

DISEASES AND SURGERY OF SINUS MAXILLARIS

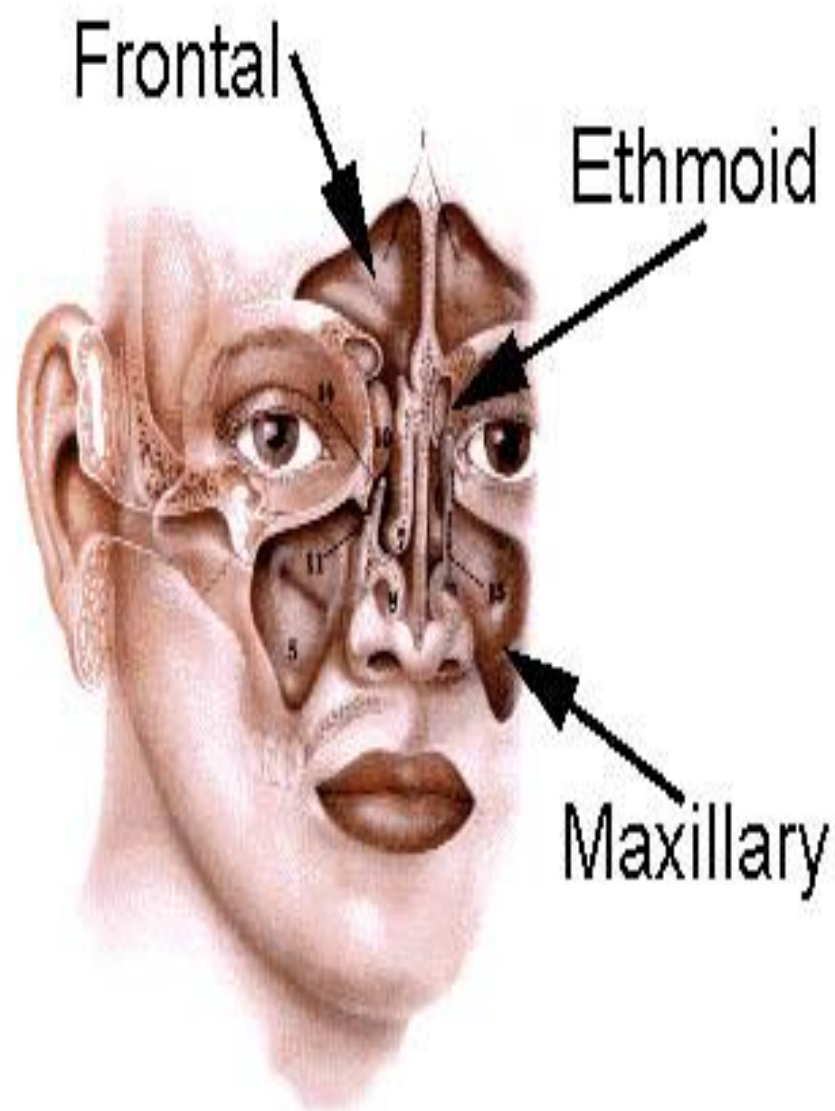
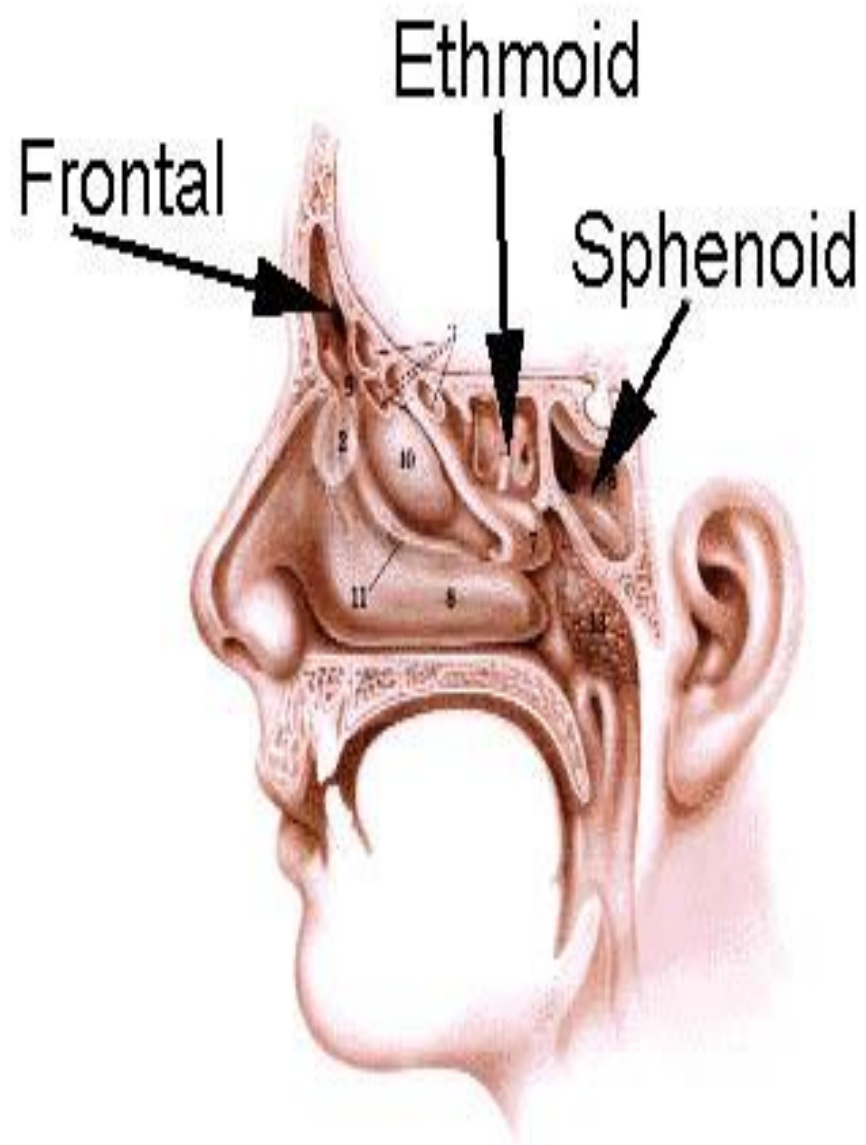
Diseases of sinus maxillaris

- Anatomical disorders
- Oronasal fistules
- Sinus apertus
- Radix in sinus maxillaris
- Cysts
- Inflammations
- Tumors
- Injuries
- Preprosthetic disorders

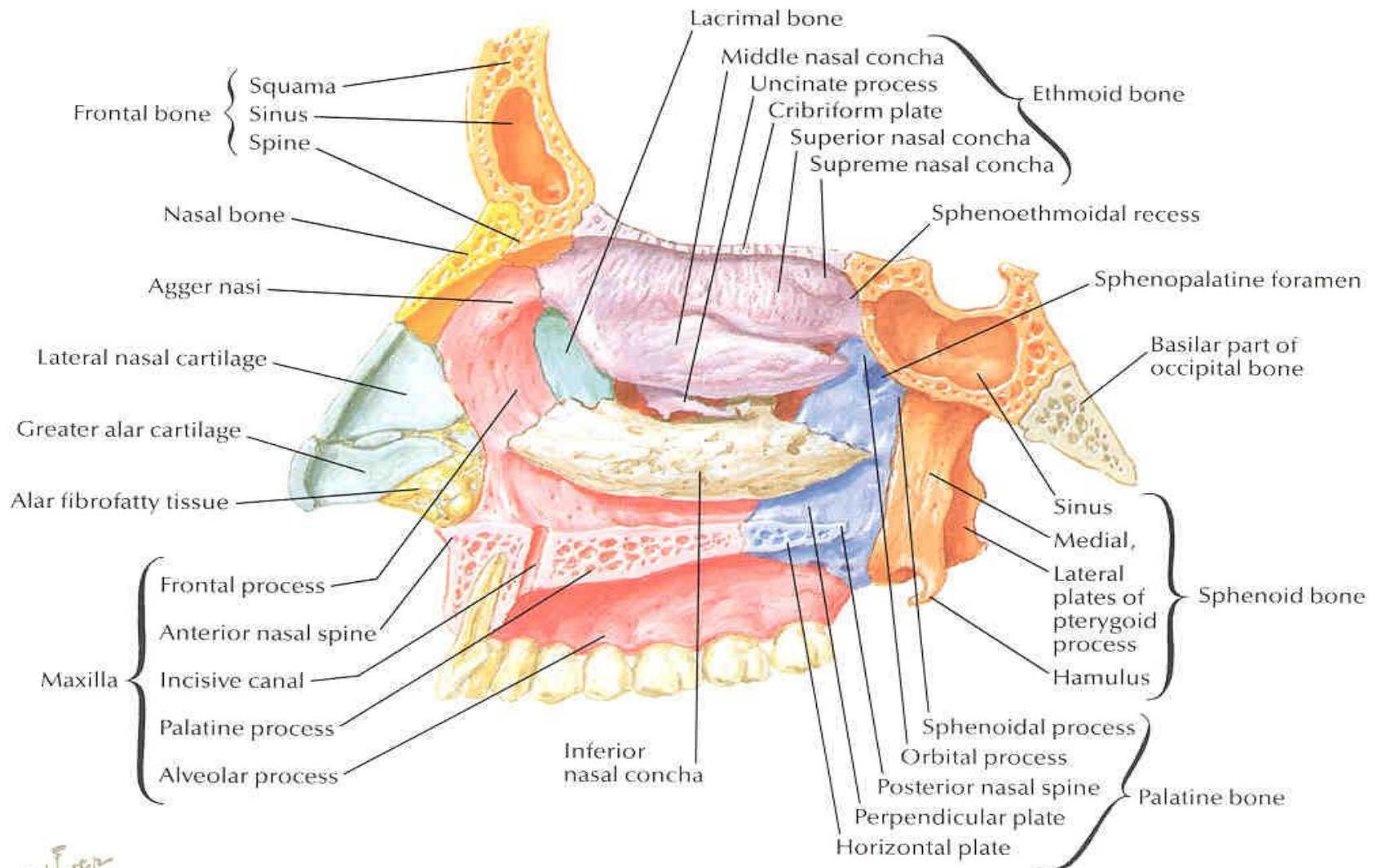
Functions of paranasal sinuses

- Humidifying and warming inspired air
- Regulation of intranasal pressure
- Increasing surface area for olfaction
- Lightening the skull
- Resonance
- Absorbing shock
- Contribute to facial growth

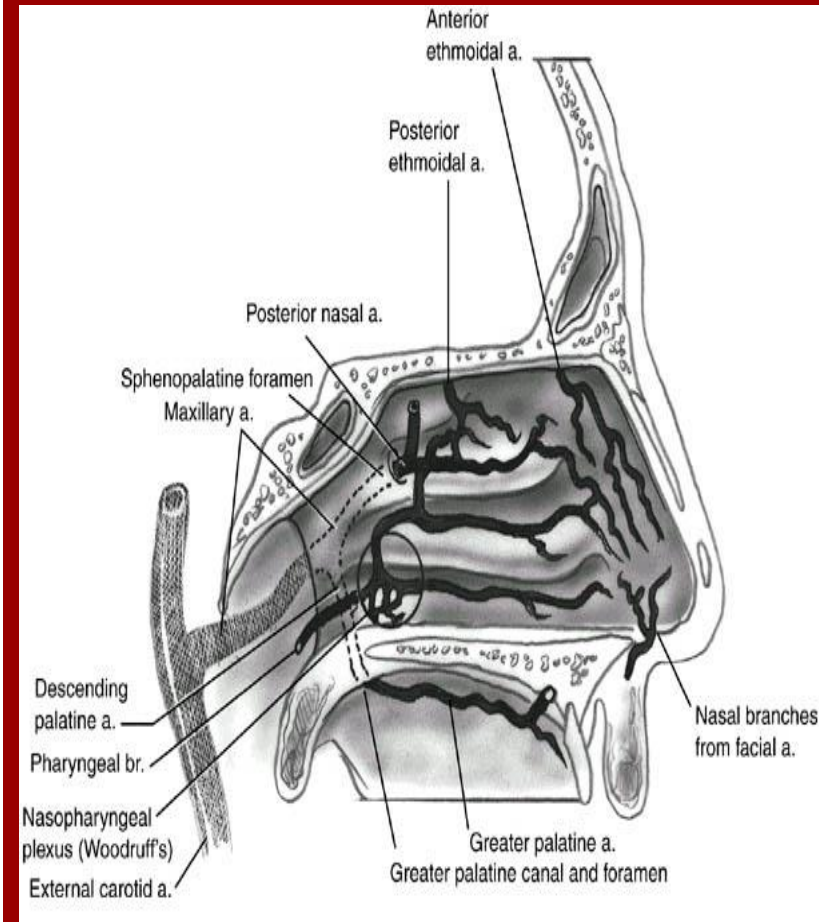
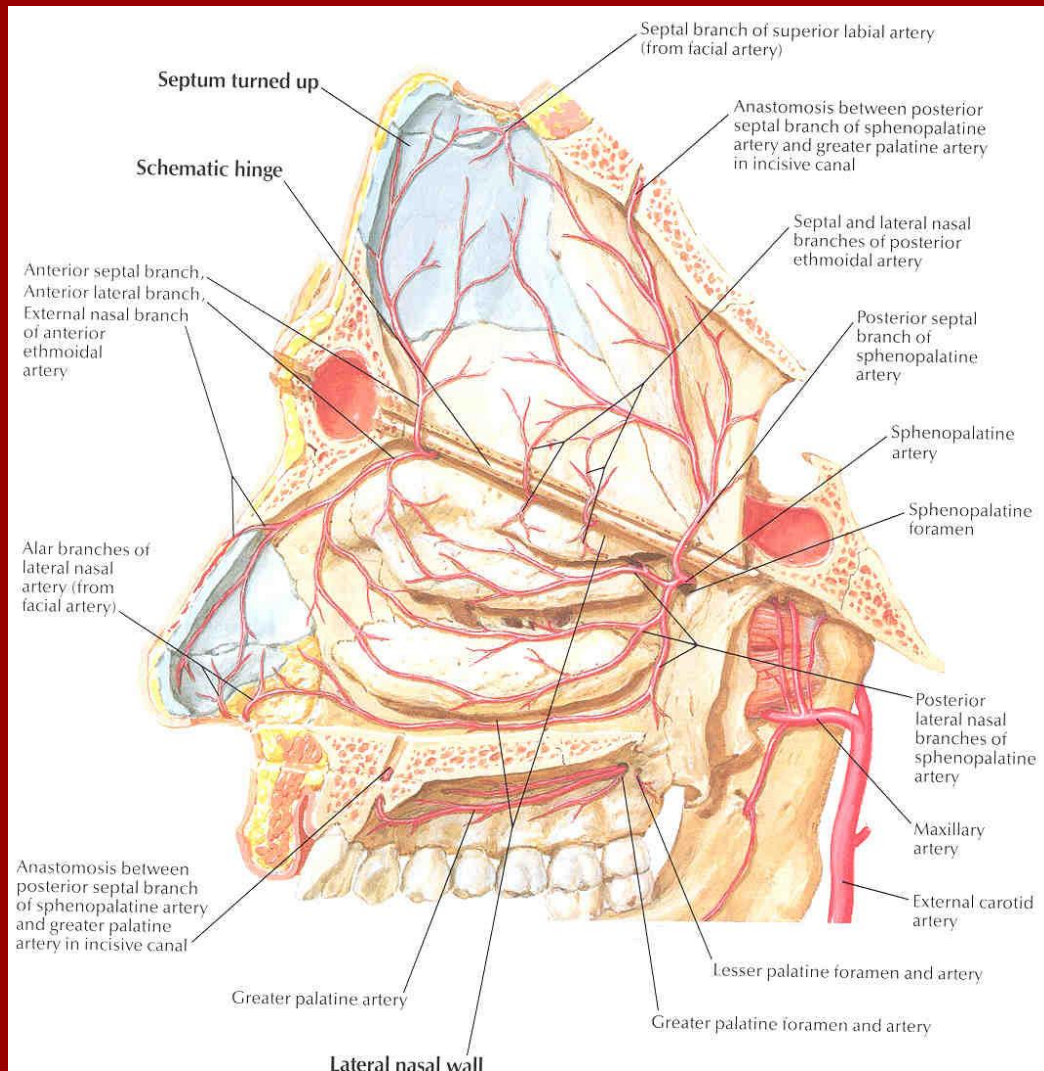
Anatomy of paranasal sinuses



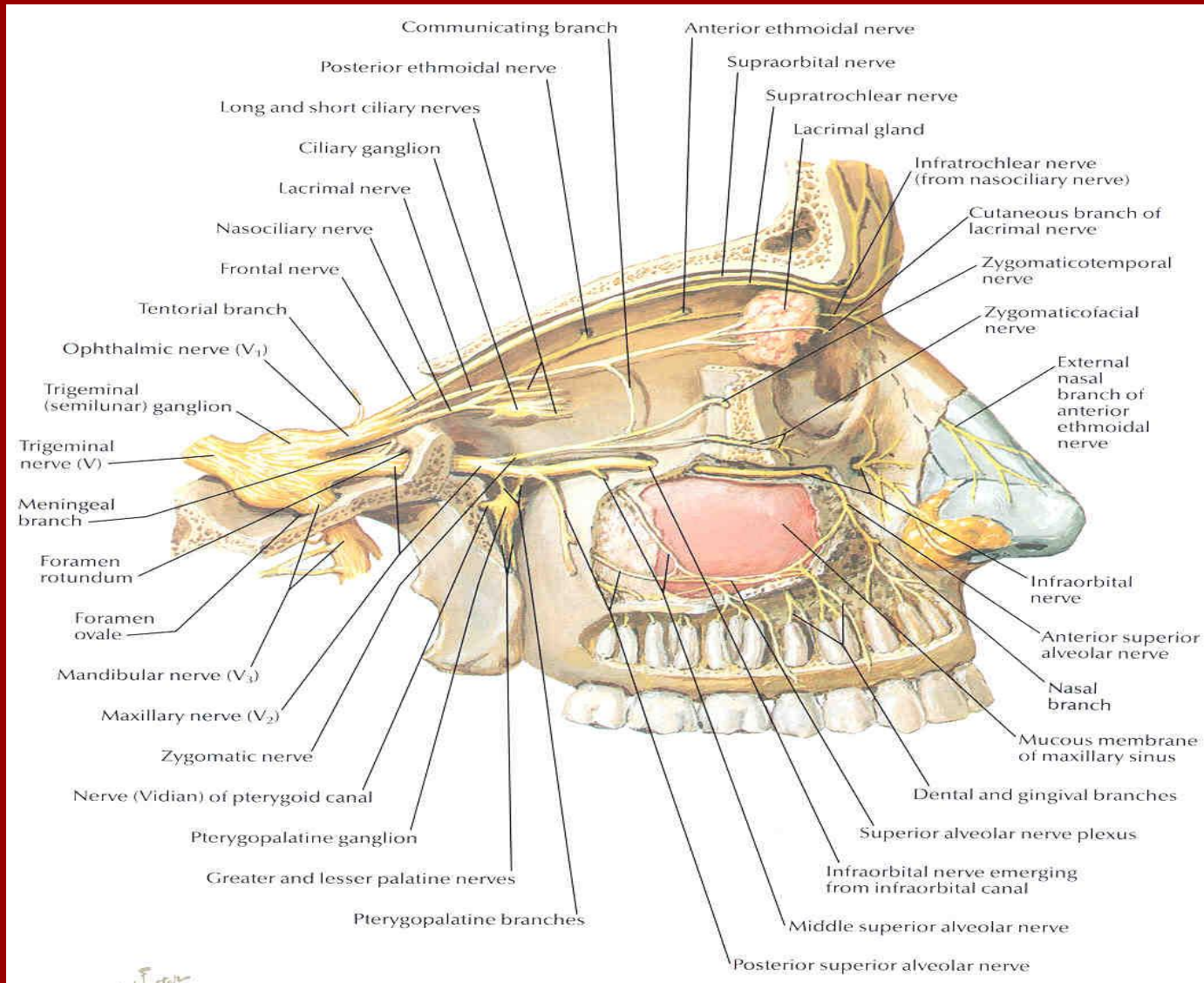
Bony structure



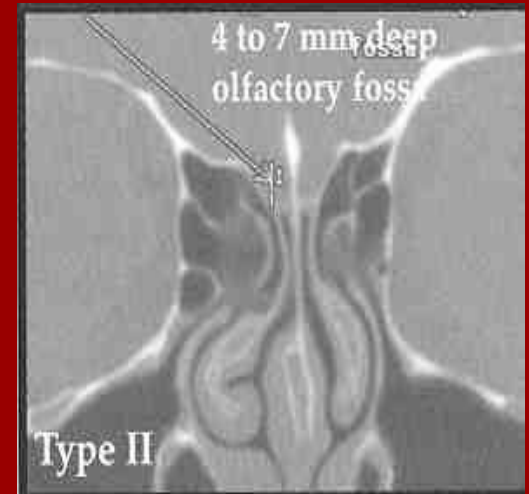
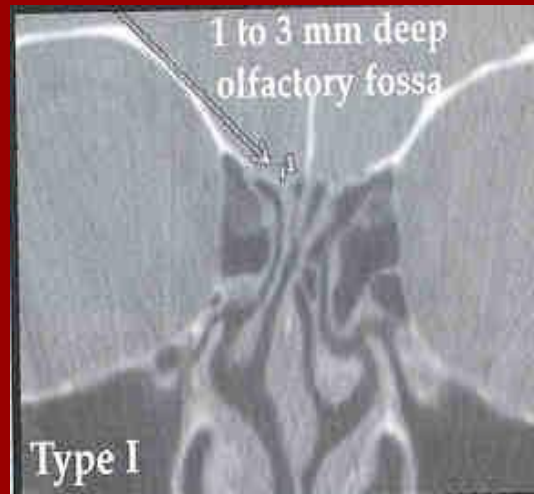
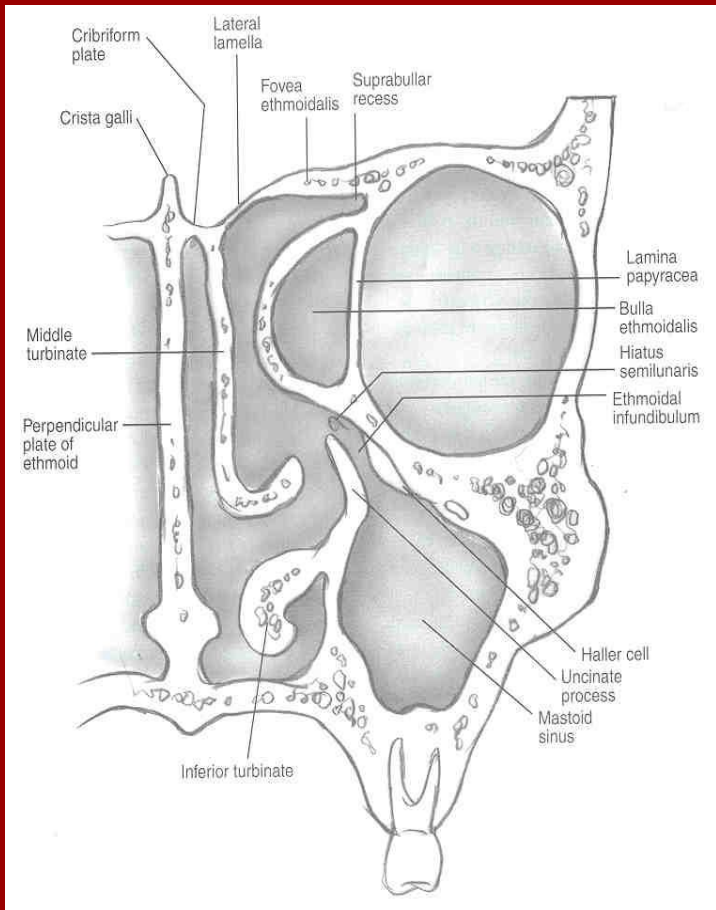
Arterial supply

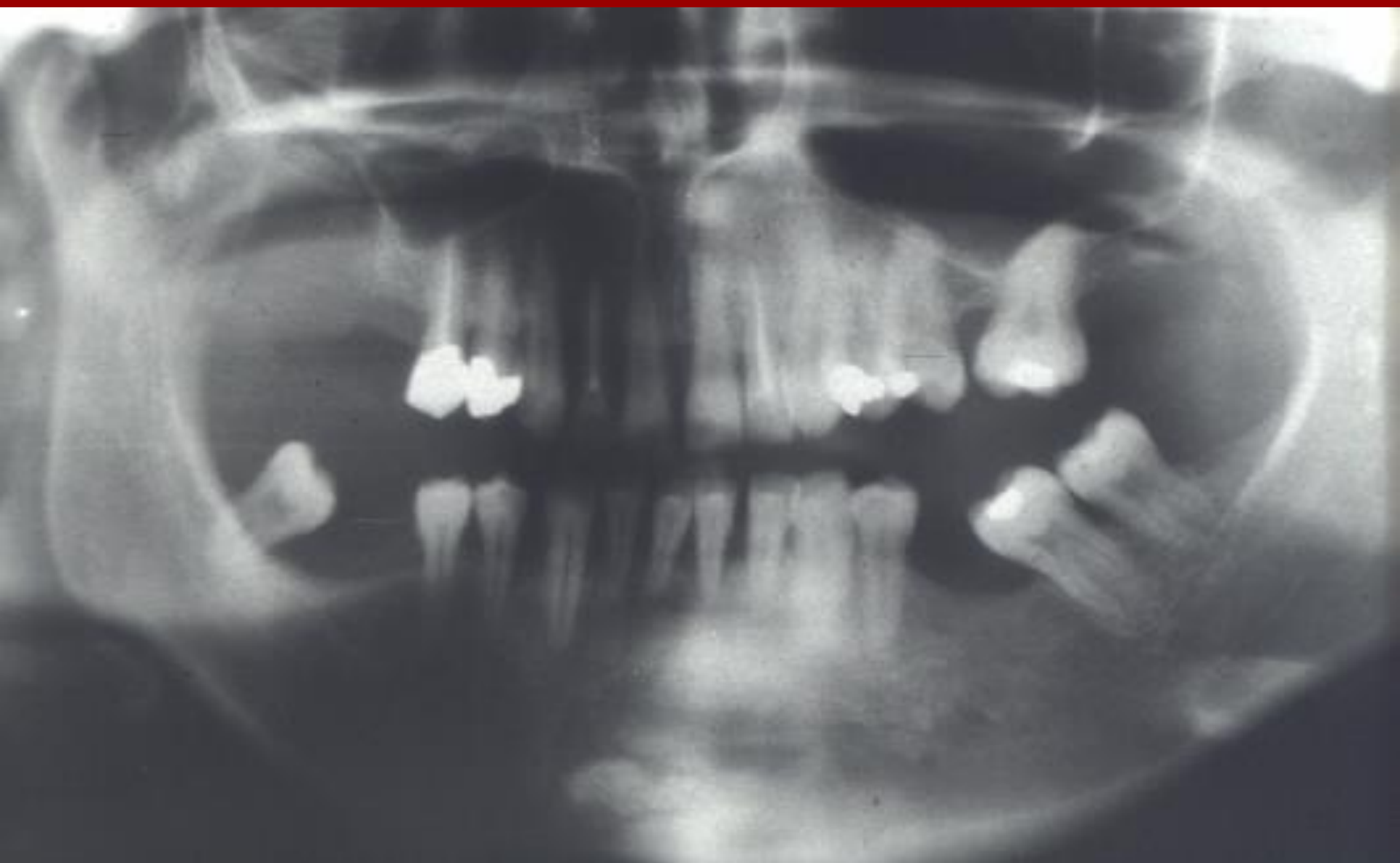


Innervation



Ethmoid roof







Anatomical disorders

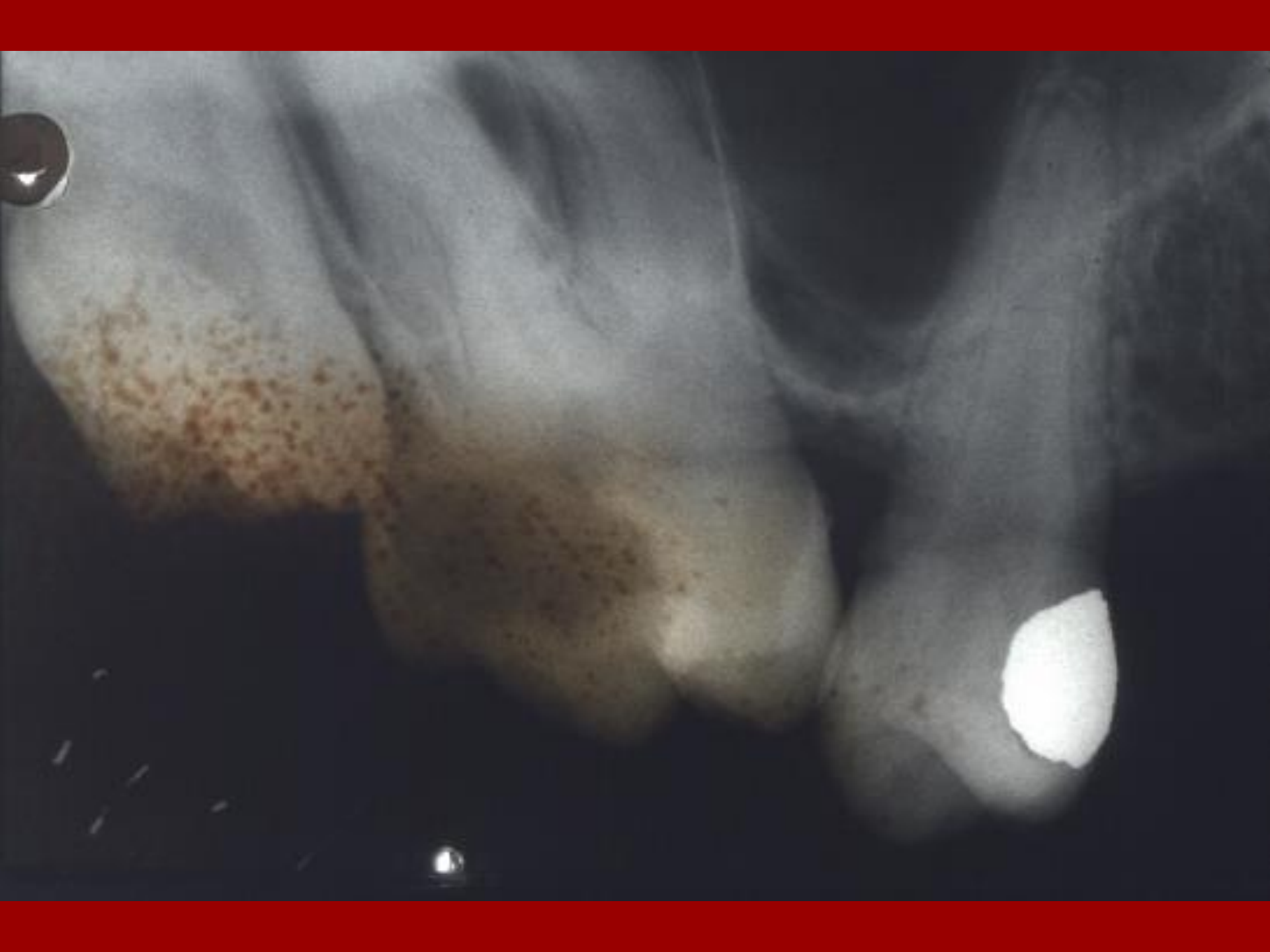


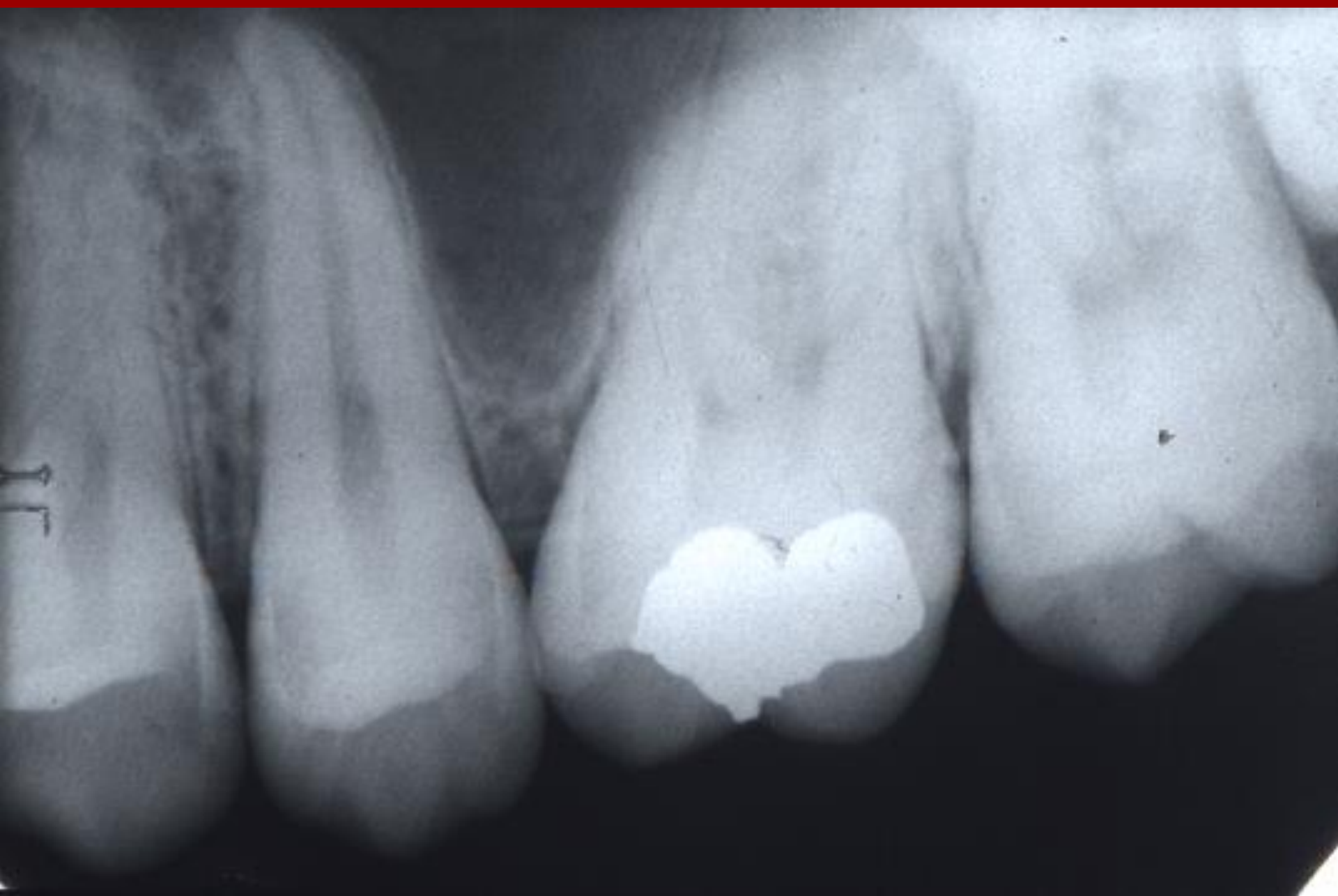
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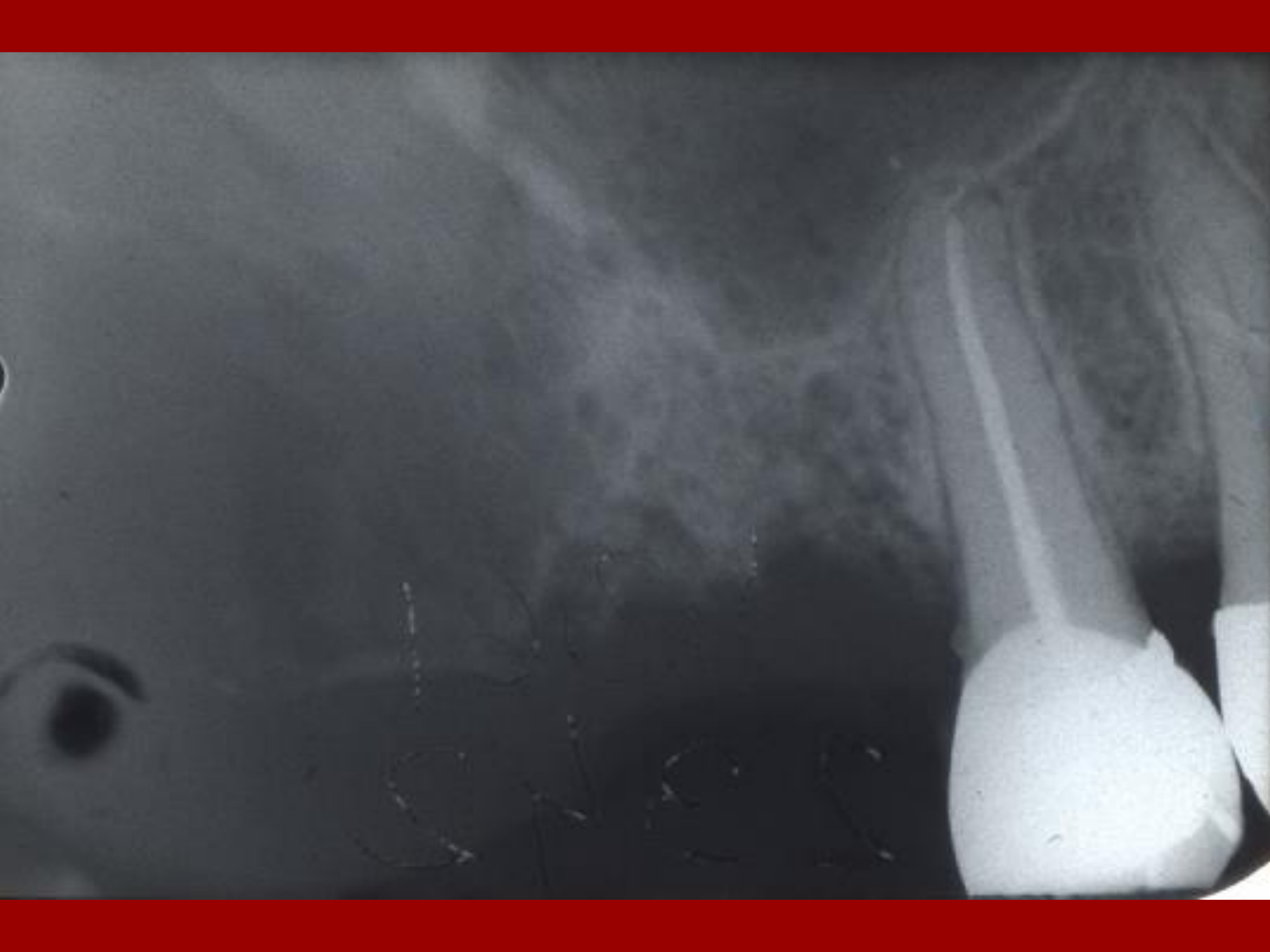


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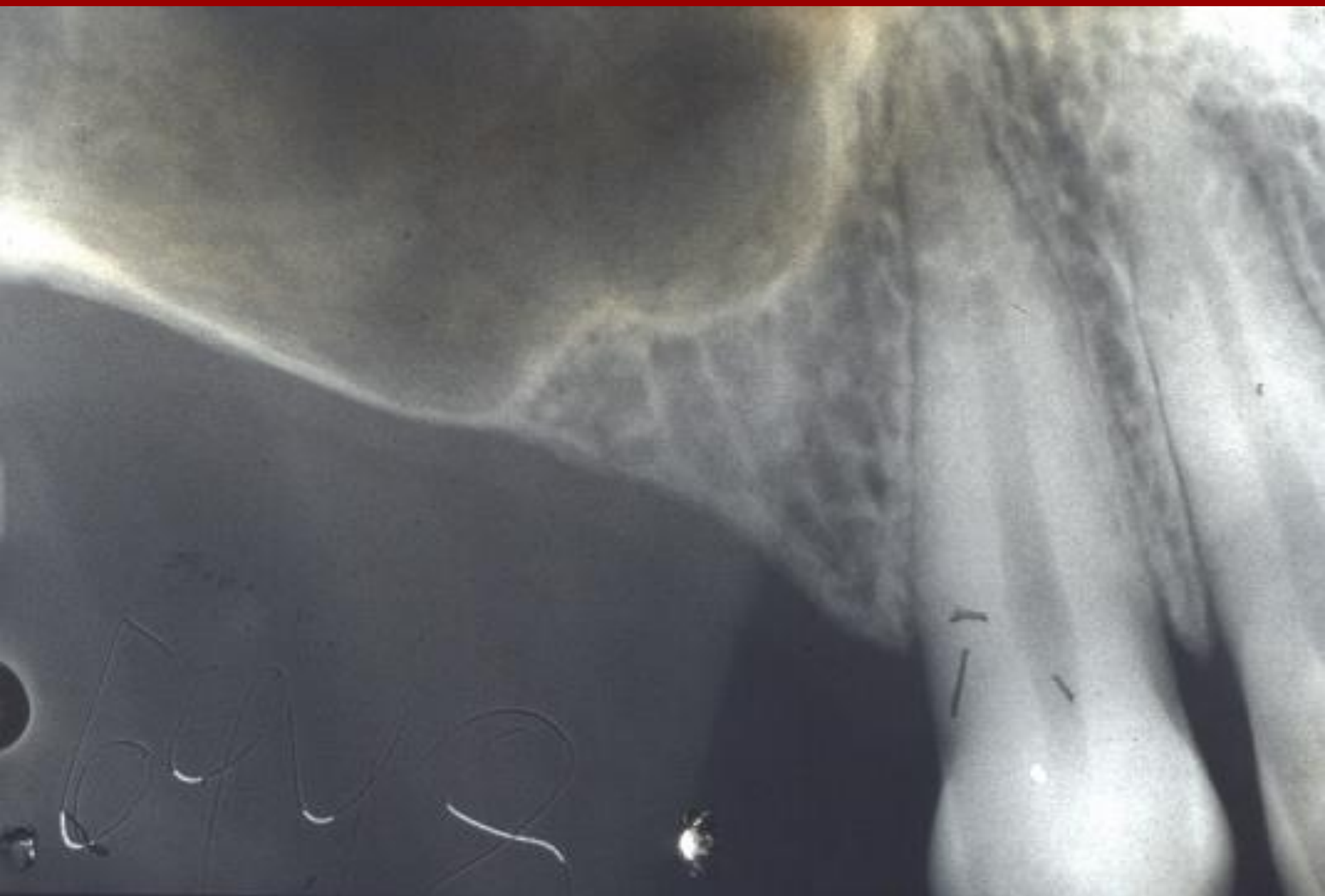












Sinus Apertus (Open sinus)

The mucosa and the bony wall of the sinus is injured

Sometimes the mucosa can be intact

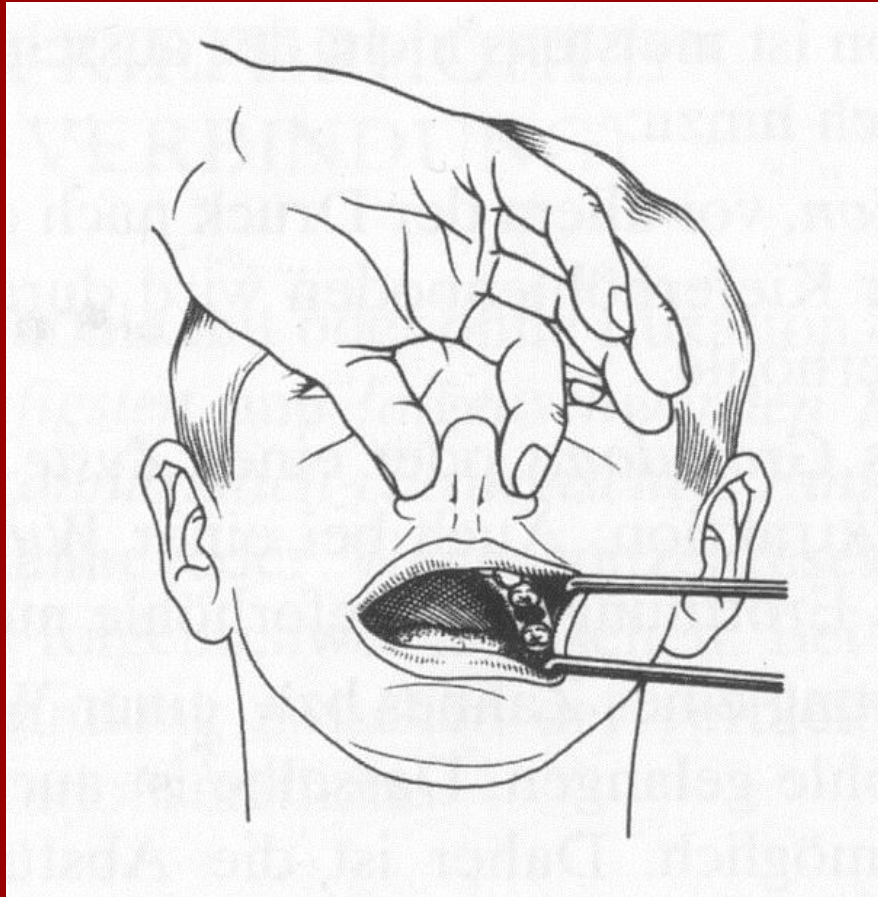
Causes

- Tooth extraction (upper molar and premolar)
- Operation
- Injury

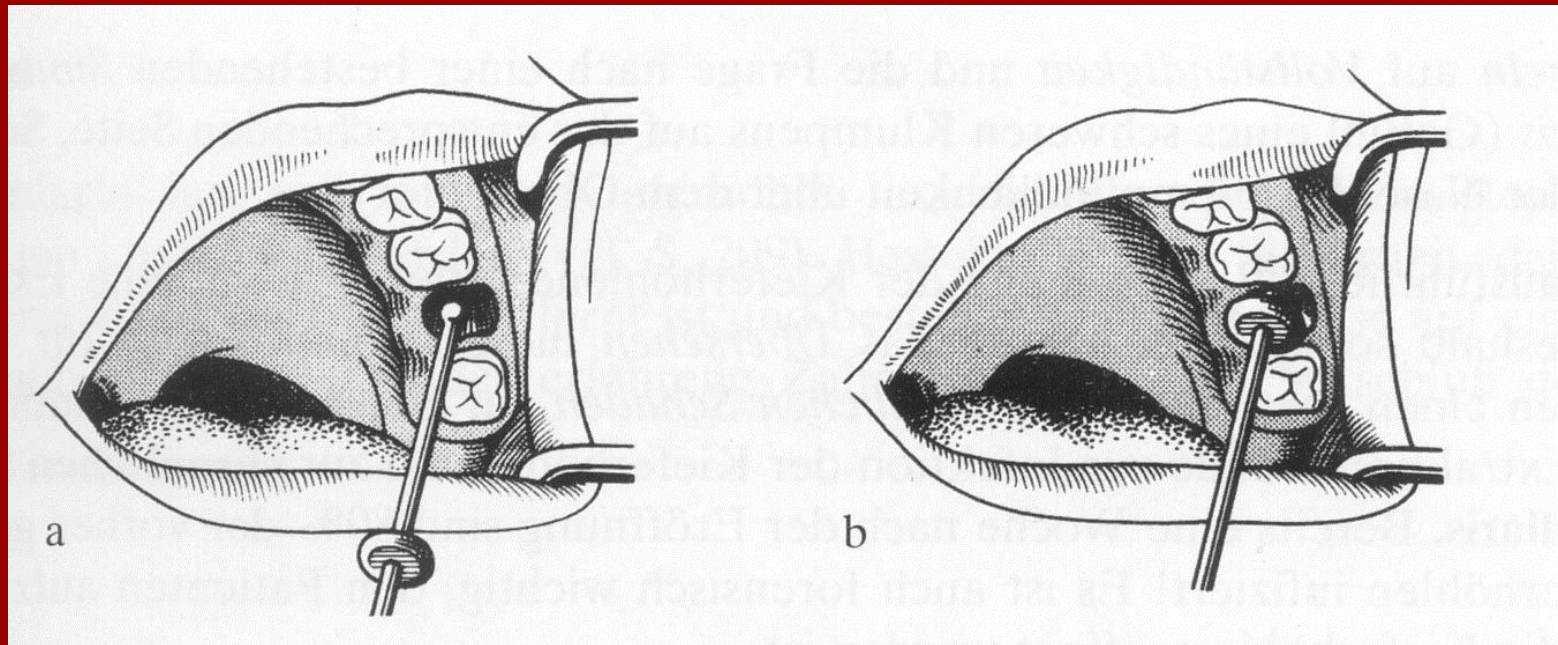
Diagnosis

- Inspection, physical examination
- Nose blowing test, Bucca blowing test
- Fluid can flow in to the nose during drinking
- Test with probe (carefully!)
- X-ray (OP, PA, CBCT)

Nose-blowing test



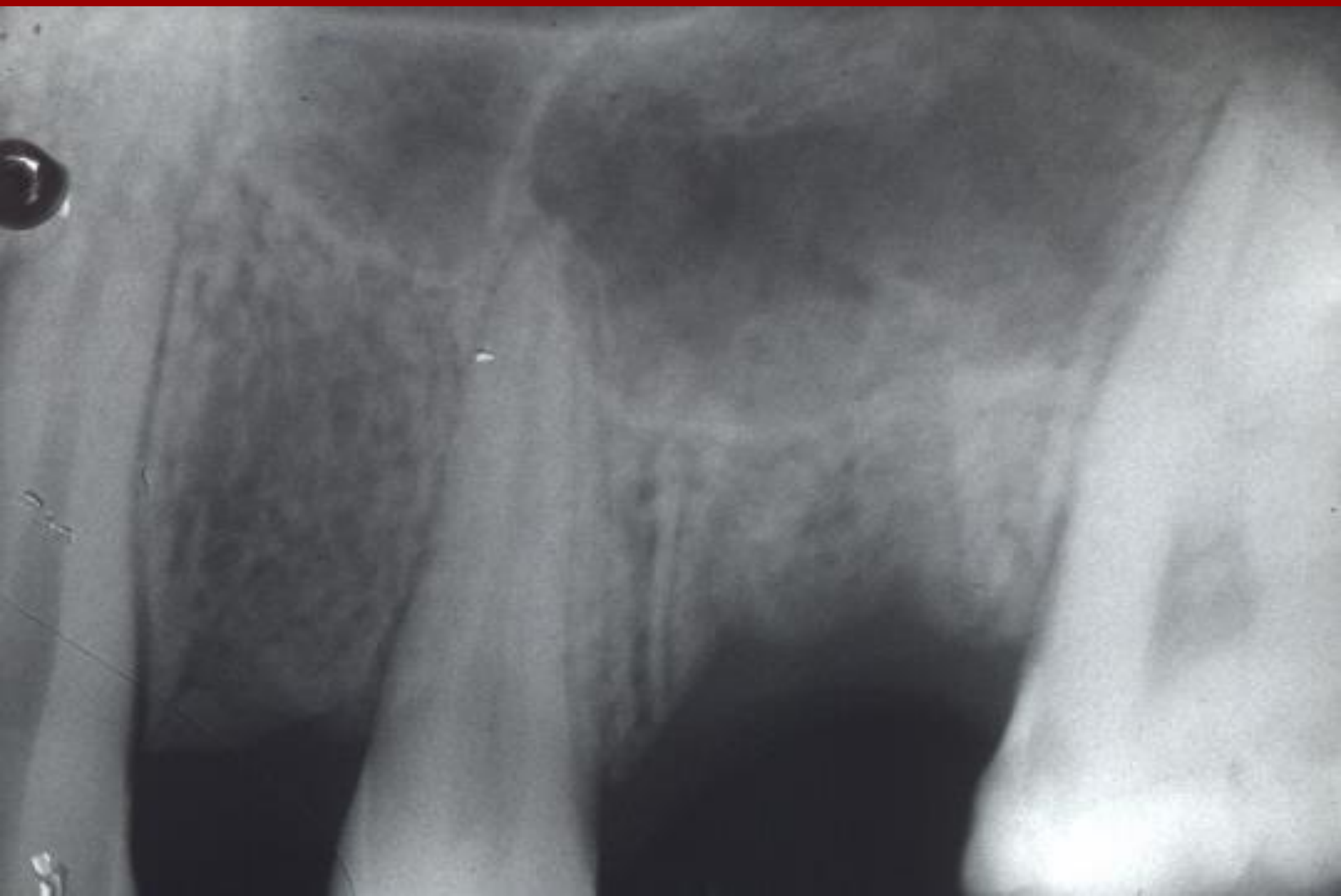
Examination with probe



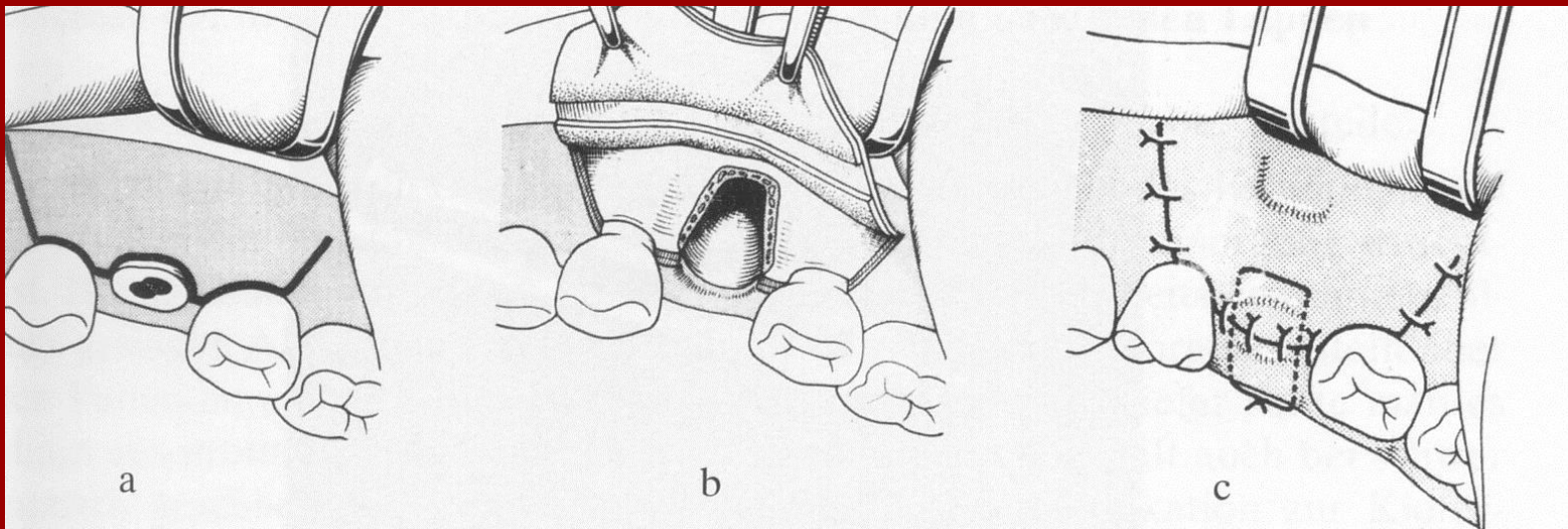
Therapy

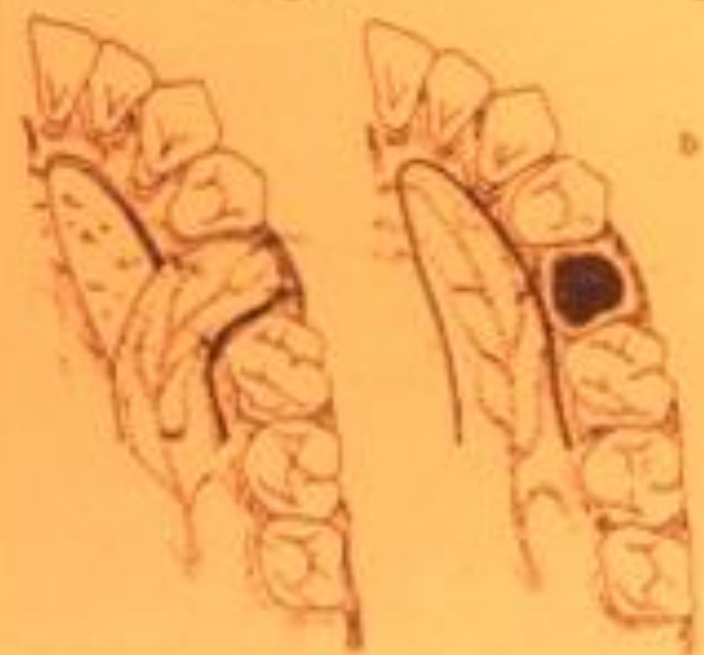
- Spontaneous closure
- Immediate (6-24 hrs) surgical closure with flap
- Delayed surgical closure in case of:
 - Purulent sinusitis conservative therapy (spontaneous closure can occur)
 - Fistula development (closure after the elimination of fistula, Luc-Caldwell operation, conservative therapy)





Closure with buccal flap

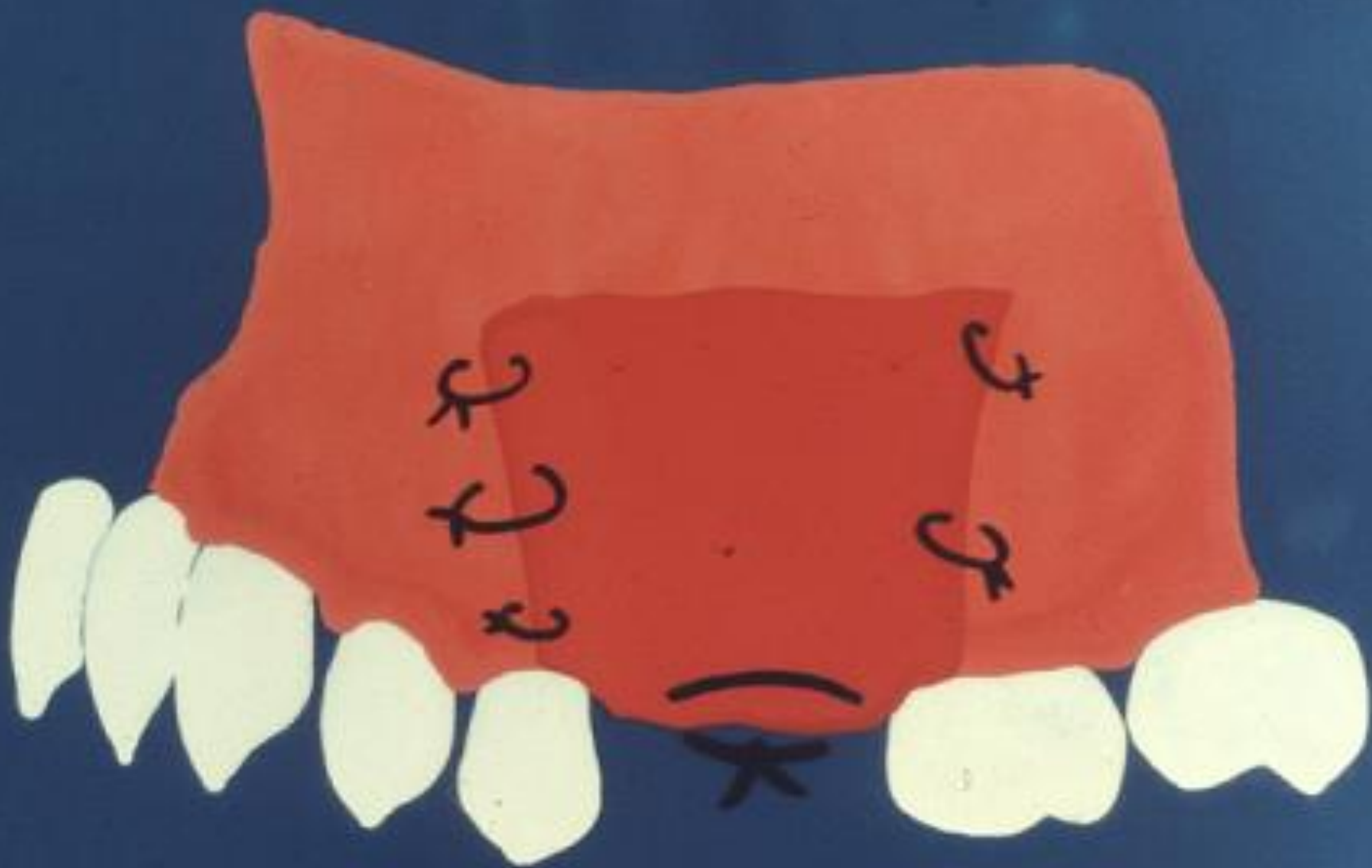


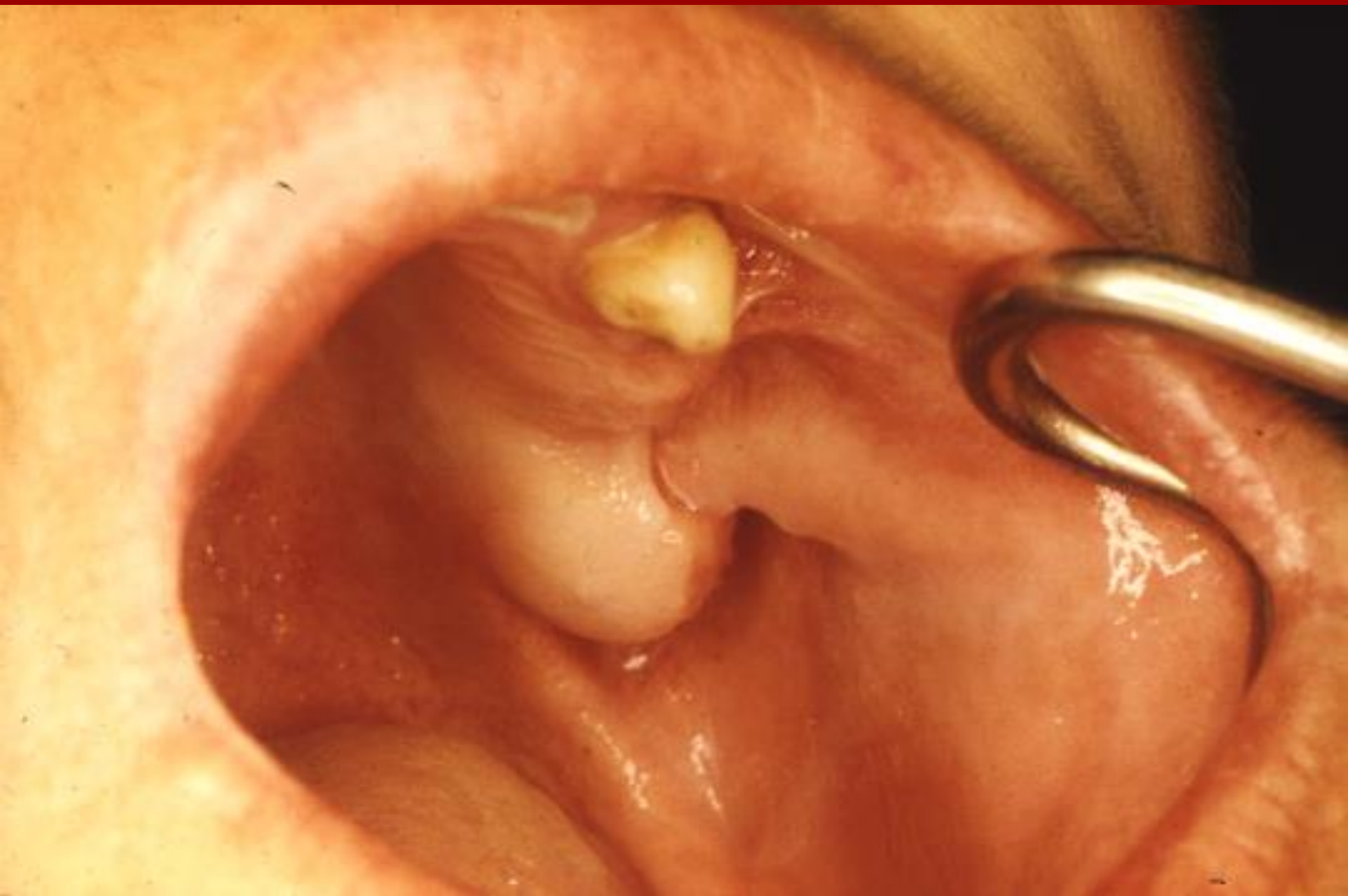




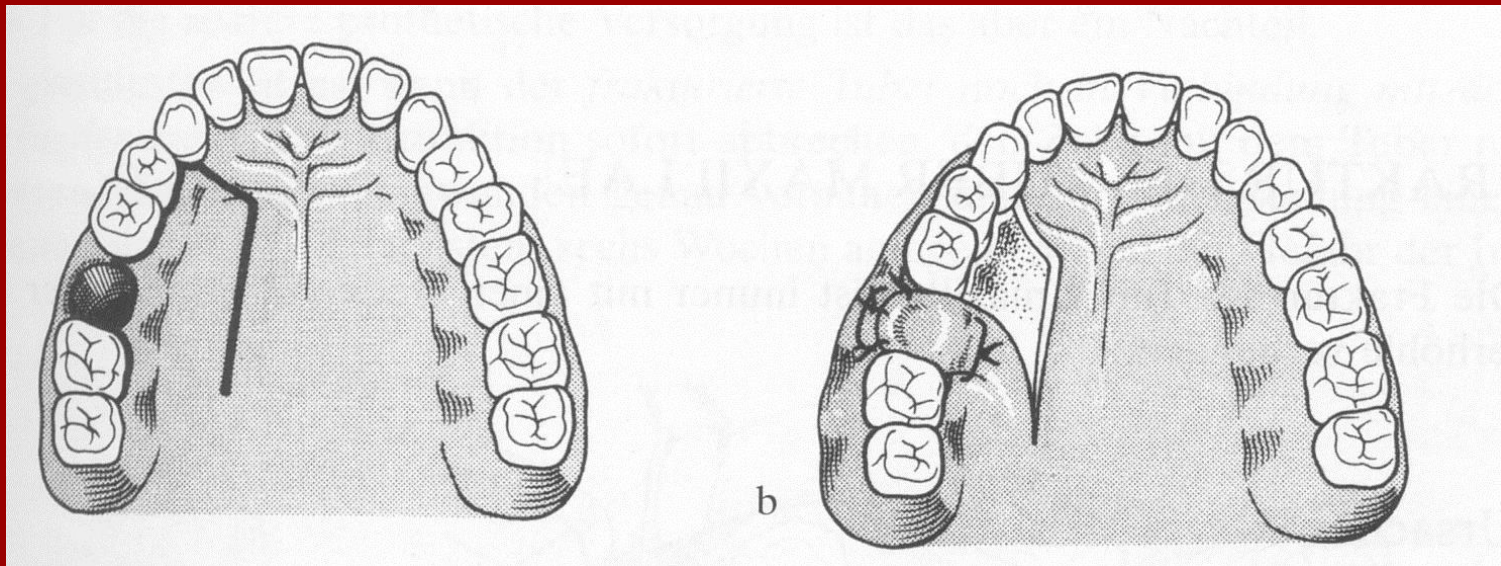
Wassmund

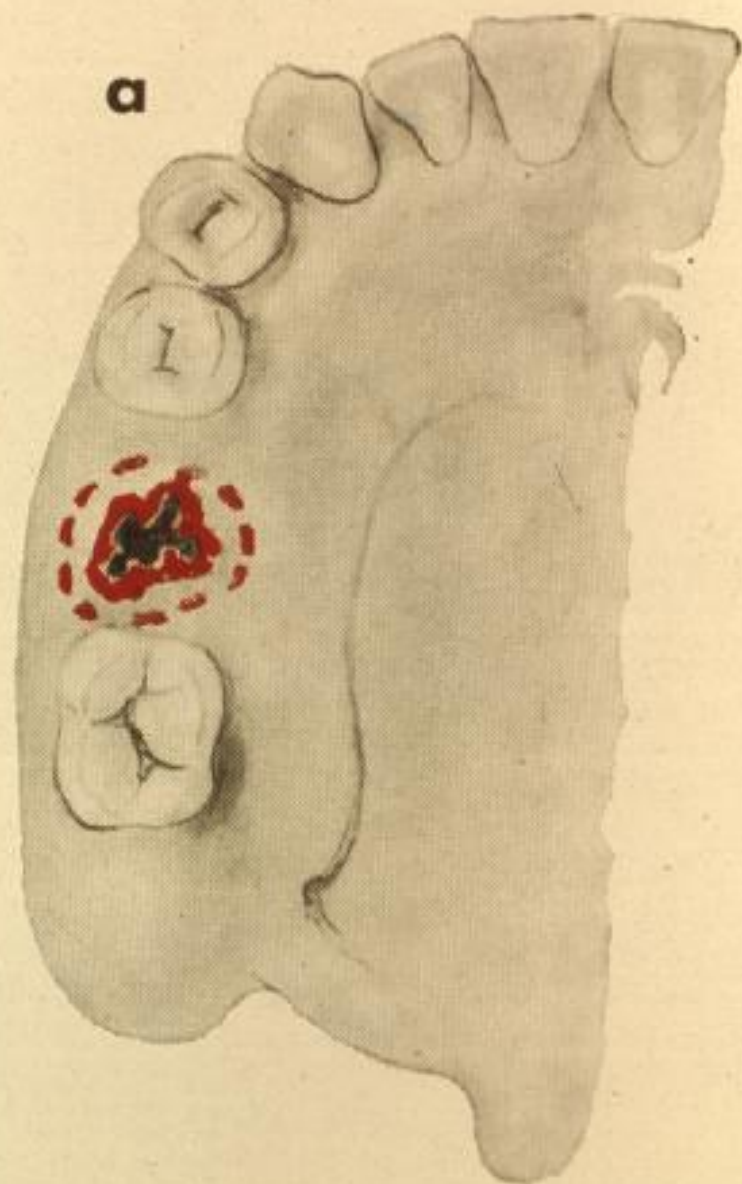




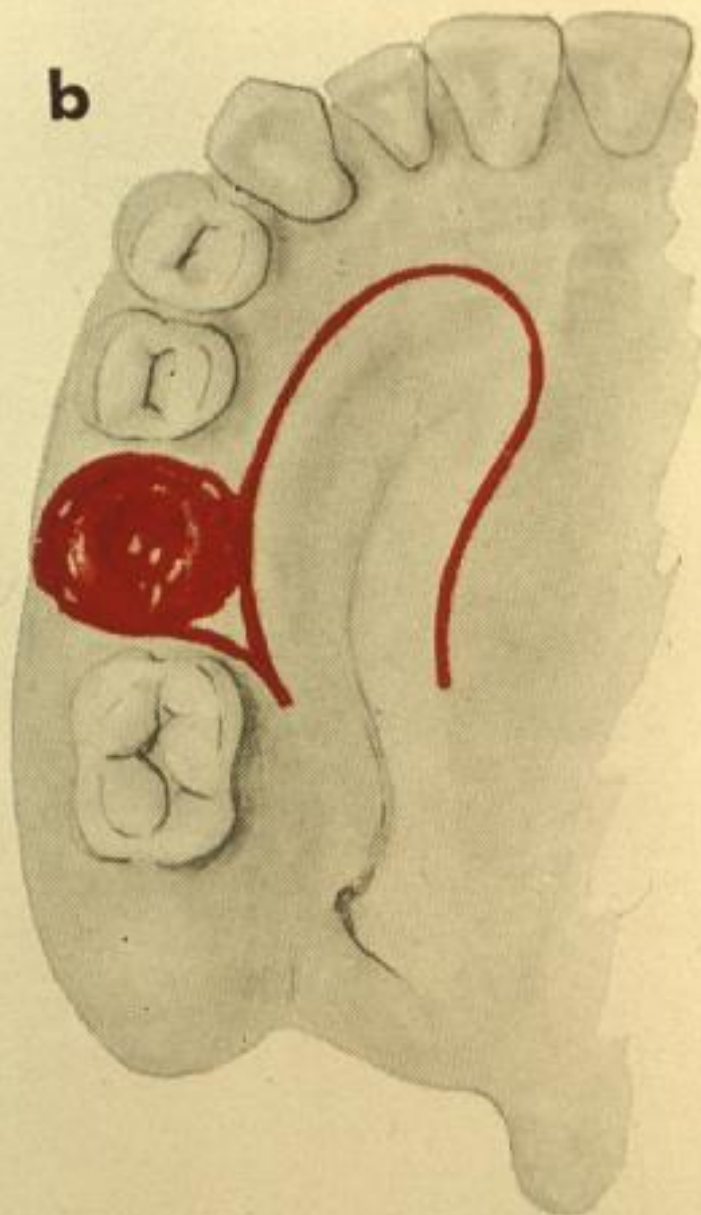


Closure with palatinal flap

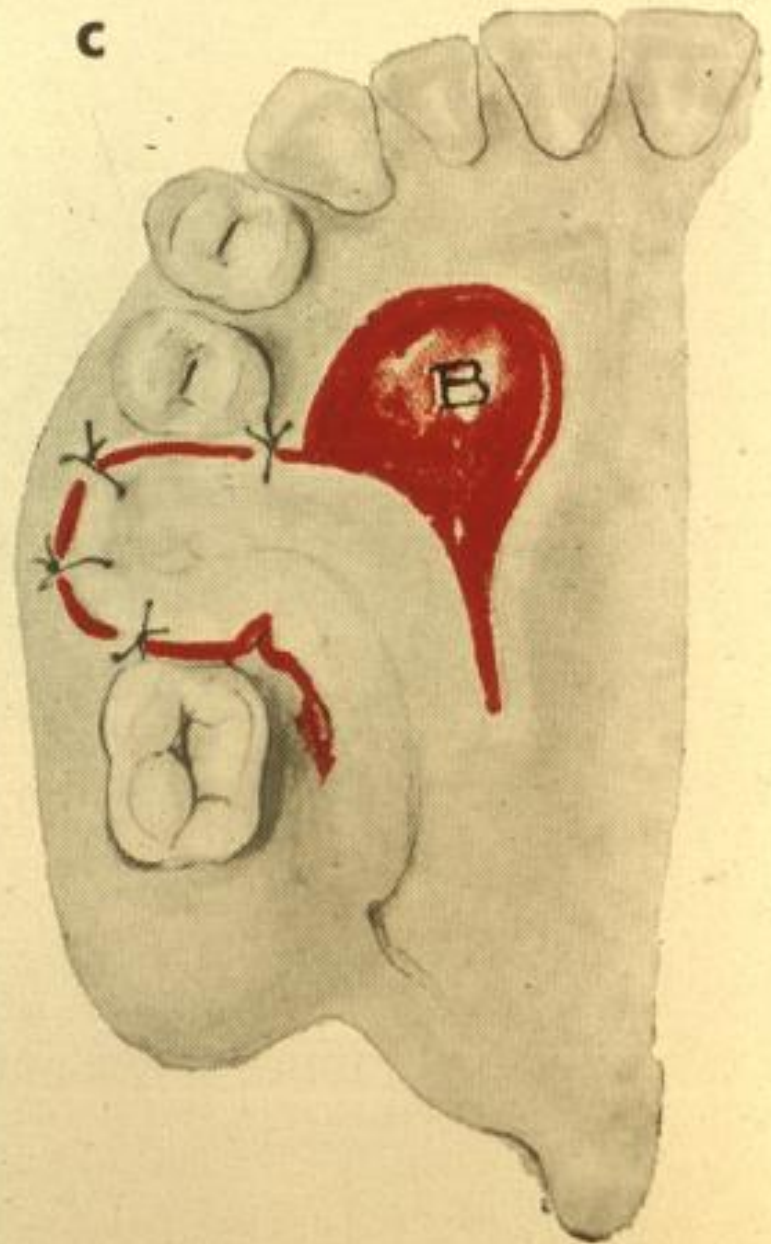




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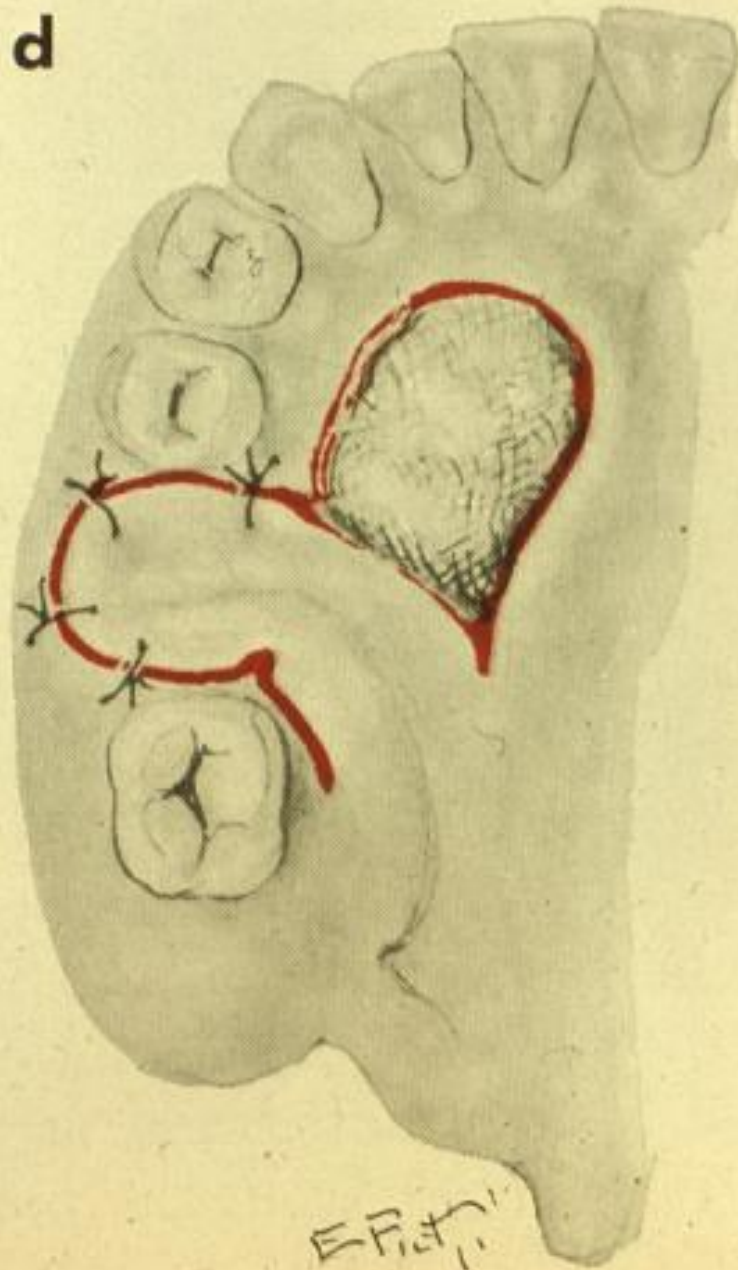


Pichler flap



Pichler flap

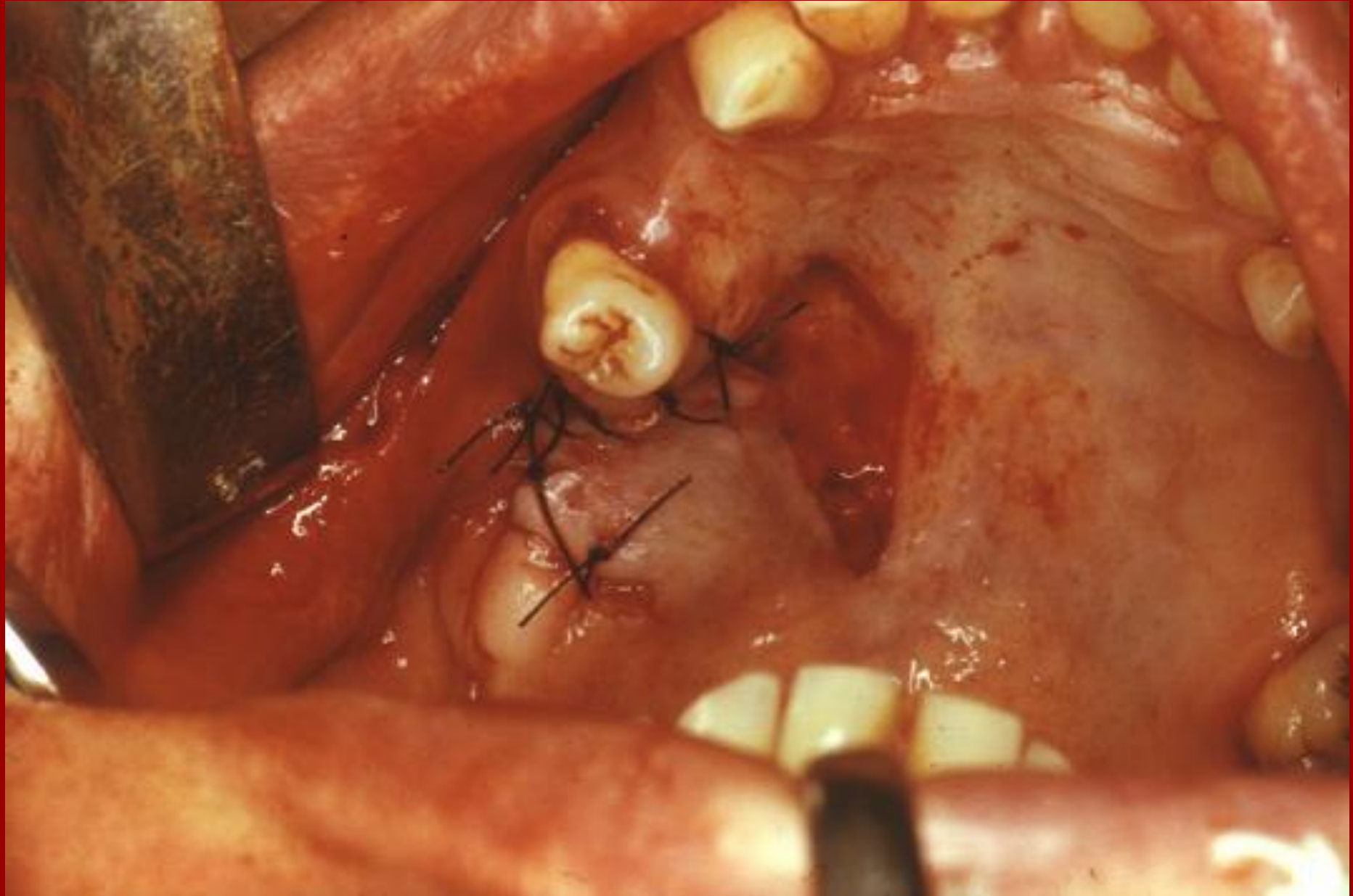
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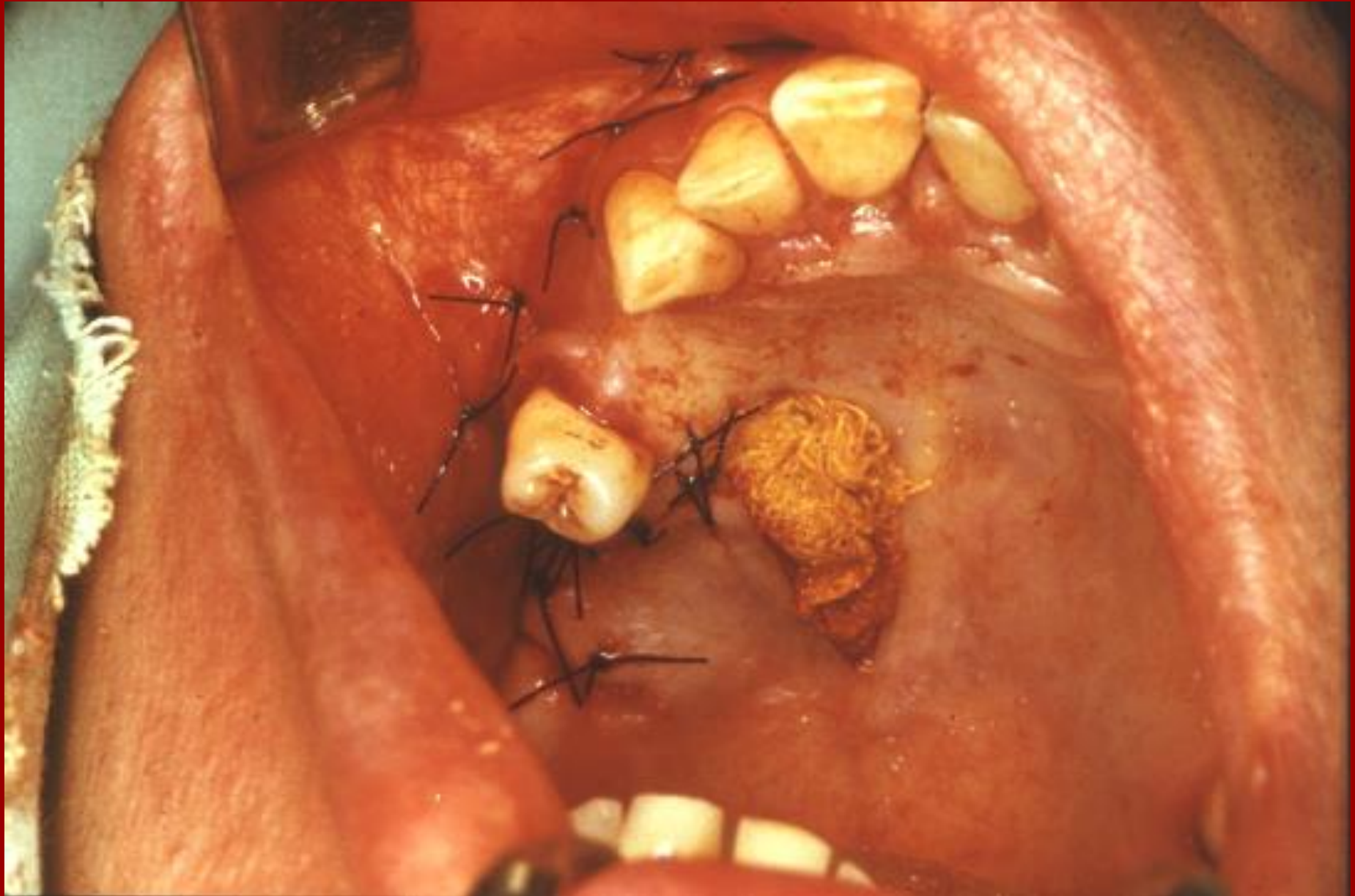
Pichler flap



Pichler flap

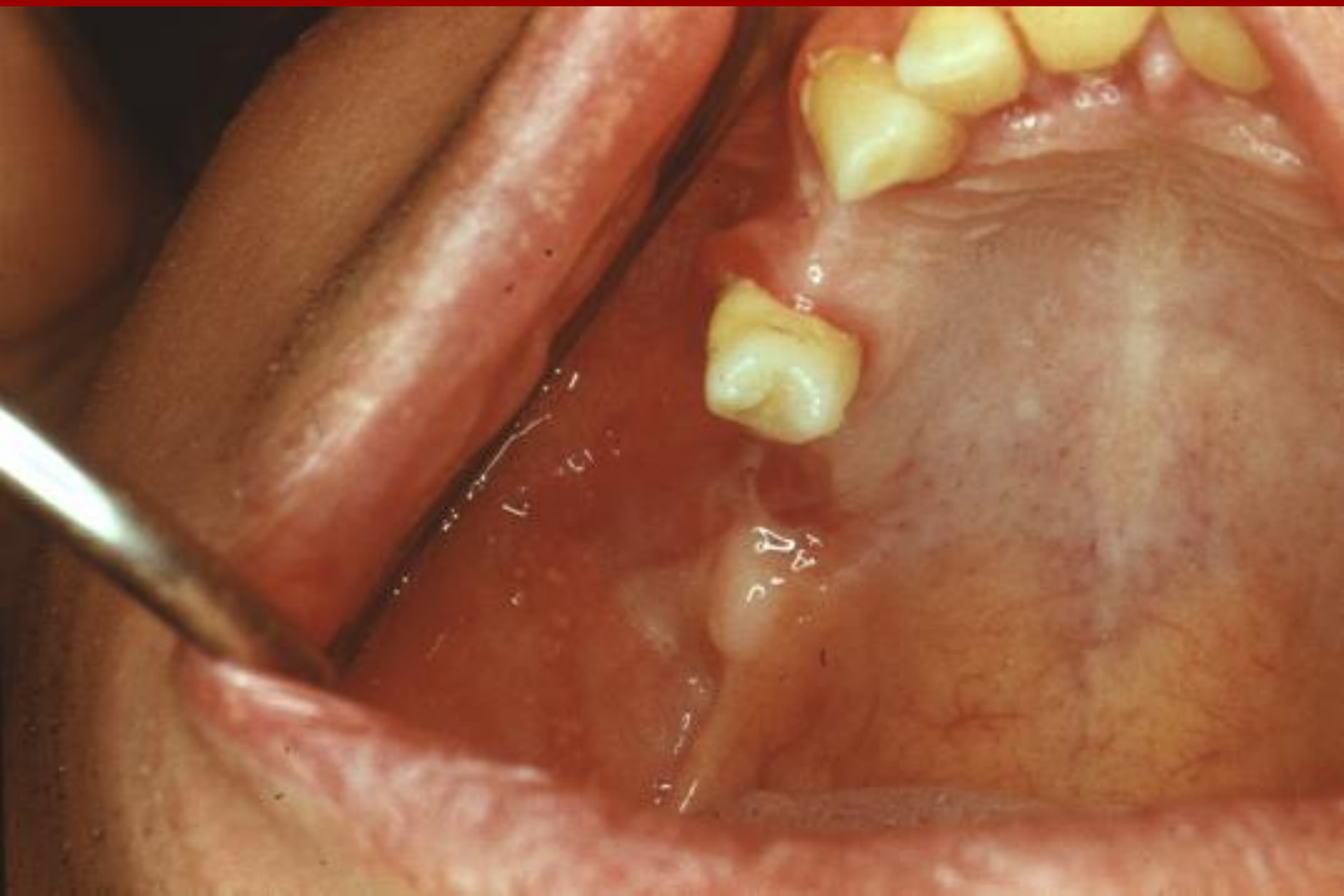


Pichler flap



Pichler flap





Inflammations

Acute and chronic

Sinusitis Maxillaris

Origin: Odontogene (1/3)
 Rhinogene (2/3)

Acute or chronic apical process

Parodontitis

Radix or radicular or follicular cyst

Parodontitis marginalis

Sinus apertus-Exploration

Implantation

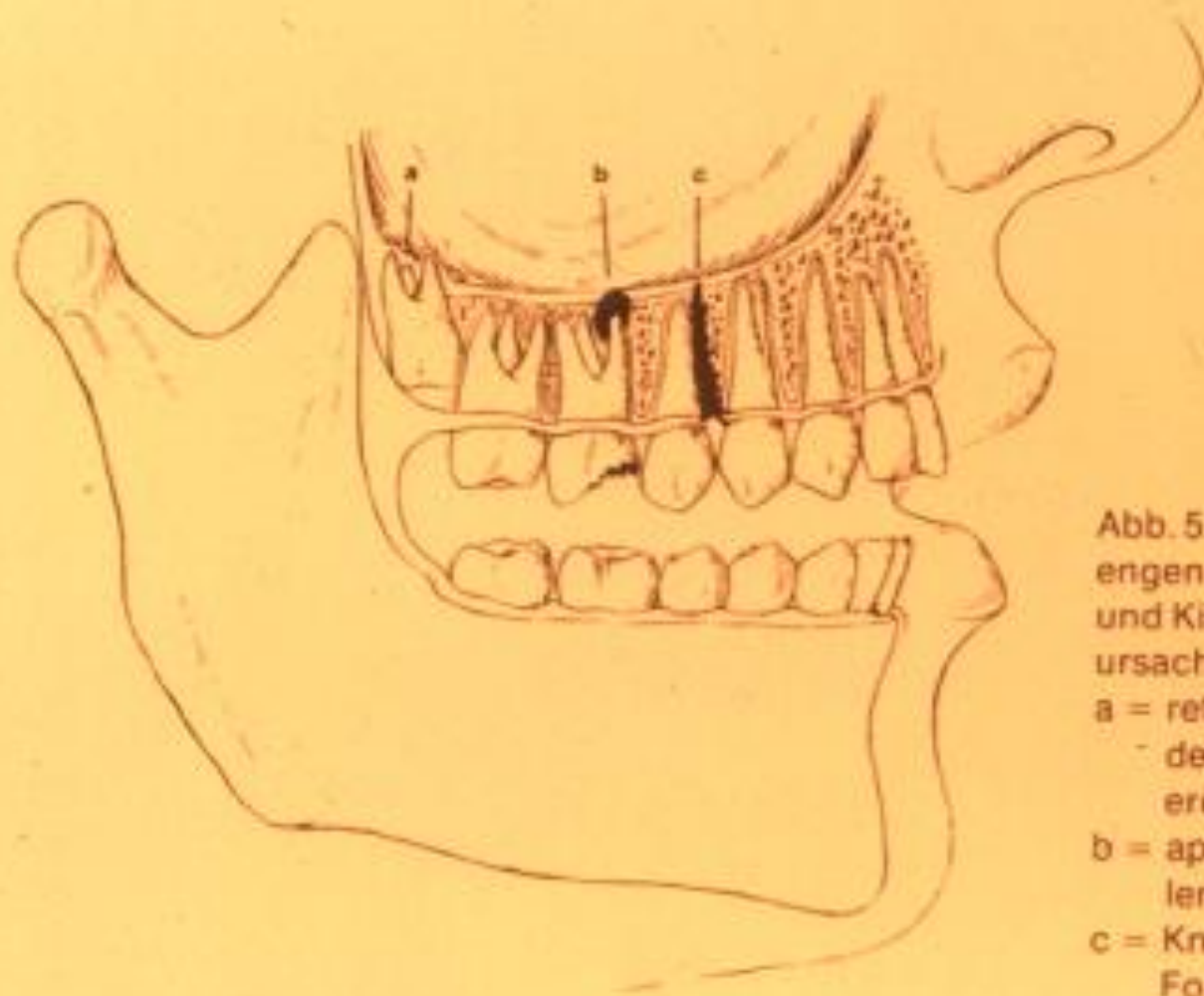
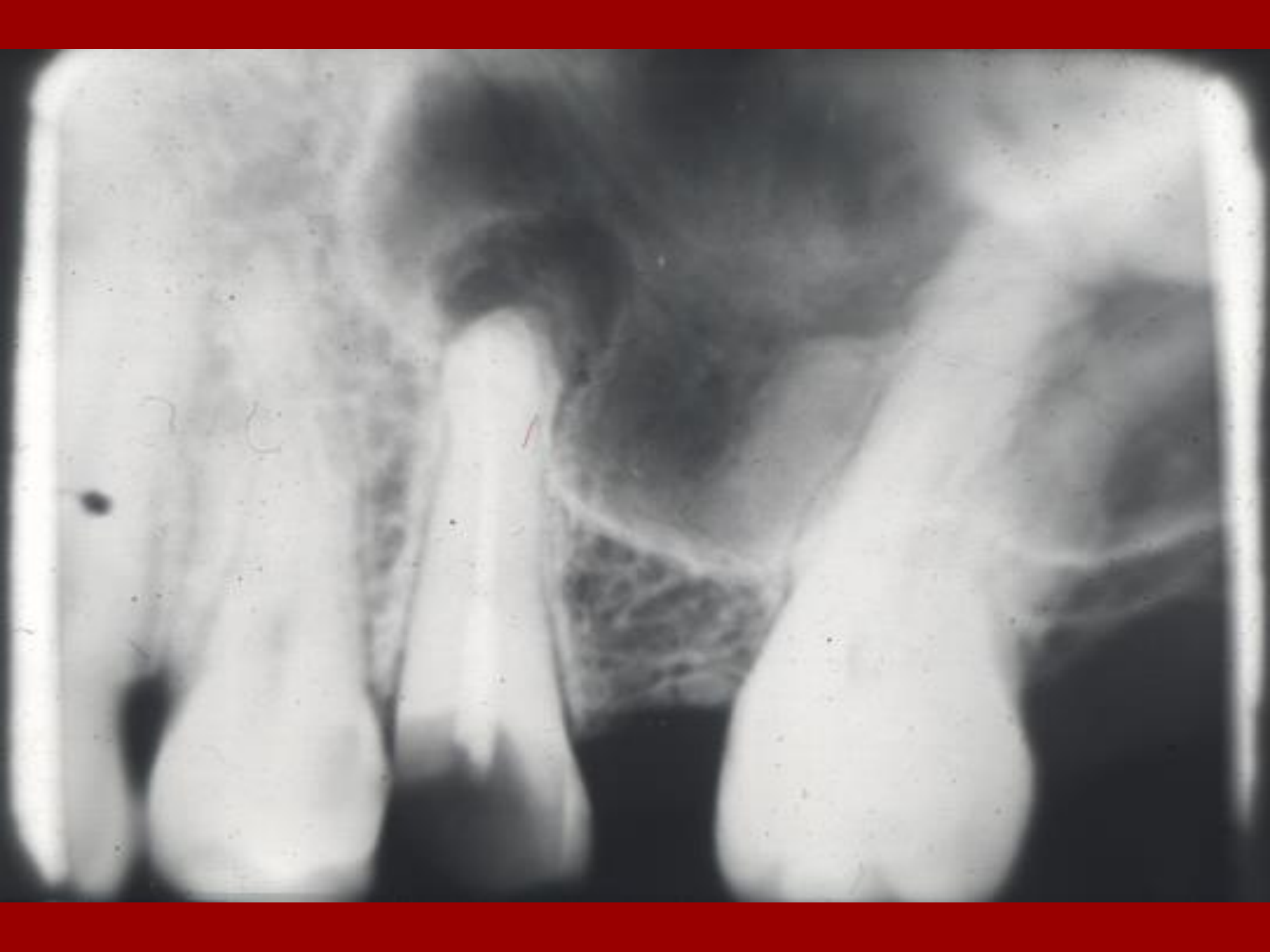


Abb. 5.1 Schematische Darstellung der engen Beziehung zwischen Zahnsystem und Kieferhöhle mit typischen Infektionsursachen:

- a = retinierter oberer Weisheitszahn, bei dessen Entfernung die Kieferhöhle eröffnet werden kann,
- b = apikale Parodontitis an der mesiobukkalen Wurzel des oberen Molaren,
- c = Knochentasche am 2. Prämolaren als Folge einer Parodontitis marginalis









Acute Sinusitis

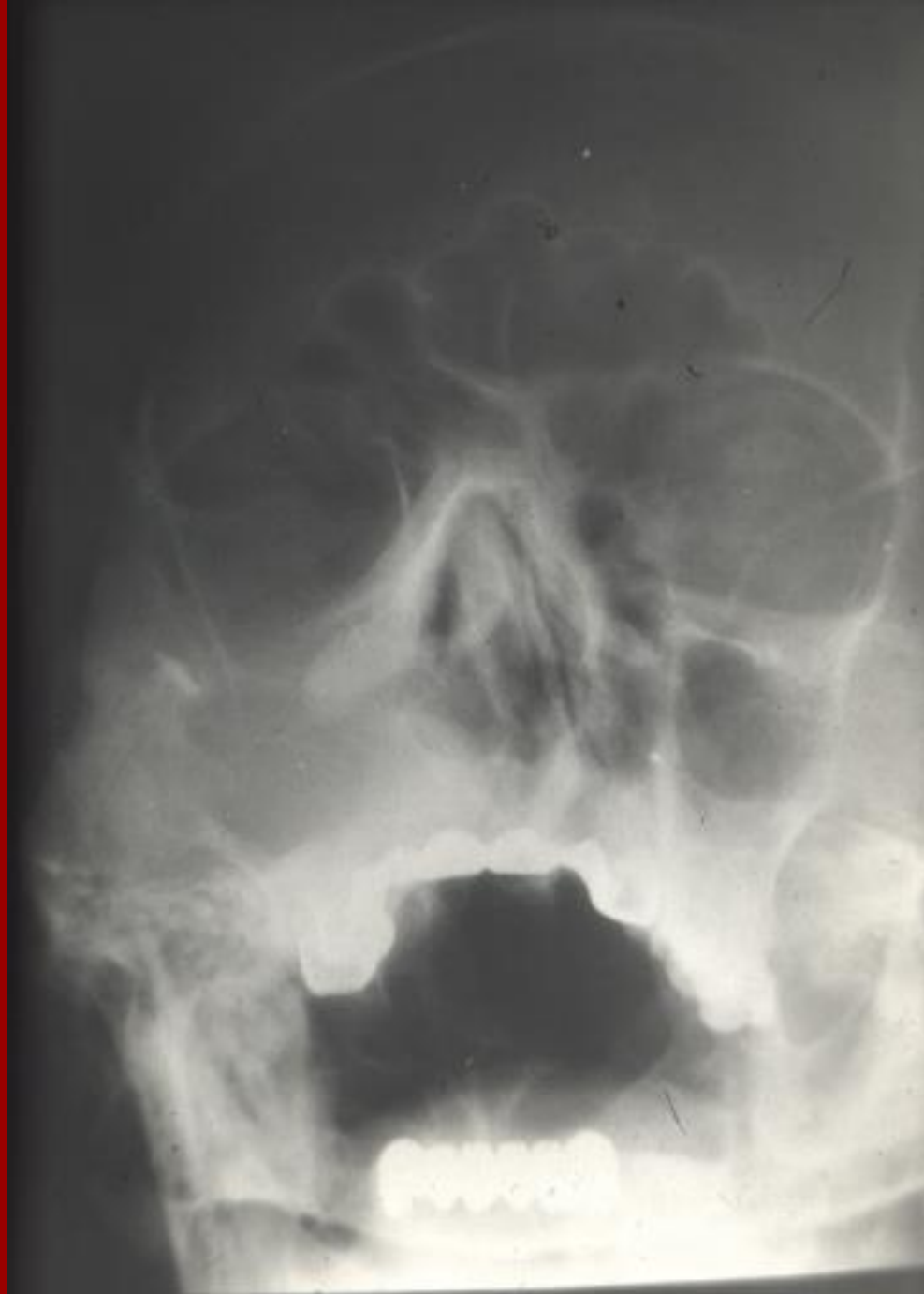
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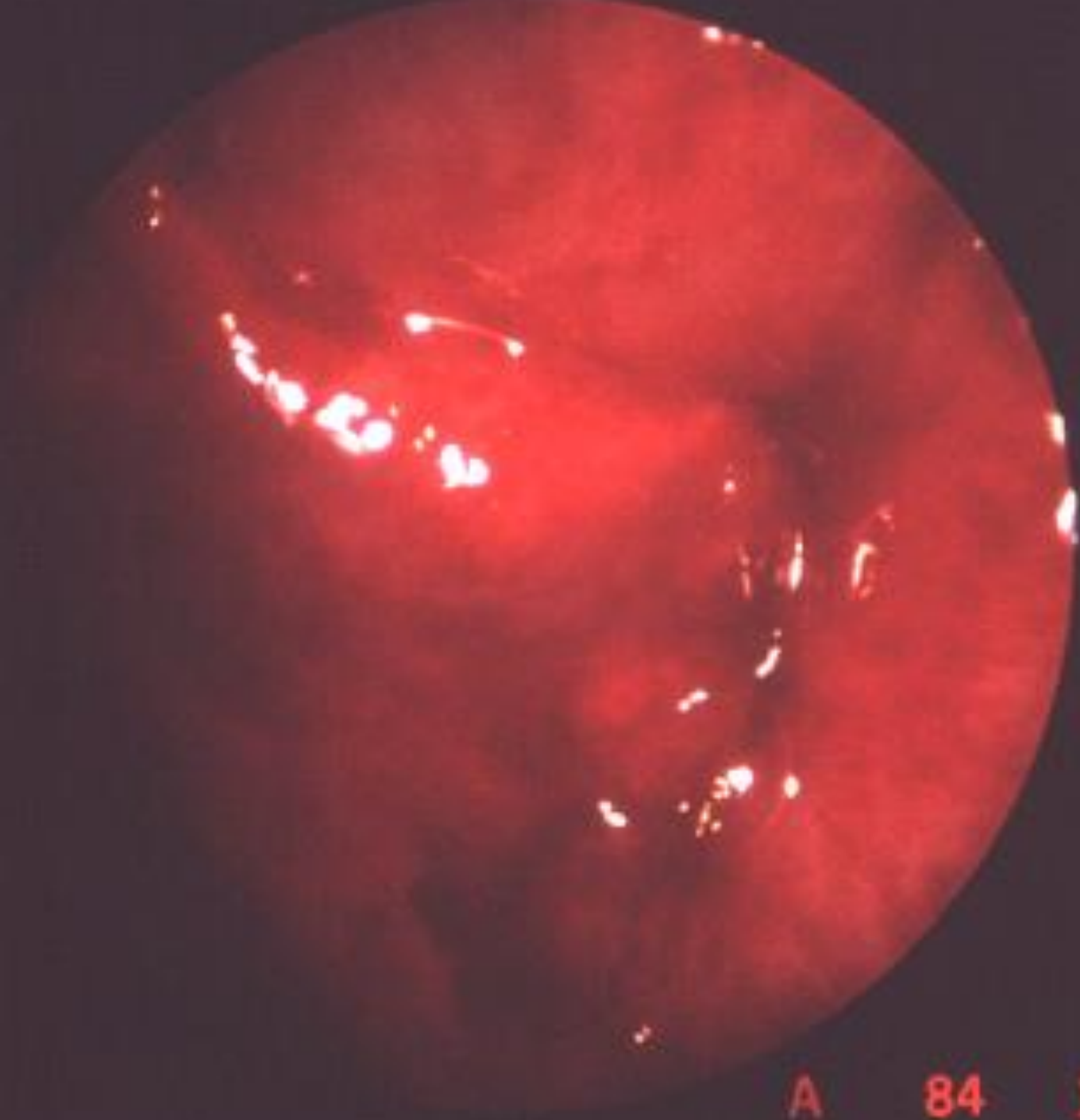
Serotic

Purulent

Symptomes

- Pain of face (fossa canina), can irradiate to the direction of upper teeth. Pain is increased in case of leaning forward and beating face
- Headache
- Fever, subfebrility
- Running nose (serotic, purulent uni- or bilateral),
- Edema of face or lower eyelid
- Covered sinus on X-ray



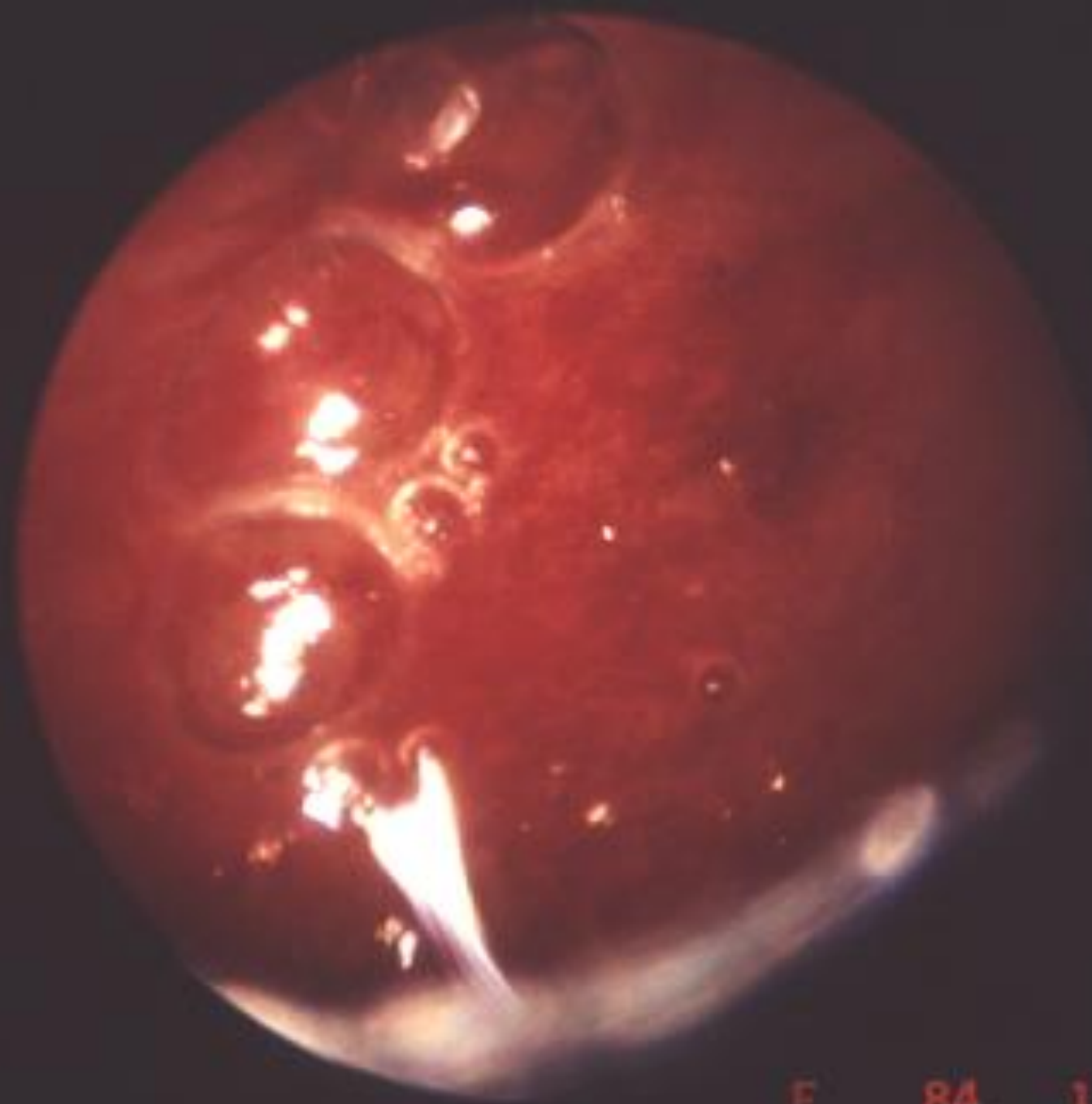


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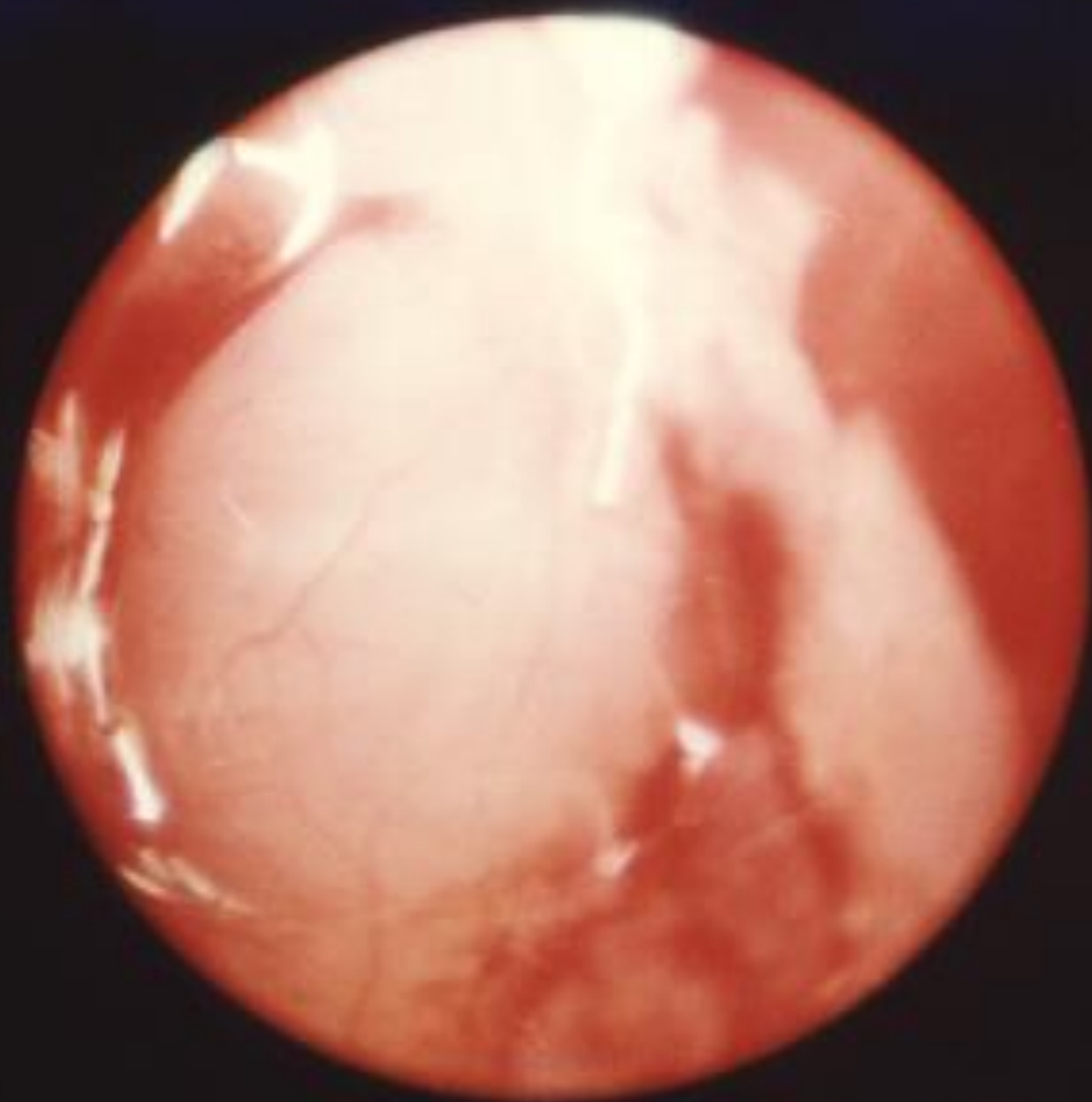
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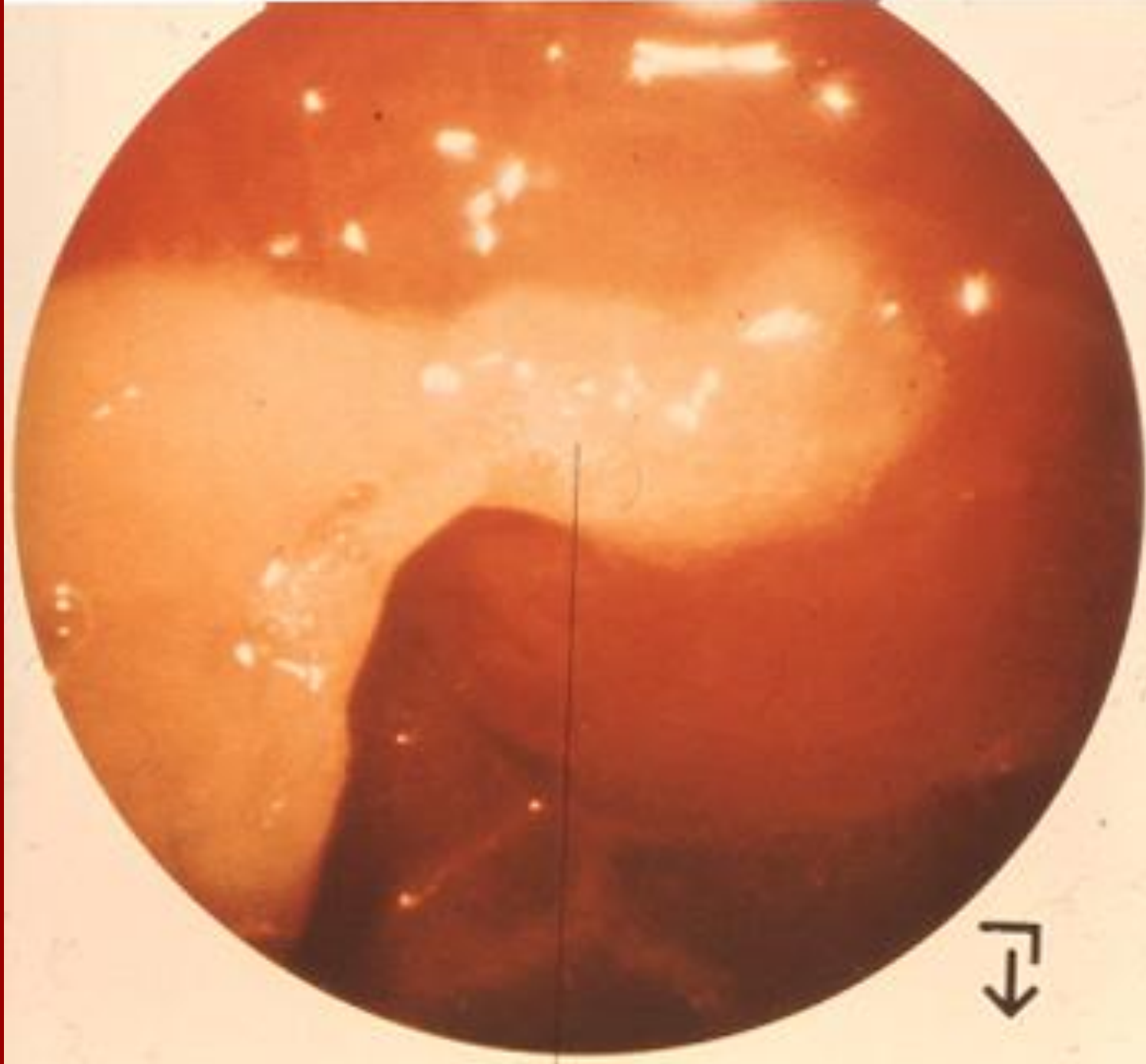
29



F 84 11 29



D 82 11 30





Differential diagnosis

- Acute Pulpitis
- Trigeminal Neuralgie
- Acute pulpitis, acute periodontitis
- TMJ disfunction

Therapy of acute Sinusitis

- Antibiotic (local – systematic)
- Nose drop, inhalation
- Physiotherapy – Local warming
- Sinus maxillaris rinsig

Chronic Sinusitis

Forms:

Purulent (uni- or bilateral)

Polipotic-serotic

Symptomes of chronic Sinusitis

- Weak symptoms
- Foreign body feeling in the region of maxillary sinus
- Runing nose, inhibited nasal breathing
- Headache
- Pharyngeal mucus flow
- Acute exacerbation

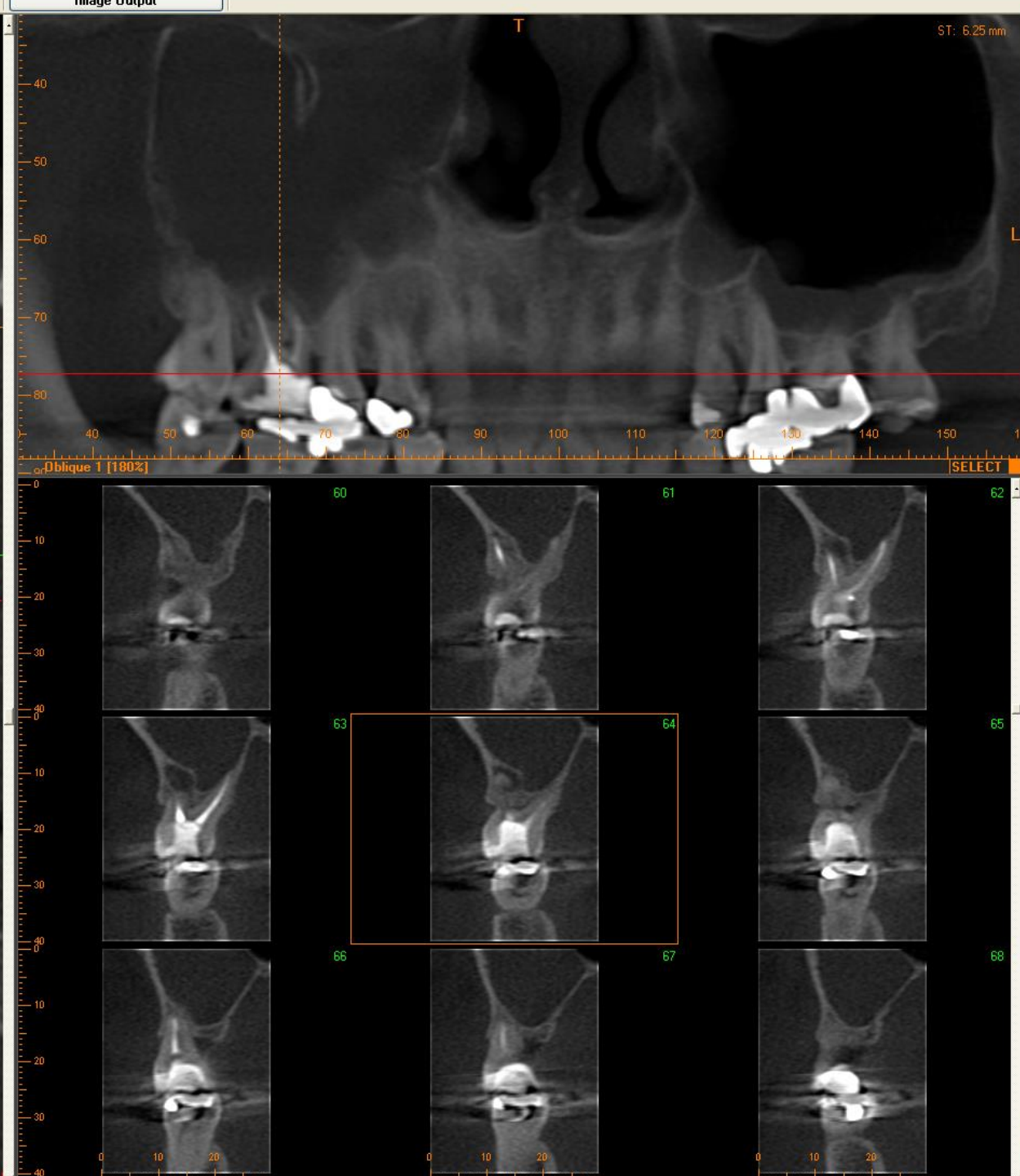
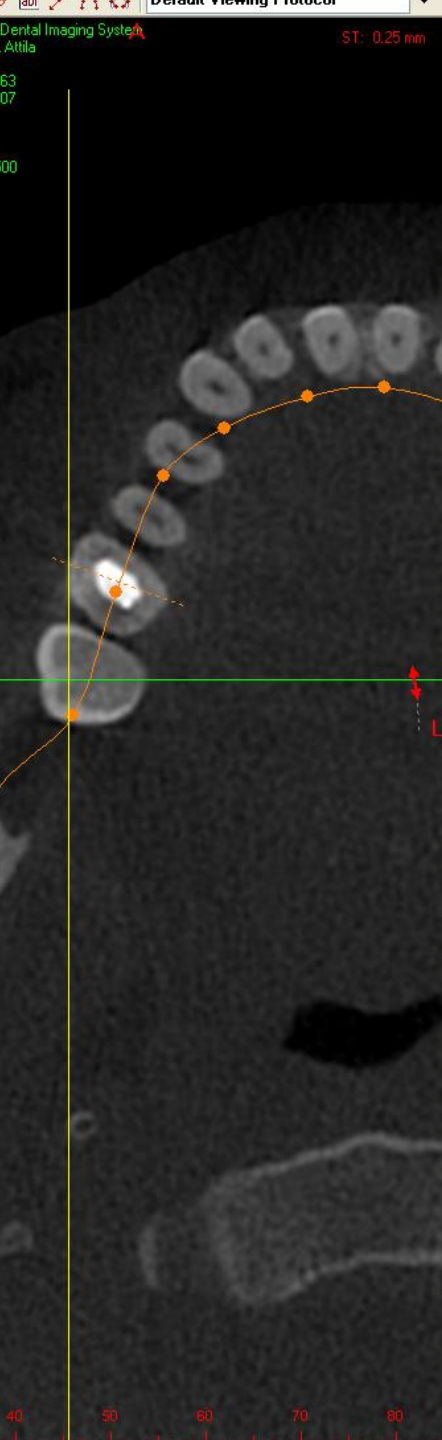
Therapy of chronic Sinusitis

- Conservative
- Surgical

Therapy of chronic Sinusitis

Without elimination of cause recidive is very often

- Conservative
 - Inhalation, local warm, nasal drops
 - Sinus rinsing
 - In case of Polypotic form local steroid (nasal spray)
- Surgical
 - FESS operation (**F**unctional **E**ndoscopic **S**inus **S**urgery
Extirpation of polyps through hiatus semilunaris)
 - Luc-Caldwell operation, oral surgery (dental origin)



Administrator A...

Log Off

Navigation

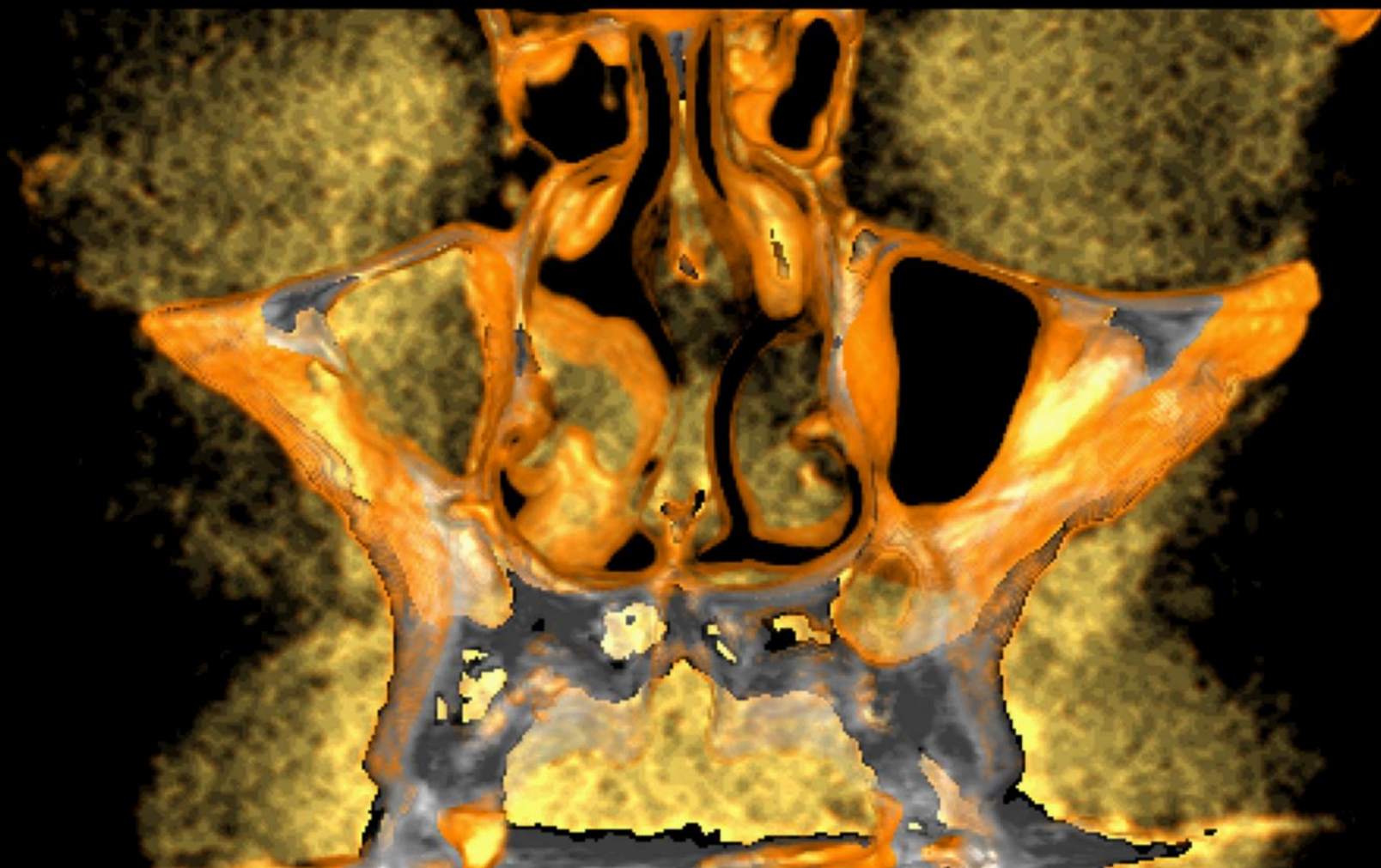
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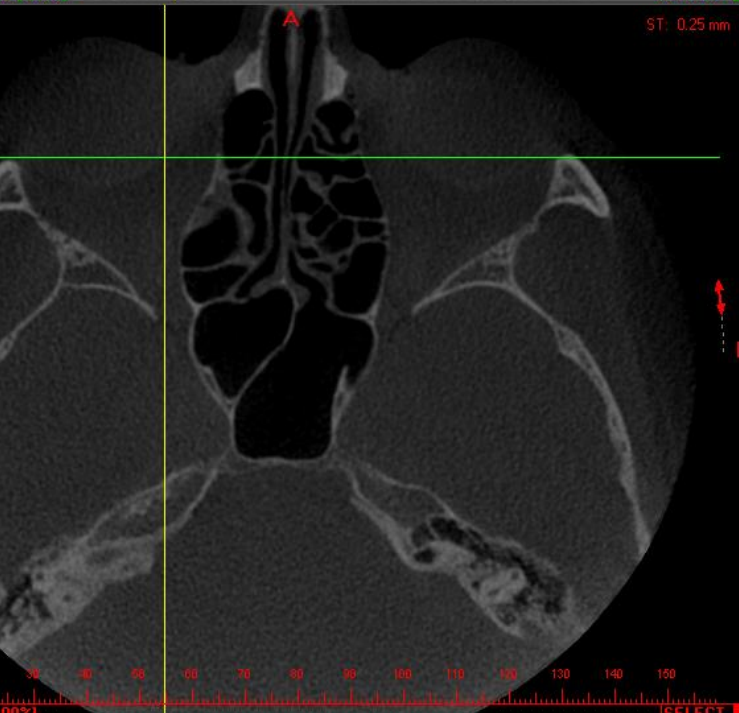
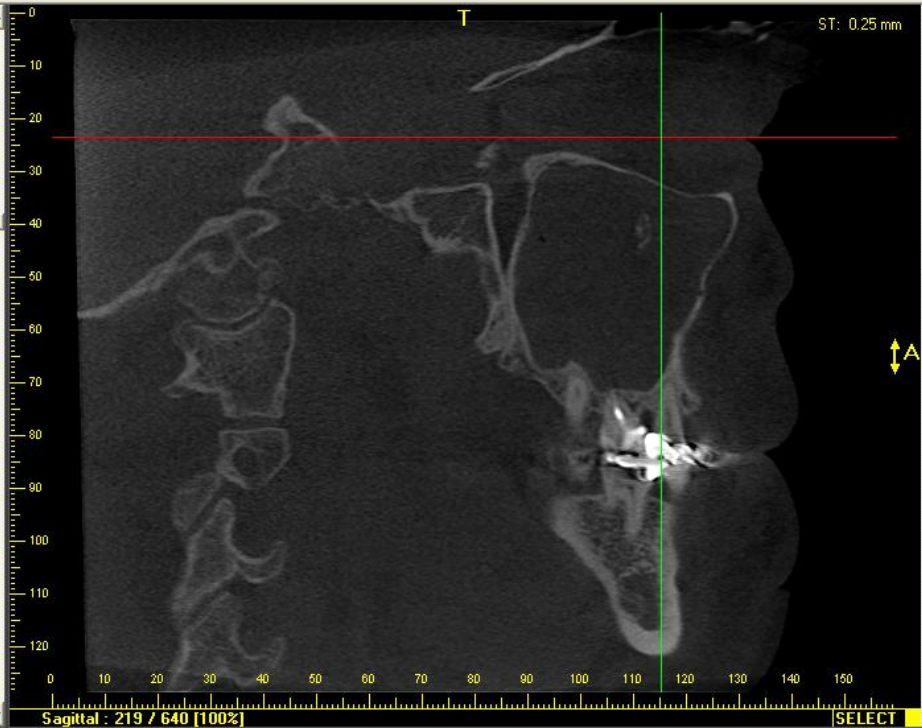
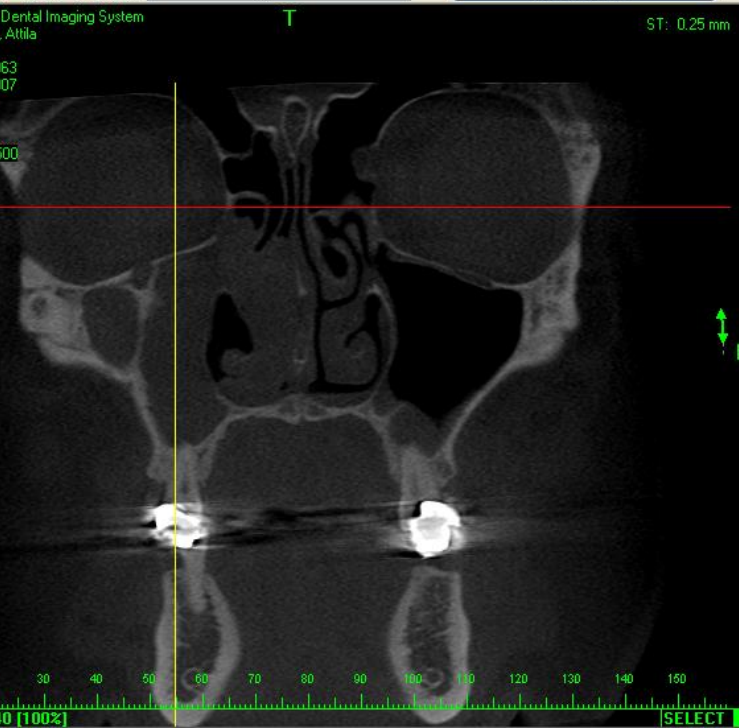
Study Data

Oblique 1

Selected Images

Selected Images





Administrator A...

Log Off

Navigation

MPR

Study Data

Oblique 1

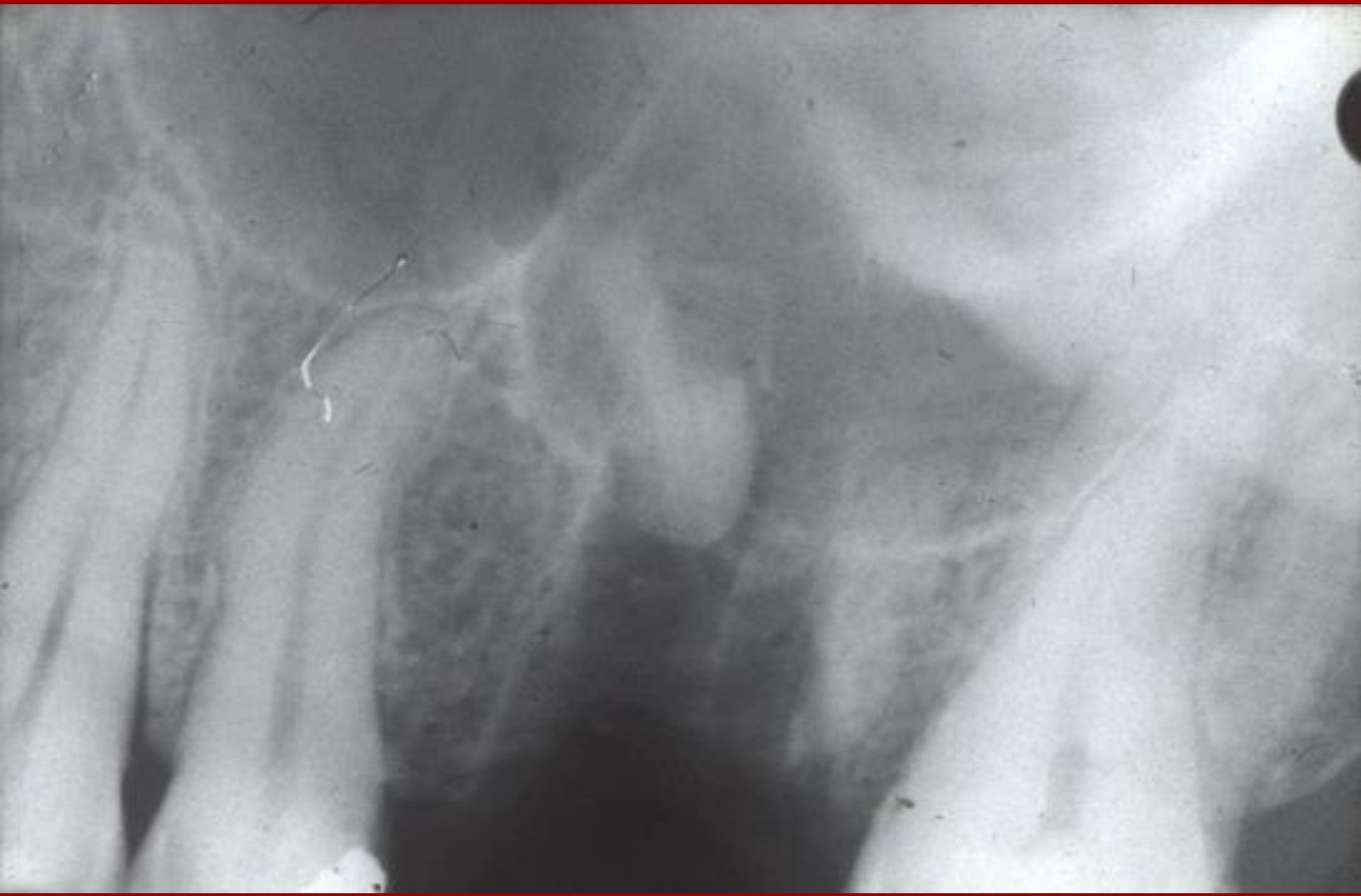
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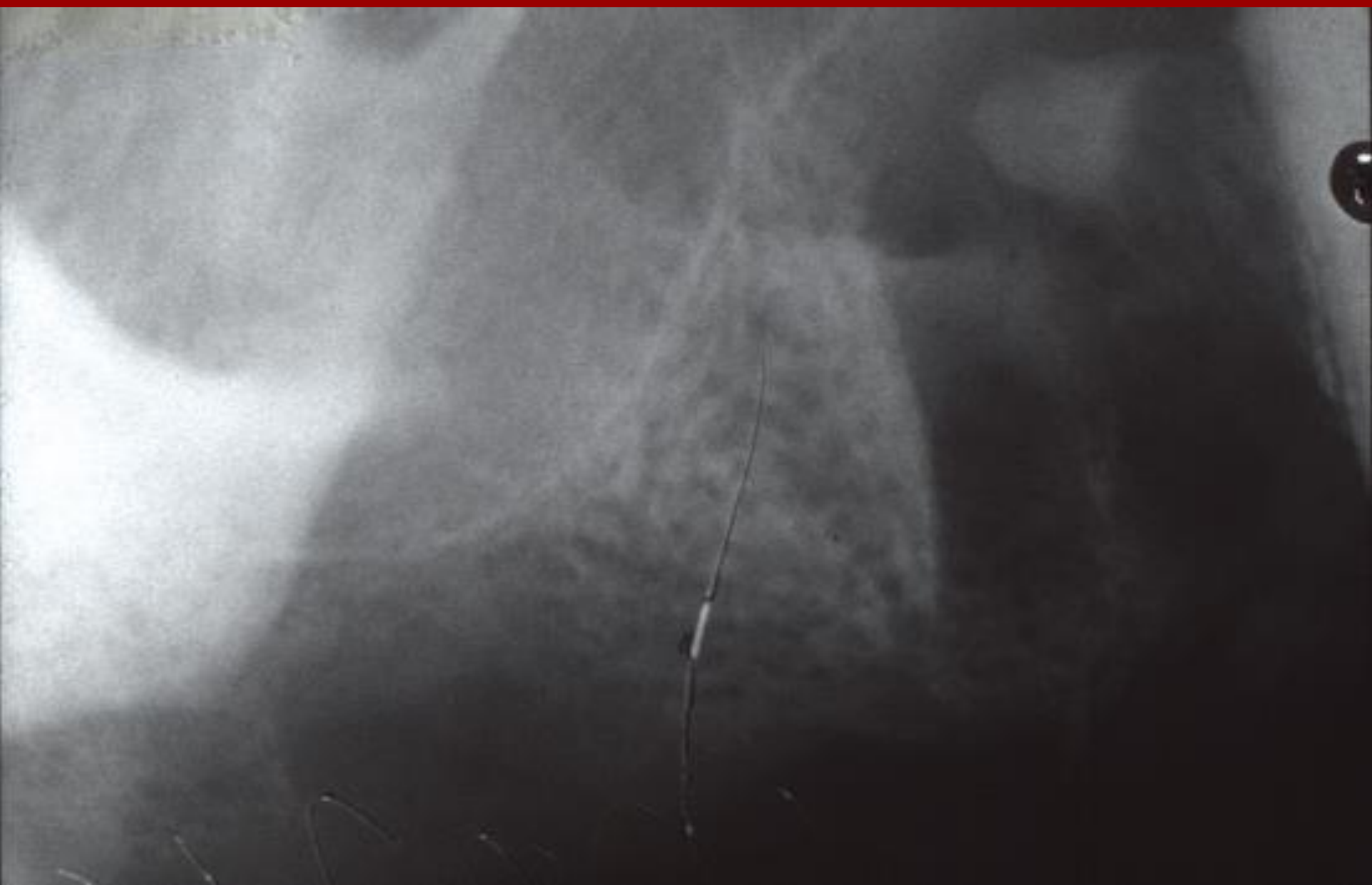
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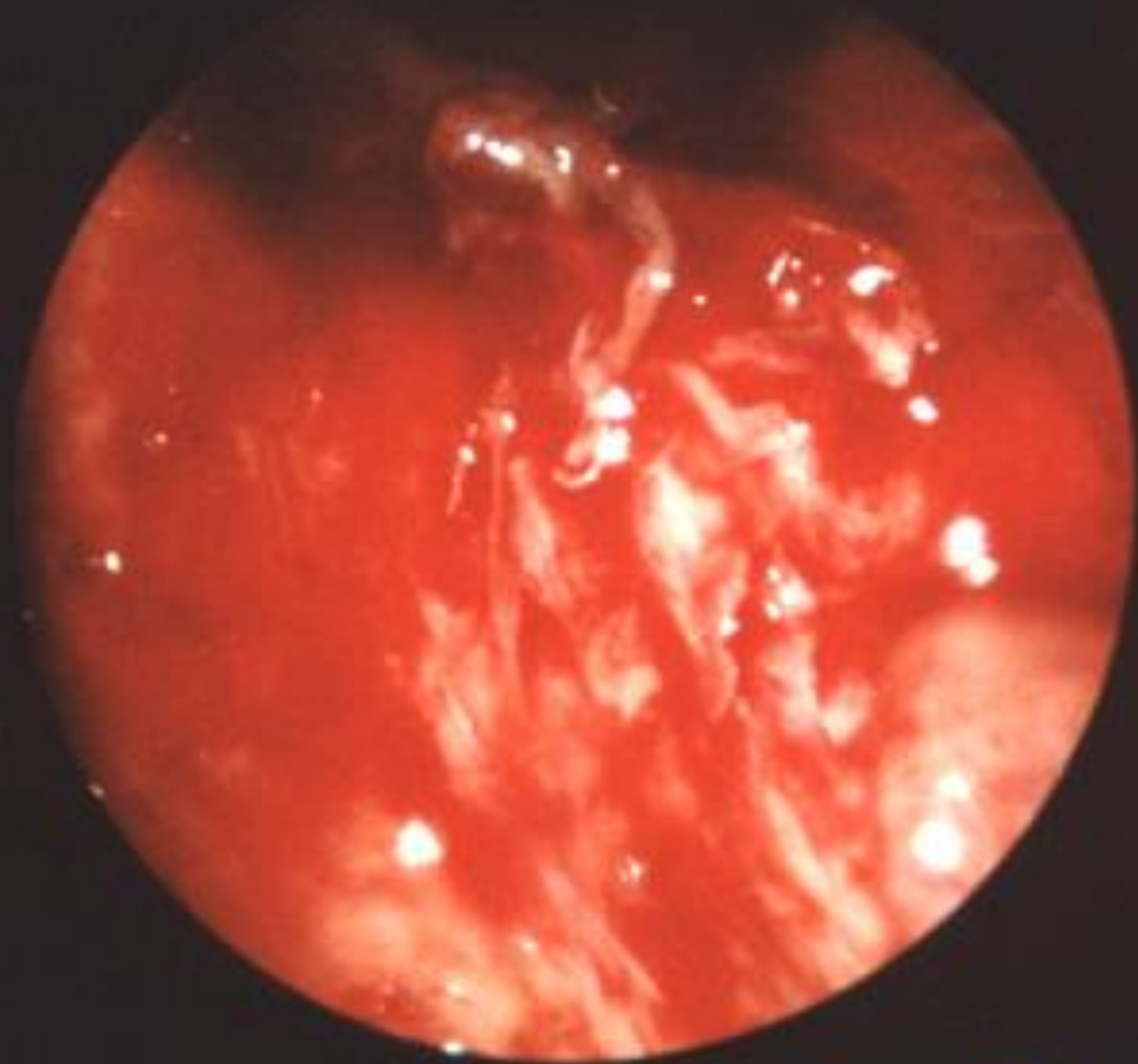
Foreign body in the maxillary
sinus

Radix in sinus maxillaris

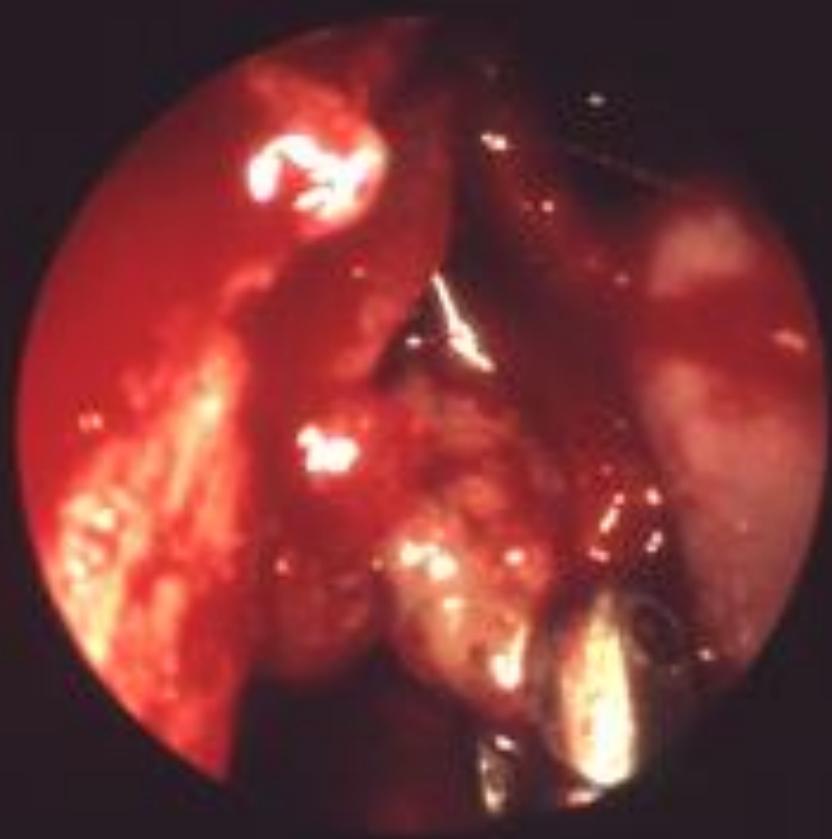
- Instruments: Depurator, Luca-, Kerpel-
- Water rinsing
- Sinuscopy







A 83 3 3



E 83 5 9



F 84 9 11



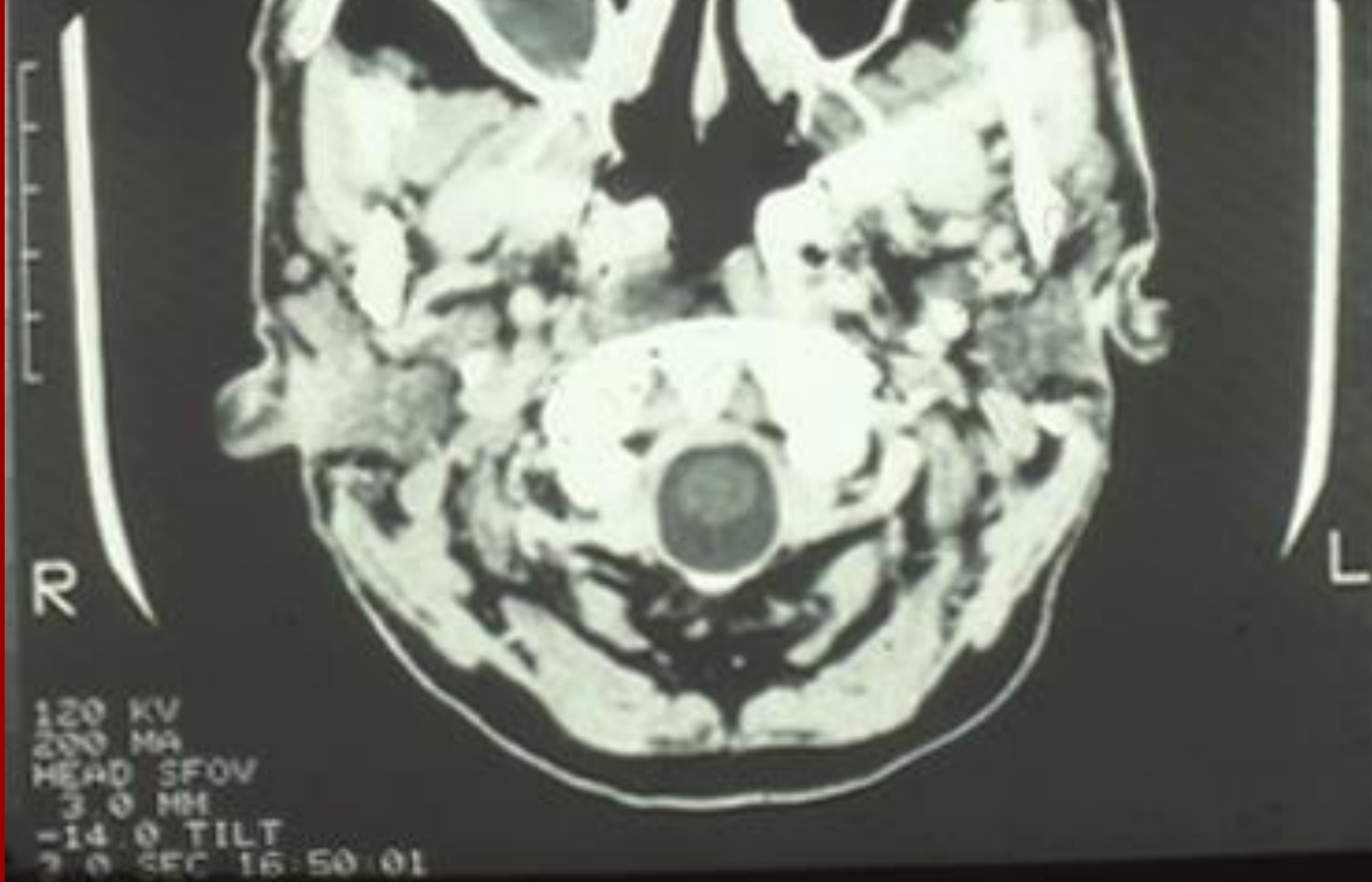
F 83 5 9

Cysts in the maxillary sinus

EXAM 8827
PRS 1
GB -4.5MM
IMAGE 41
+C

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7 SEP 93
512
95HR

DFOV 22.0
X .00
Y .00
STND/I



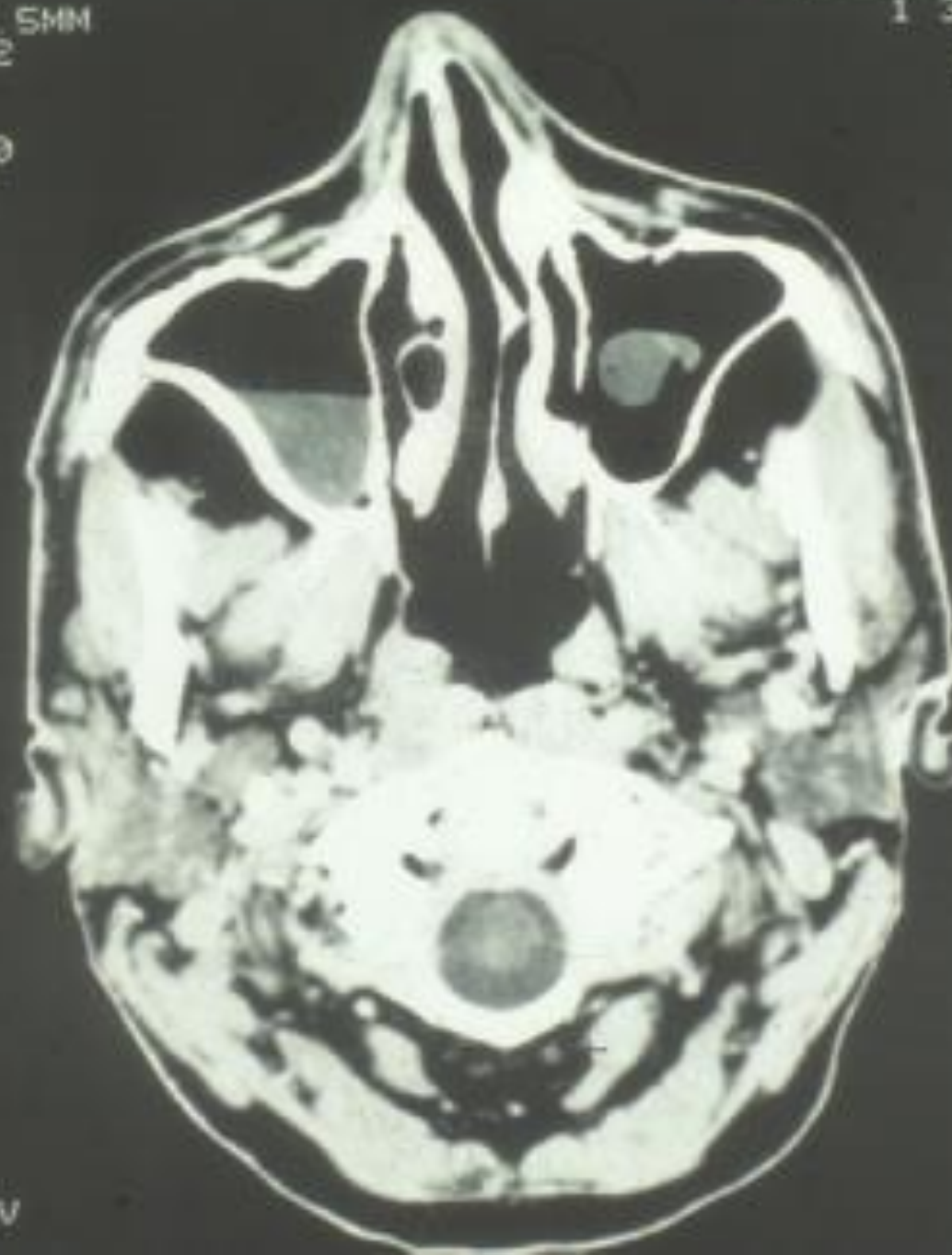
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PRS 1
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IMAGE 42
+C

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7 SEP 9
512
96HR



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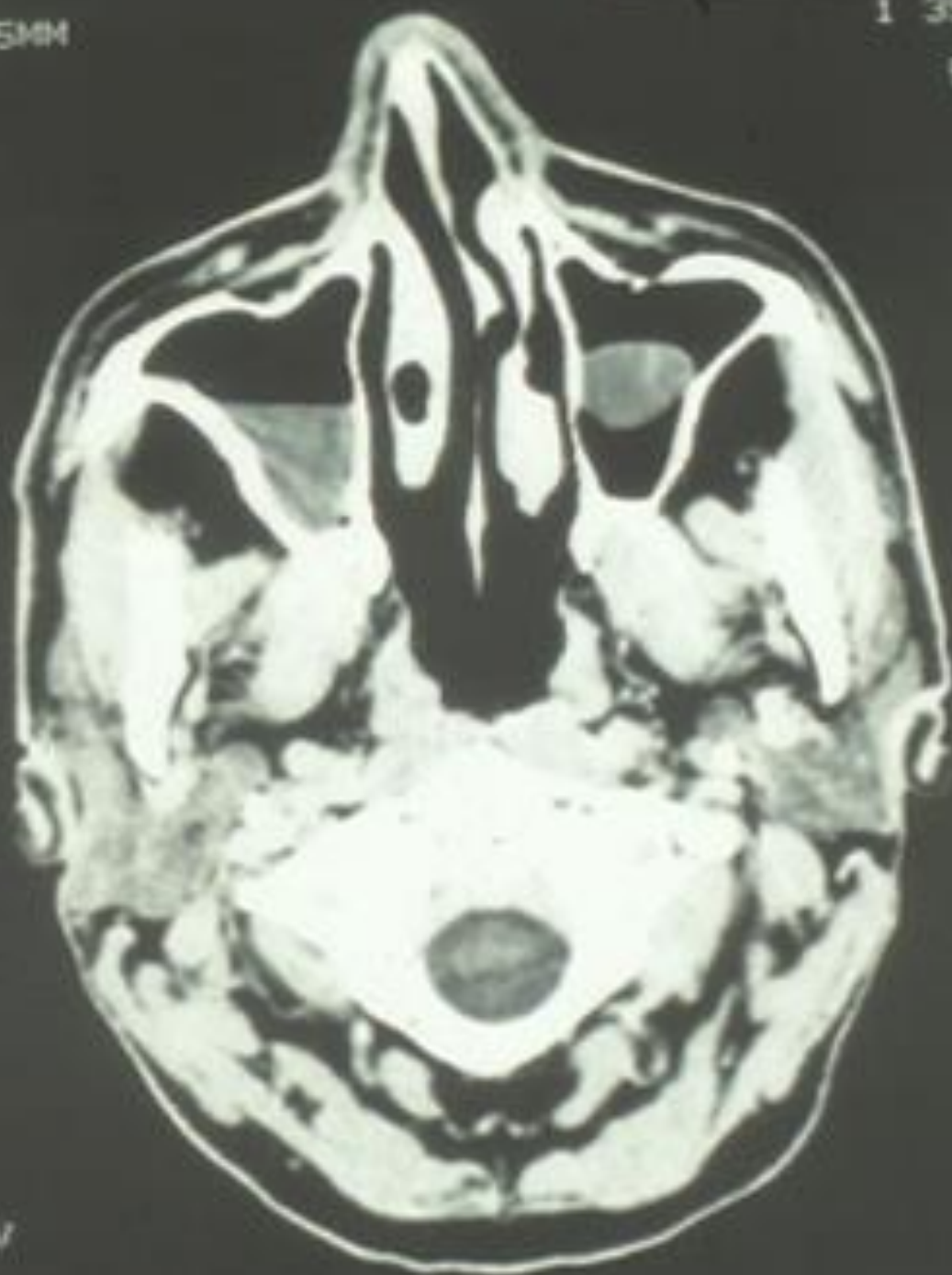
L

120 KV
200 MA
HEAD SFOV
3.0 MM

EXAM 8827
PRS 1
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IMAGE 43
+C

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Y .00
STND/I

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512
98HR



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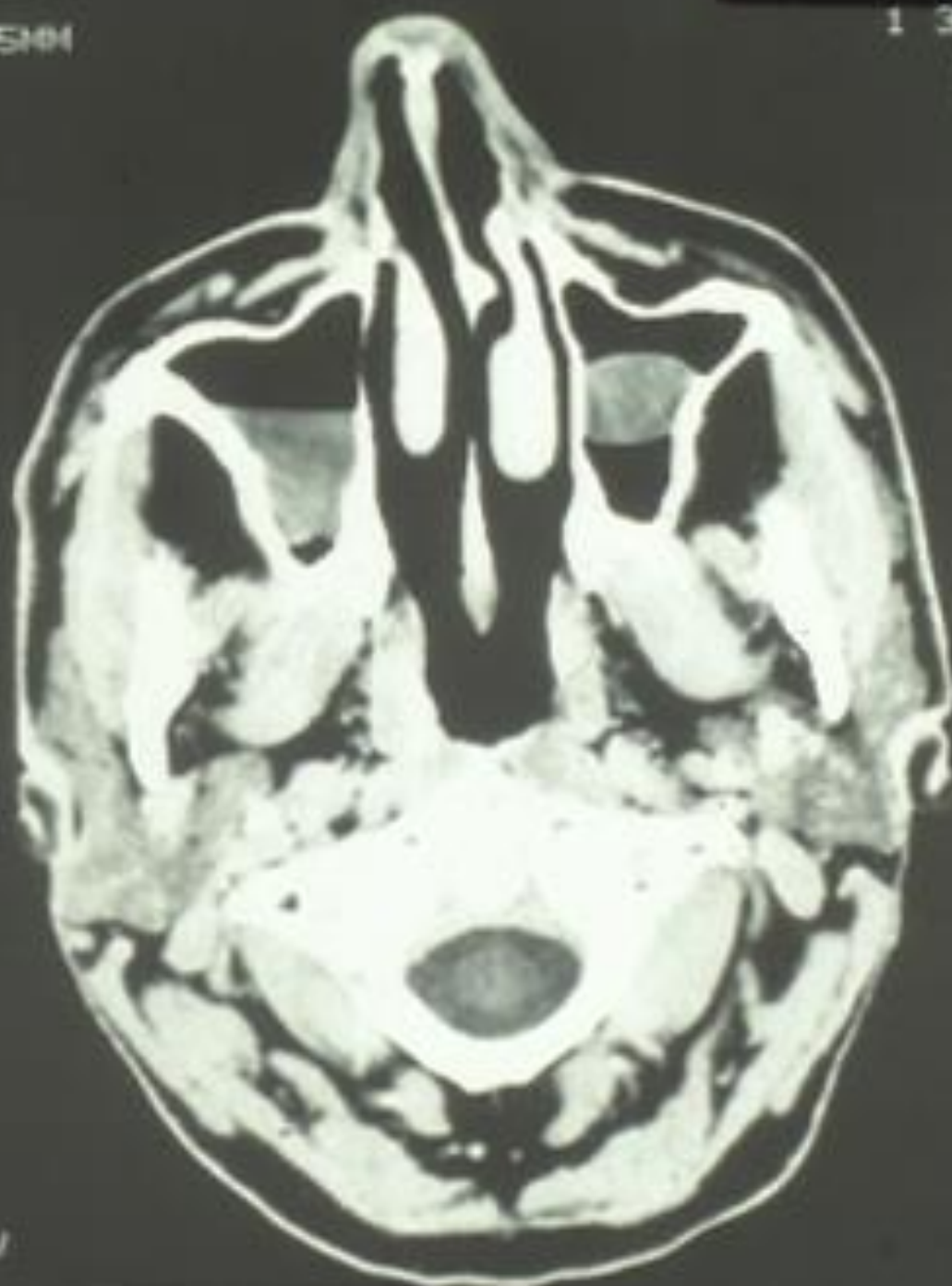
L

120 KV
200 MA
HEAD SFOV
3.0 MM

EXAM 882/
PRS 1
GB -13.5MM
IMAGE 44
+C

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X .00
Y .00
STND/I

1 391215
7 SEP 93
512
9SHR



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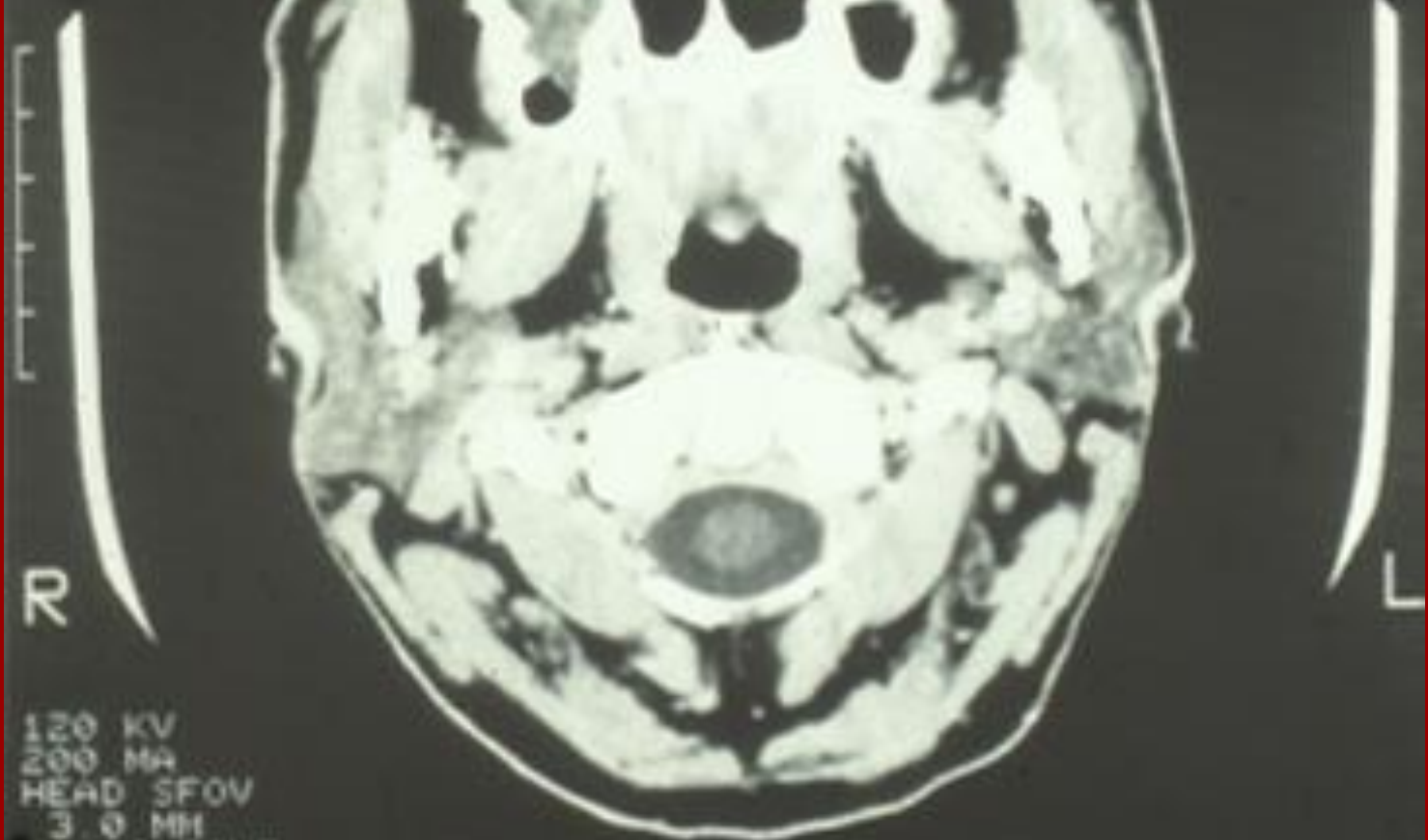
L

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200 MA
HEAD SFOV
3.0 MM

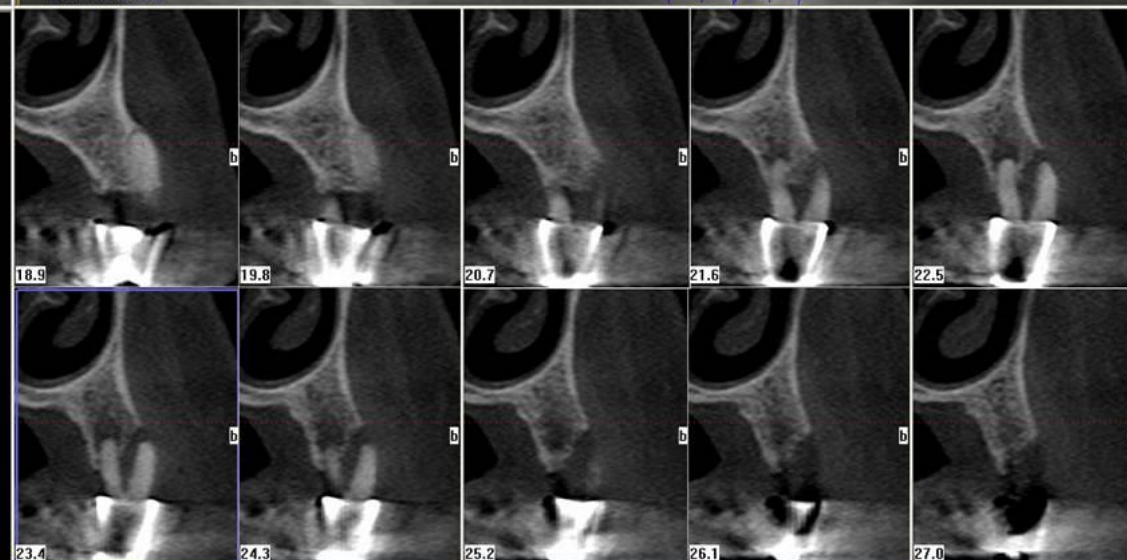
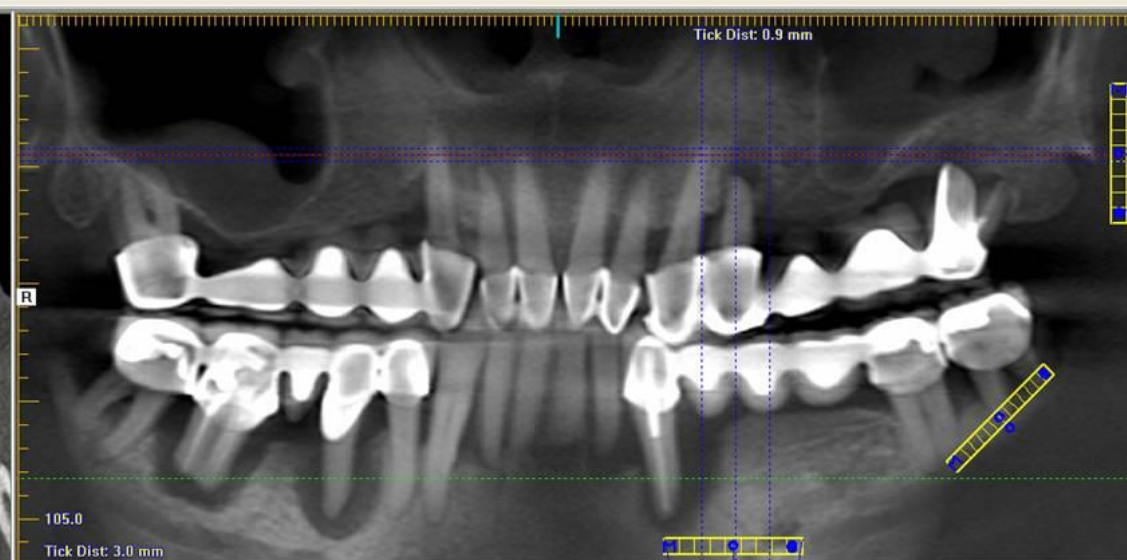
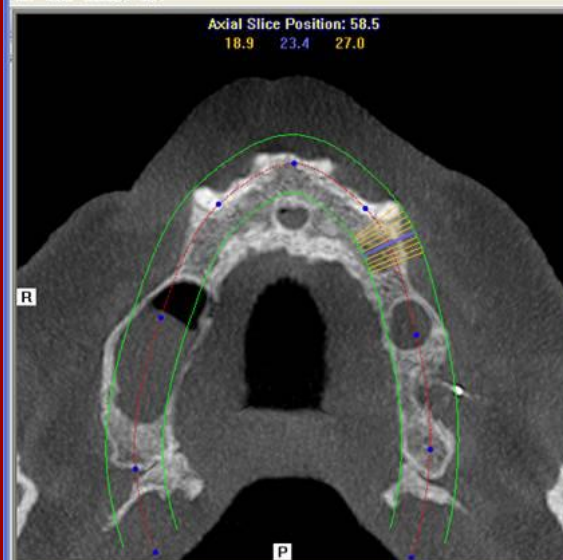
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GB -16.5MM
IMAGE 45
+C

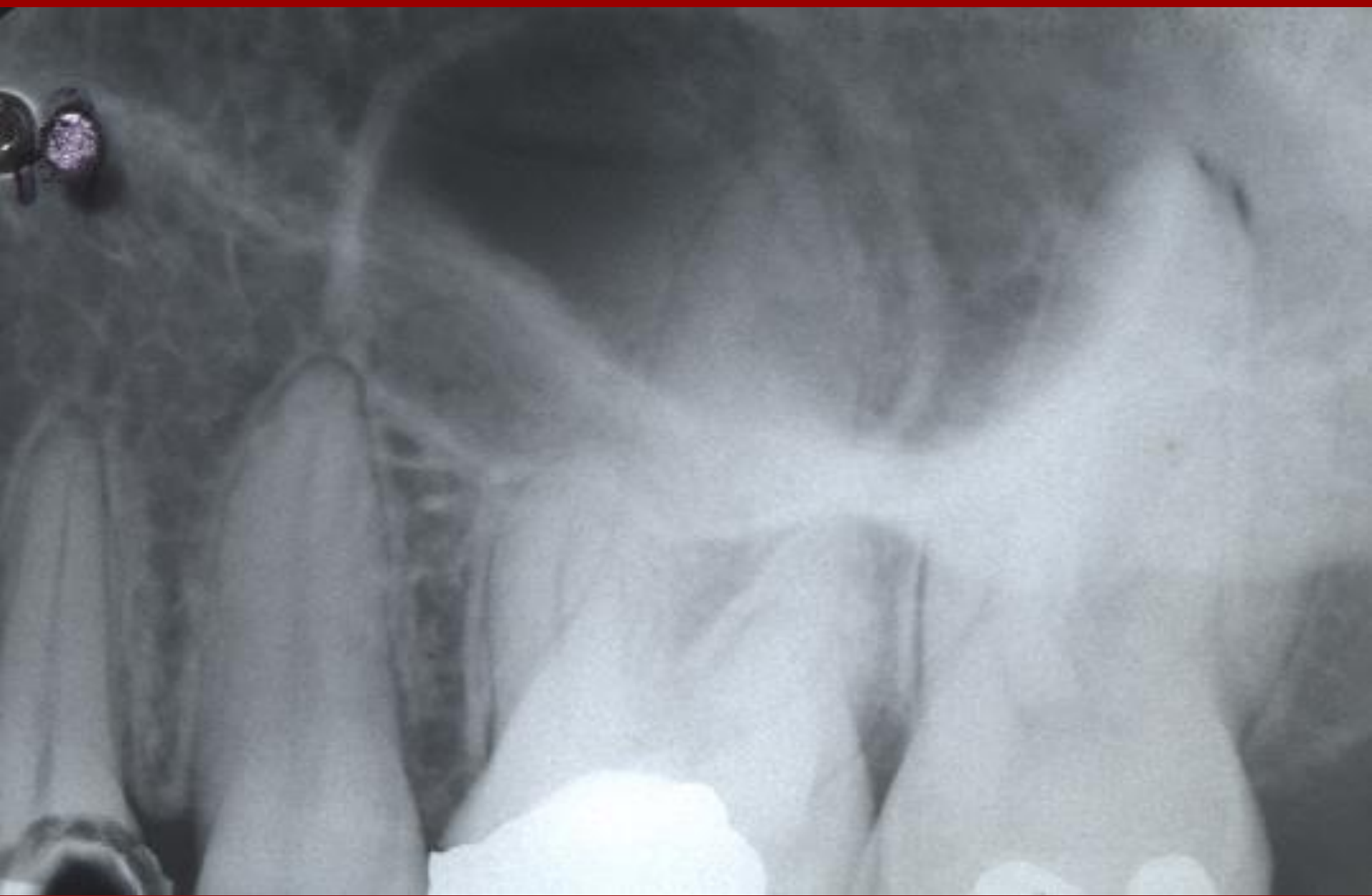
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X .00
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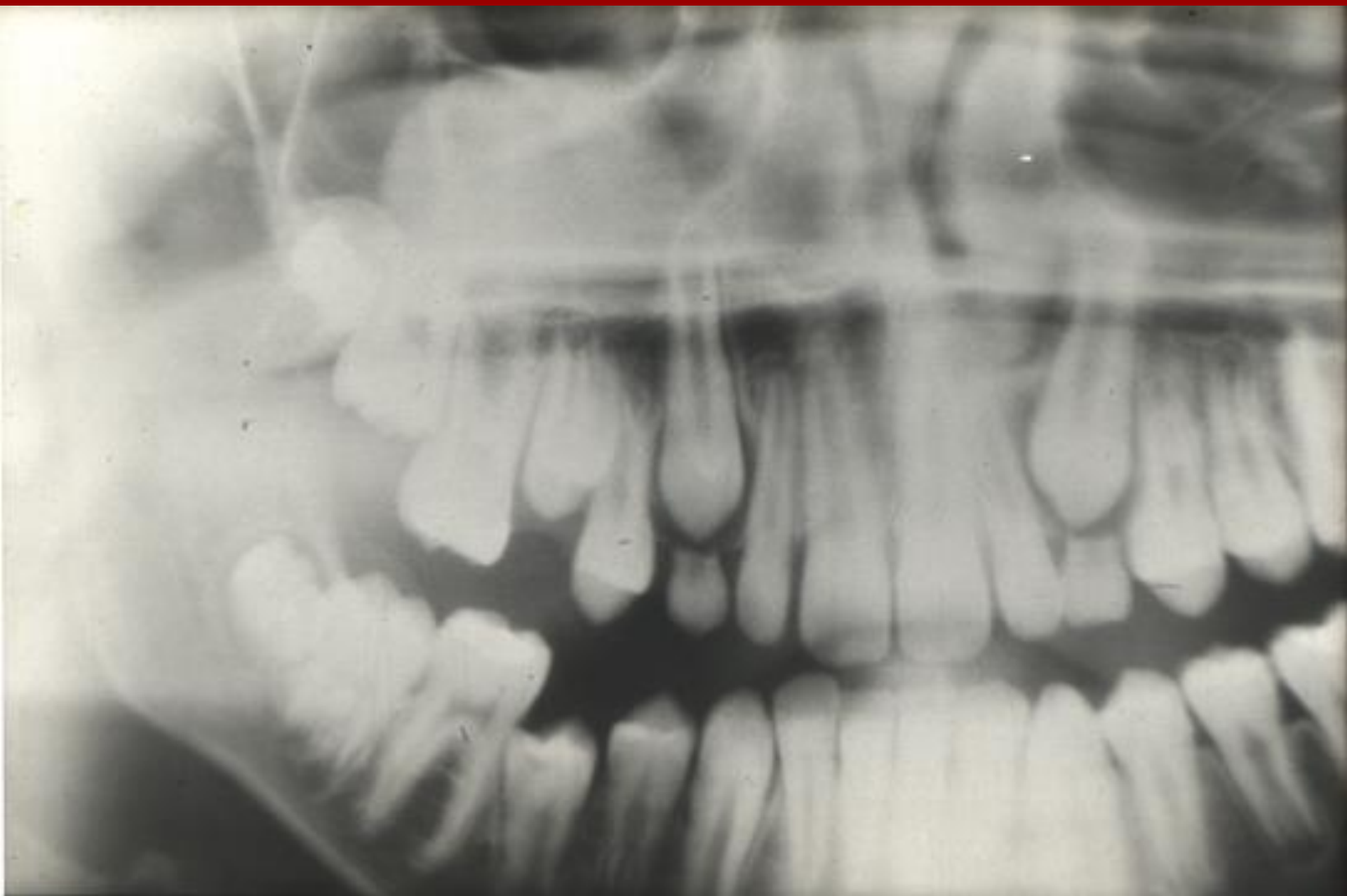
1 391215
7 SEP 93
512
98HR

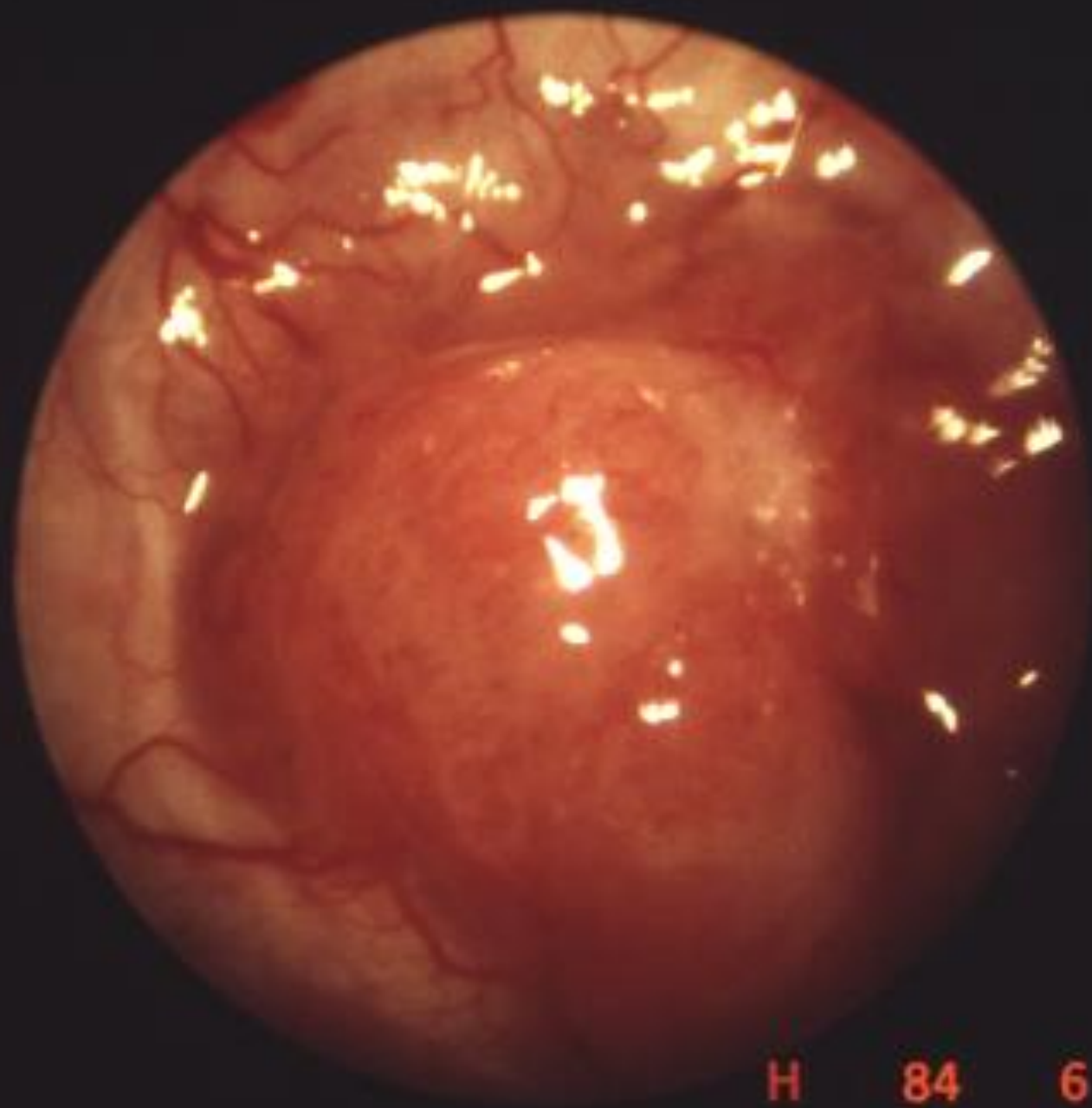


120 KV
200 MA
HEAD SFOV
3.0 MM
-14.0 TILT
7.0 SEC 16:51:27









H 84 6 26



G 84 6 26



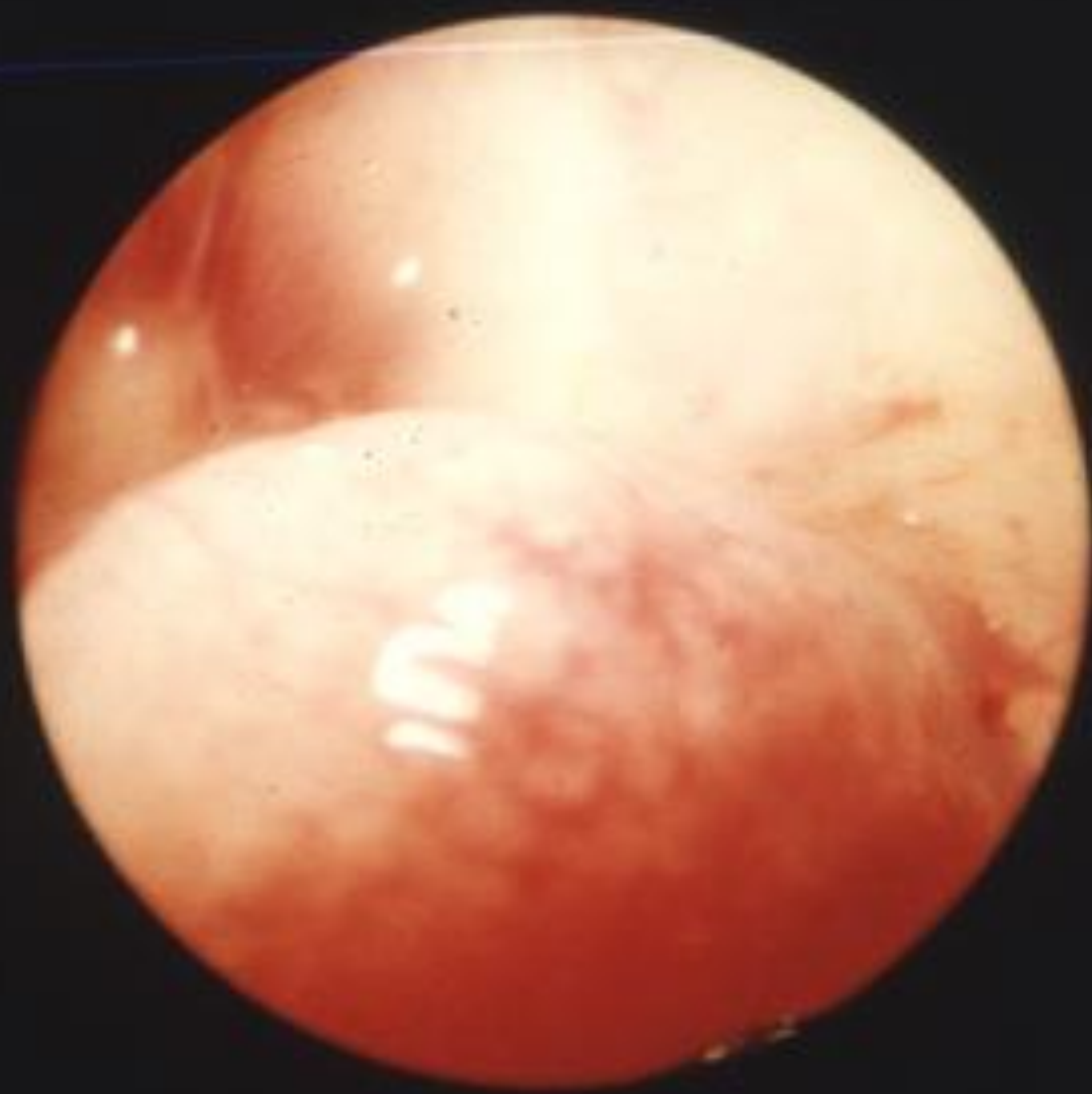
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Tumors in the maxillary sinus

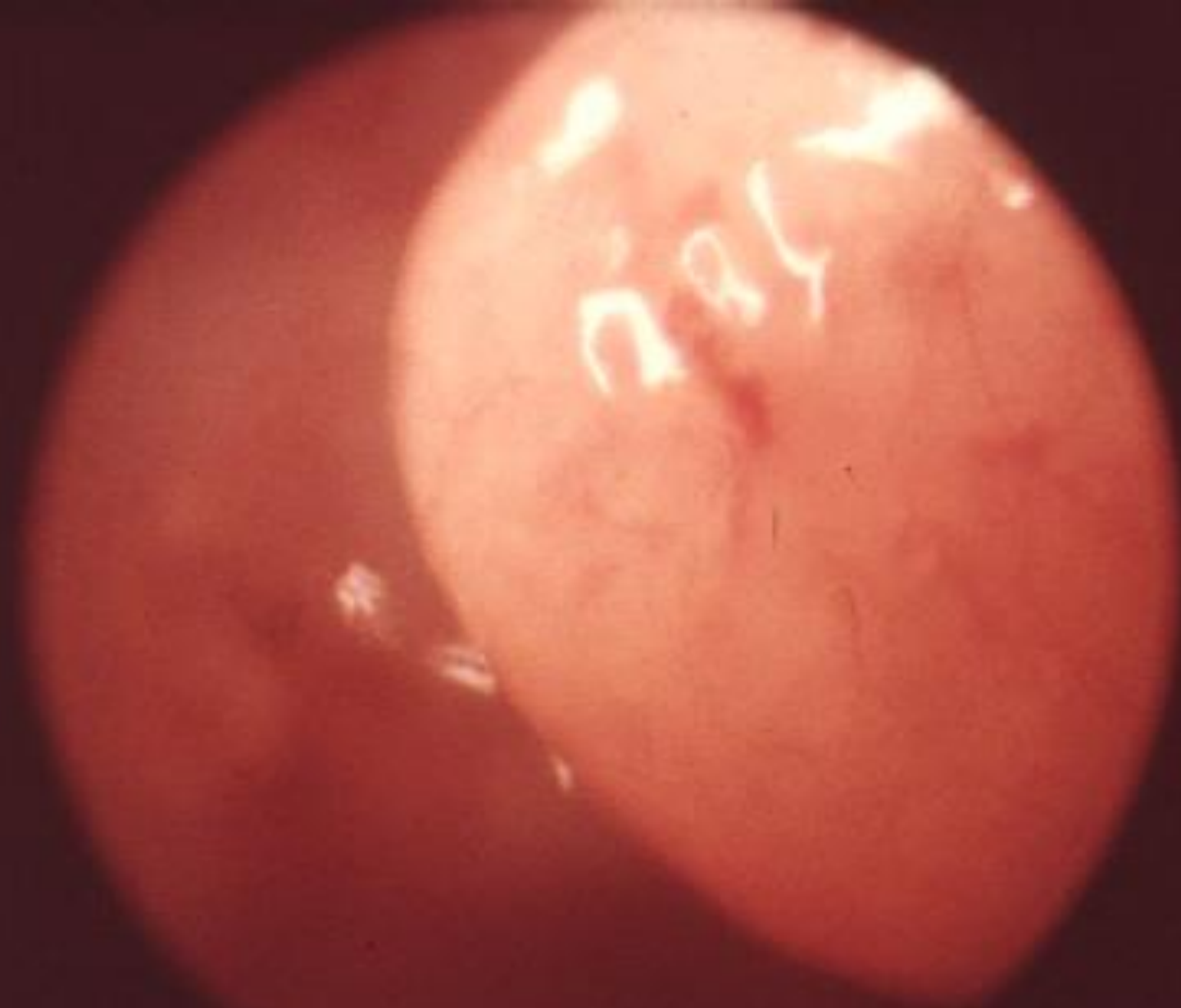
- Benign: (Polyp, Cyst, Mucocoele), Adenoma, osteoma, odontogenic origin
- Malignant: Adenocarcinoma, Sarcoma, epithelial carcinoma (squamous)

Symptoms

- No symptoms for long time
 - Swelling, asymmetry, occlusional problems
 - Uncertain tooth pain
 - Nose bleeding, smelly nasal flow, tear flow disorder
 - Inhibited nasal breathing
 - Ulceration on the mucosa of upper jaw
-
- Diagnosis: endoscopy, imaging methods, histology



E 83 2 22



D

86

5

27



0 84 11 16



Injuries

- Open-, closed fractures
- Midface fractures
- Fracture of lower wall of orbita (Blow out)
- Bone injury→mucosa injury→haemosinus
- Foreign bodies
- Iatrogen injuries

Fracture of tuber maxillae - complication of tooth extraction

Therapy:

- stop of extraction and application of splint
- complete the extraction with
 - 1) the elimination of broken tuber or
 - 2) reconstruction of the broken tuber (osteosynthaesis)





