

CASE PRESENTATION

CATEGORY: **PULP REVASCULARIZATION**
(REGENERATIVE ENDODONTICS)

PRESENTED BY **Dr.Sopida Thipung**

General information

- Female, Age 11 years

Chief complaint

- Toothache

Medical history

- No history involved
- NKDA

Dental history

- 1 month ago
Tooth 25: Spontaneous pain for 1-2 minutes, 1-2 times/day, No drug therapy

Clinical Evaluation

Extraoral examination

WNL, no facial asymmetry, no swelling, no lymphadenopathy

Intraoral examination

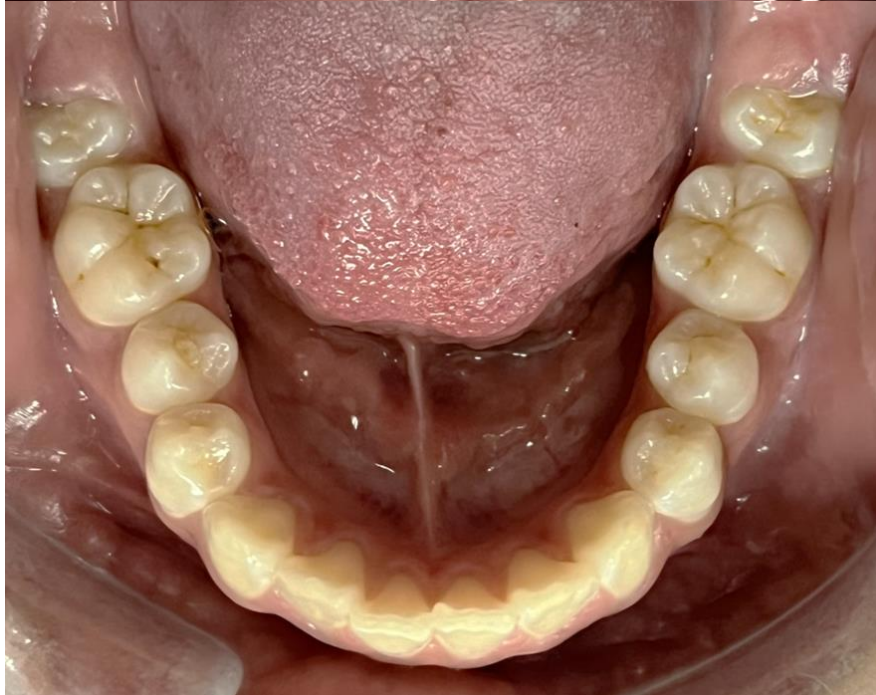
Soft tissue: No sinus tract opening, no swelling

Tooth 25: **Tubercle fracture**,

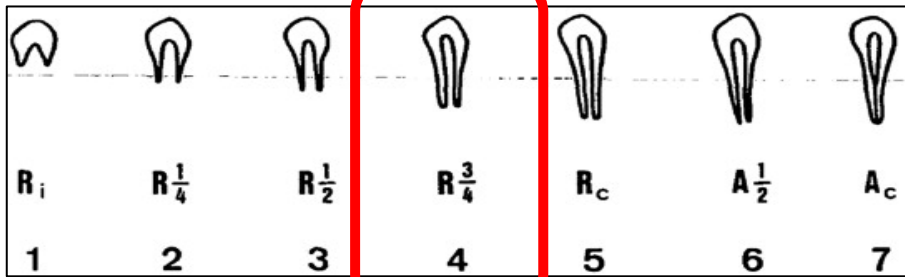
No traumatic occlusion



Tooth	EPT	Cold test	Percussion	Palpation	Mobility	PD		
						2	2	2
25	-ve	-ve	+ve	+ve	WNL	2	2	2
						3	2	2

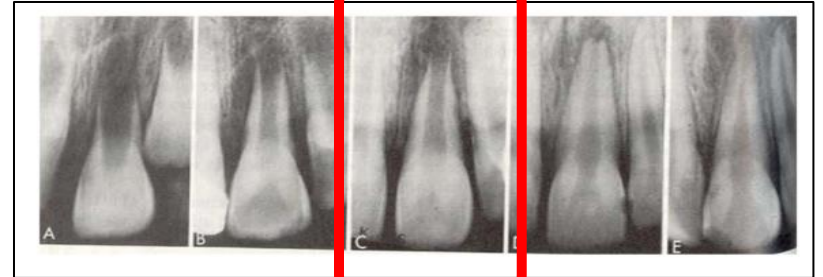






Moorrees et al.1963

Stage 4



Cvek 1992

Stage 3

Diagnosis and Treatment Plan

- Diagnosis: **25 Pulp necrosis with symptomatic apical periodontitis**
- Emergency treatment: None
- Ideal treatment: Regenerative Endodontics
- Alternative treatment: Apexification
Extraction
- Definitive treatment: **Regenerative Endodontics**
- Pre-operative treatment: none
- Restorative after Treatment: Resin composite

Prognosis

Apical Periodontitis

The presence of periapical radiolucency is not an absolute indicator of a poor long-term prognosis. The vast majority of teeth with apical periodontitis can be expected to heal after nonsurgical or surgical endodontic treatment. Data indicate the presence of a lesion prior to treatment only decreases the prognosis slightly.

Favorable

Pulp necrosis with or without a lesion present that responds to non-surgical treatment

Questionable

Pulp necrosis and a periapical lesion is present that does not respond to nonsurgical root canal treatment but can be treated surgically

Unfavorable

Pulp necrosis and a periapical lesion is present that does not respond to nonsurgical root canal treatment or subsequent surgical intervention

Prognosis

Favorable

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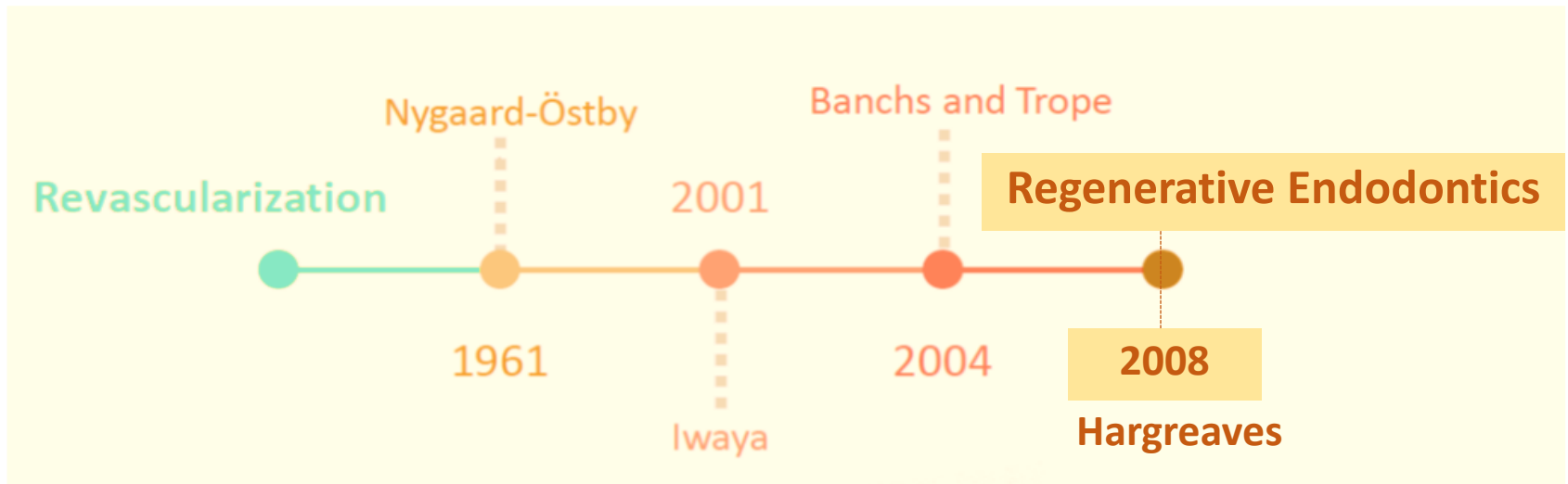
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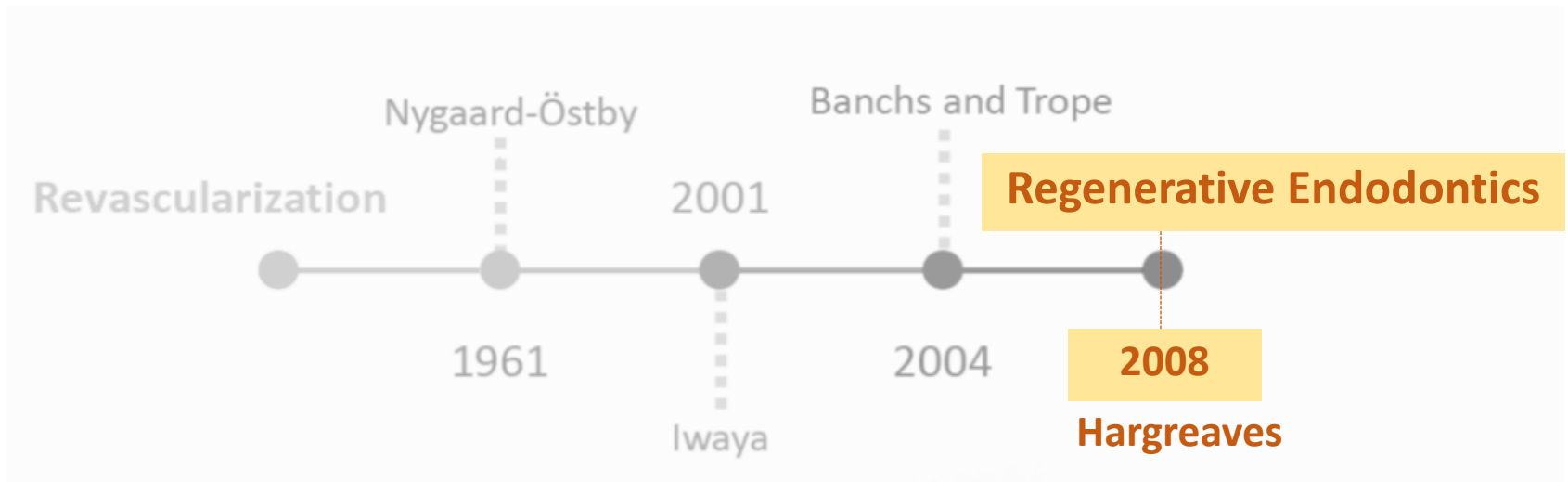
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Regenerative Endodontics



Regenerative Endodontics



Regenerative Endodontics

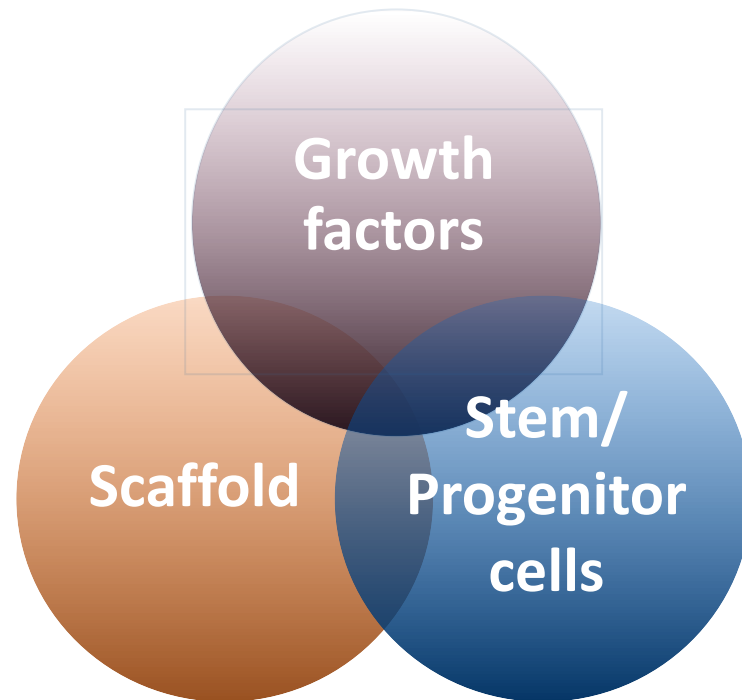
- Definition:

Biologically based procedures designed to replace damaged tooth structures, including dentine and root structures, as well as cells of the pulp–dentine complex

- Aim:

To regenerate the pulp–dentine complex damaged by infection, trauma or developmental anomaly of immature permanent teeth with necrotic pulp

Regenerative Endodontics



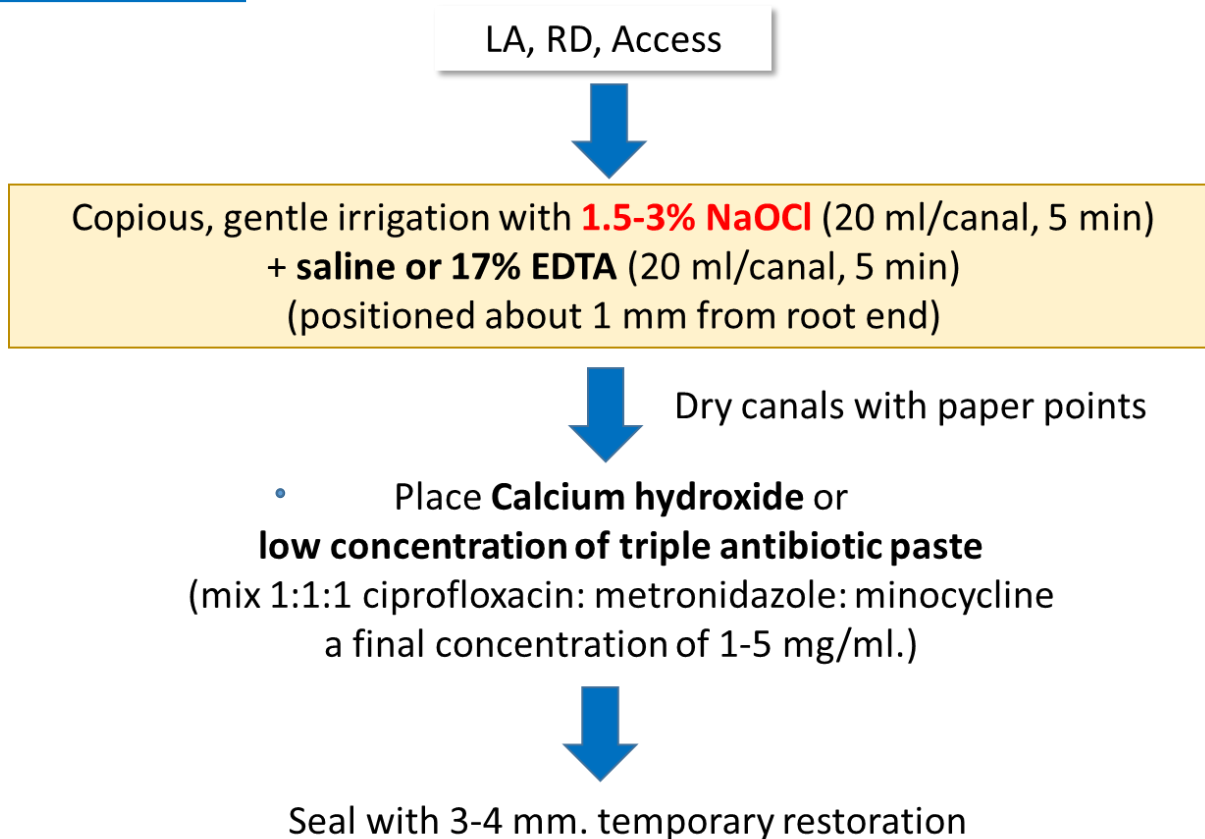
Regenerative Endodontics

Case Selection:

- Tooth with necrotic pulp and an immature apex
- Pulp space not needed for post/core, final restoration
- Compliant patient/parent
- Patients not allergic to medicaments and antibiotics necessary to complete procedure (ASA 1 or 2)

Regenerative Endodontics

First appointment

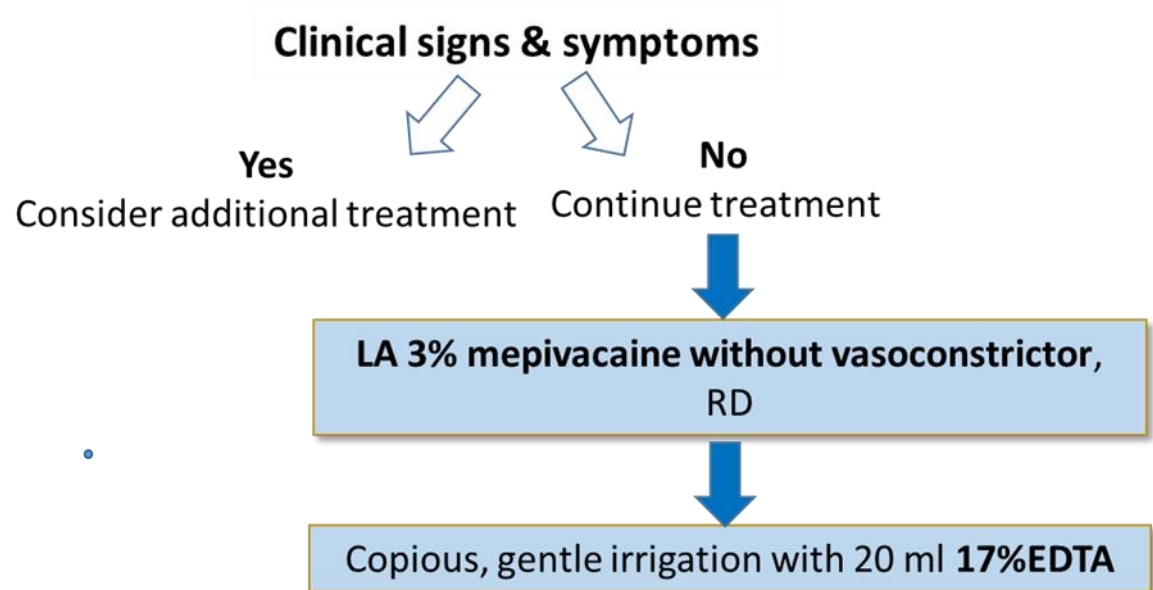


Kim et al. 2018
AAE Clinical Considerations for a Regenerative Procedure Revised November 2022

Regenerative Endodontics

Second appointment

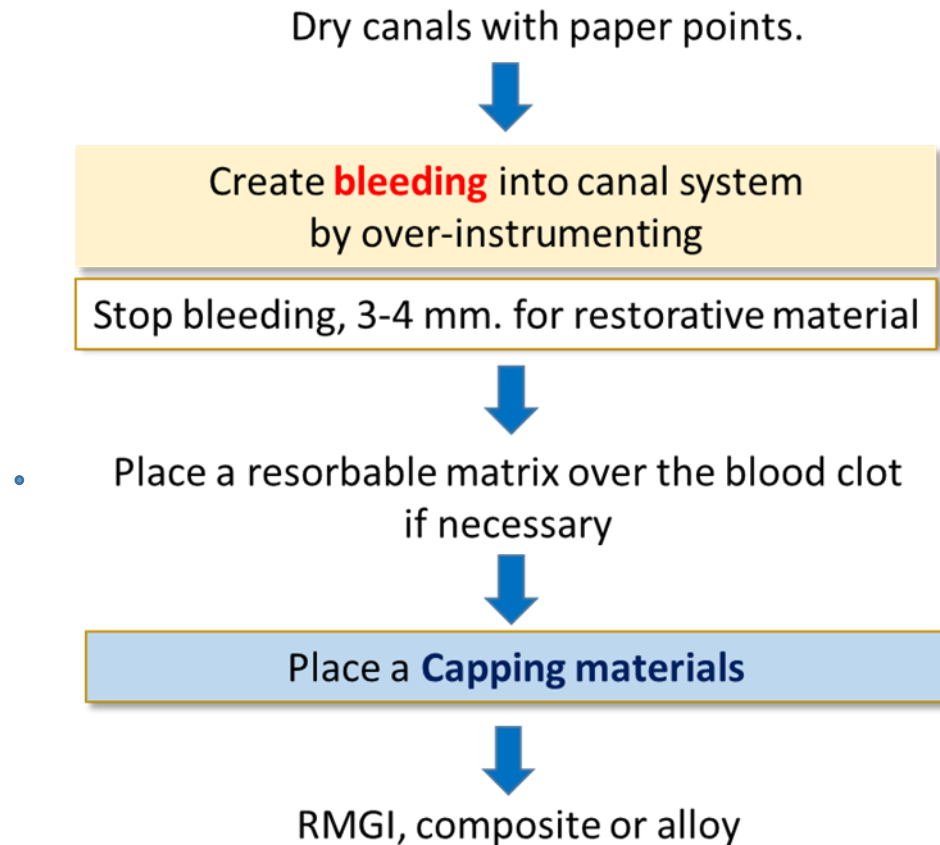
1-4 week after 1st appointment



Kim et al. 2018
AAE Clinical Considerations for a Regenerative Procedure Revised November 2022

Regenerative Endodontics

Second appointment



Regenerative Endodontics

Follow-up: (6, 12, 24 months)

Clinical examination

- No pain or soft tissue swelling
- Positive pulp vitality test response

Radiographic examination

- Resolution of apical radiolucency (6-12 month)
- Increased width of root walls (12-14 month)
- Increased root length

Regenerative Endodontics

The degree of success

Primary goal: The elimination of symptoms
and the evidence of bony healing

Secondary goal: Increased root wall thickness and/or
Increased root length
(desirable, but perhaps not essential)

Tertiary goal: Positive response to vitality testing
(which if achieved, could indicate a more organized
vital pulp tissue)

1st visit



LA

2% lidocaine
with 1:100,000 epinephrine

RD

OC

IR

1.5% NaOCl (20 ml, 5 min)
+ Saline (20 ml, 5 min)

MED

Calcium hydroxide

DS

2nd visit



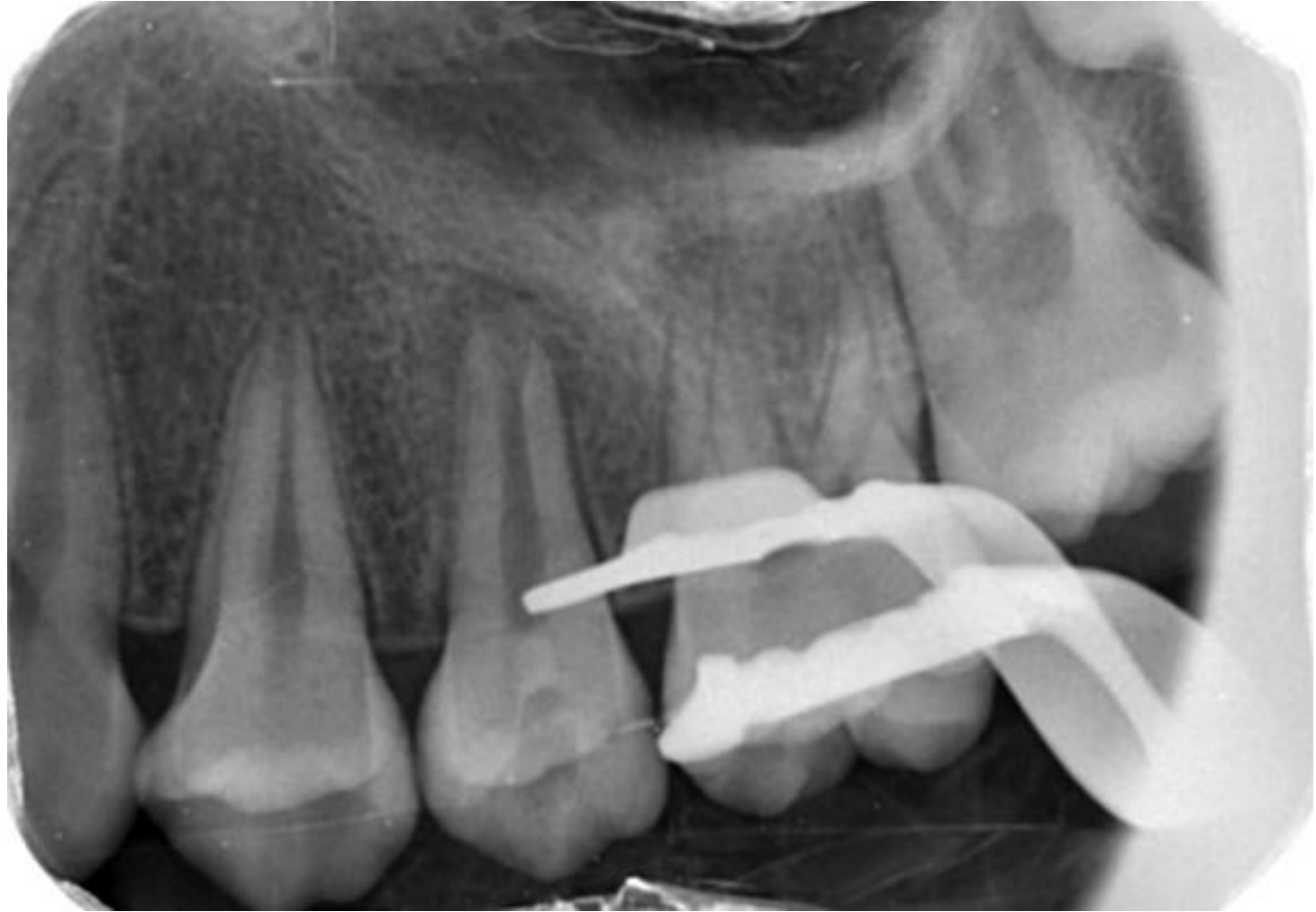
LA
3% mepivacaine
without epinephrine
RD

IR
17% EDTA 20 ml

Create
bleeding

Biodentine

2nd visit



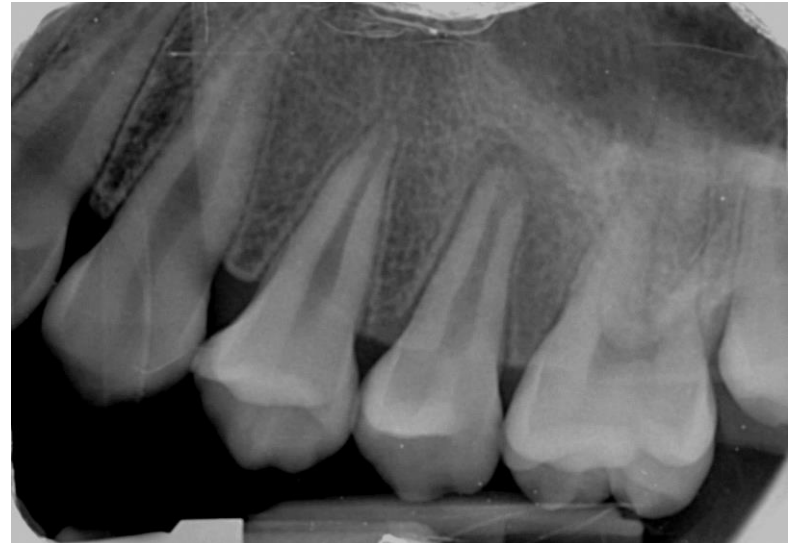
2nd visit



Restorative: **Resin composite**



Initial



Final



Initial



Follow-up: 7 months

Conclusion

Thank you