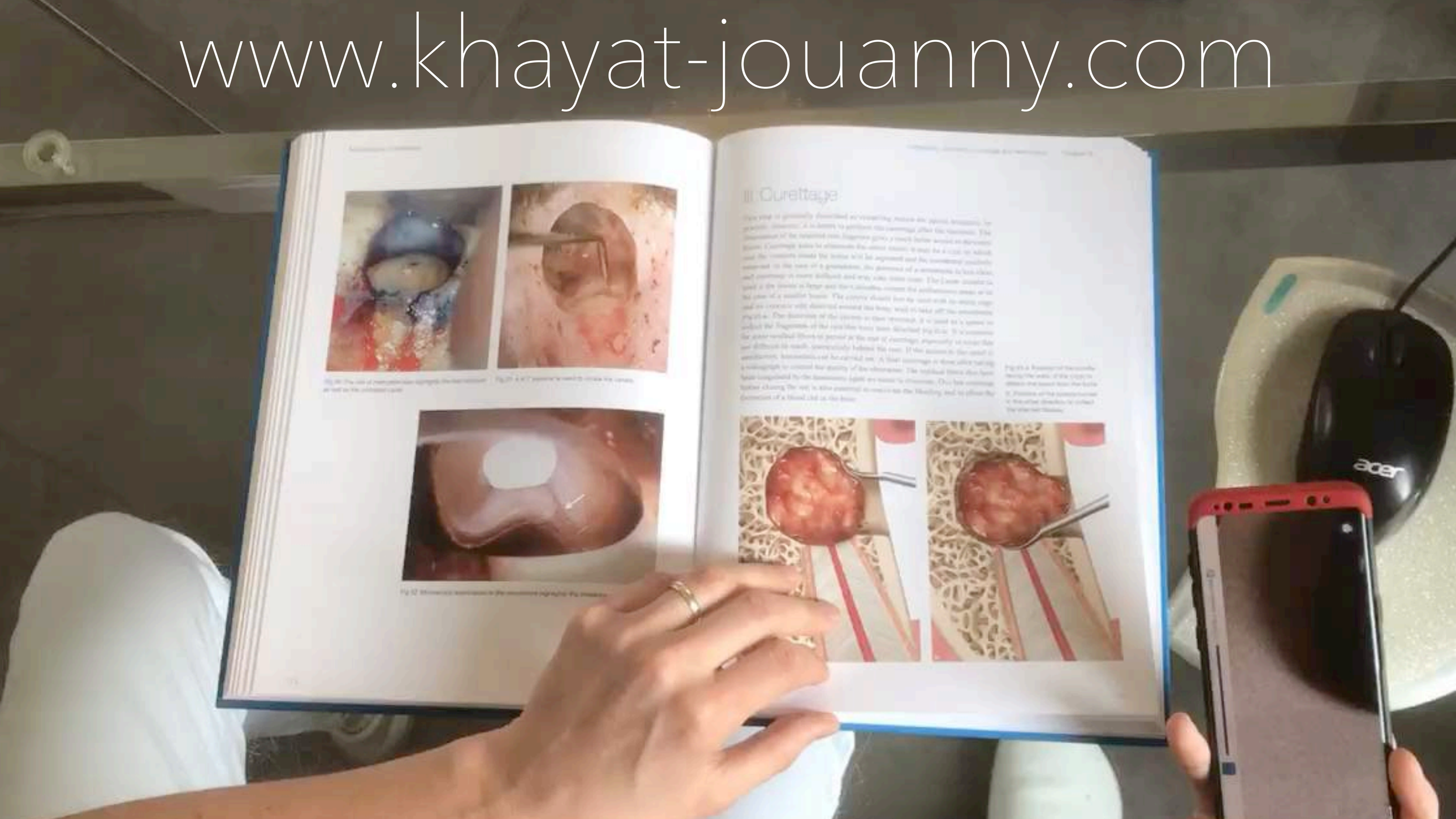

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