Introduction to Practical Oral Surgery 2026

DENT5310

Dr Richard Hague

A little about me…

- **I am a General Dentist with an interest and significant experience in Oral Surgery.**

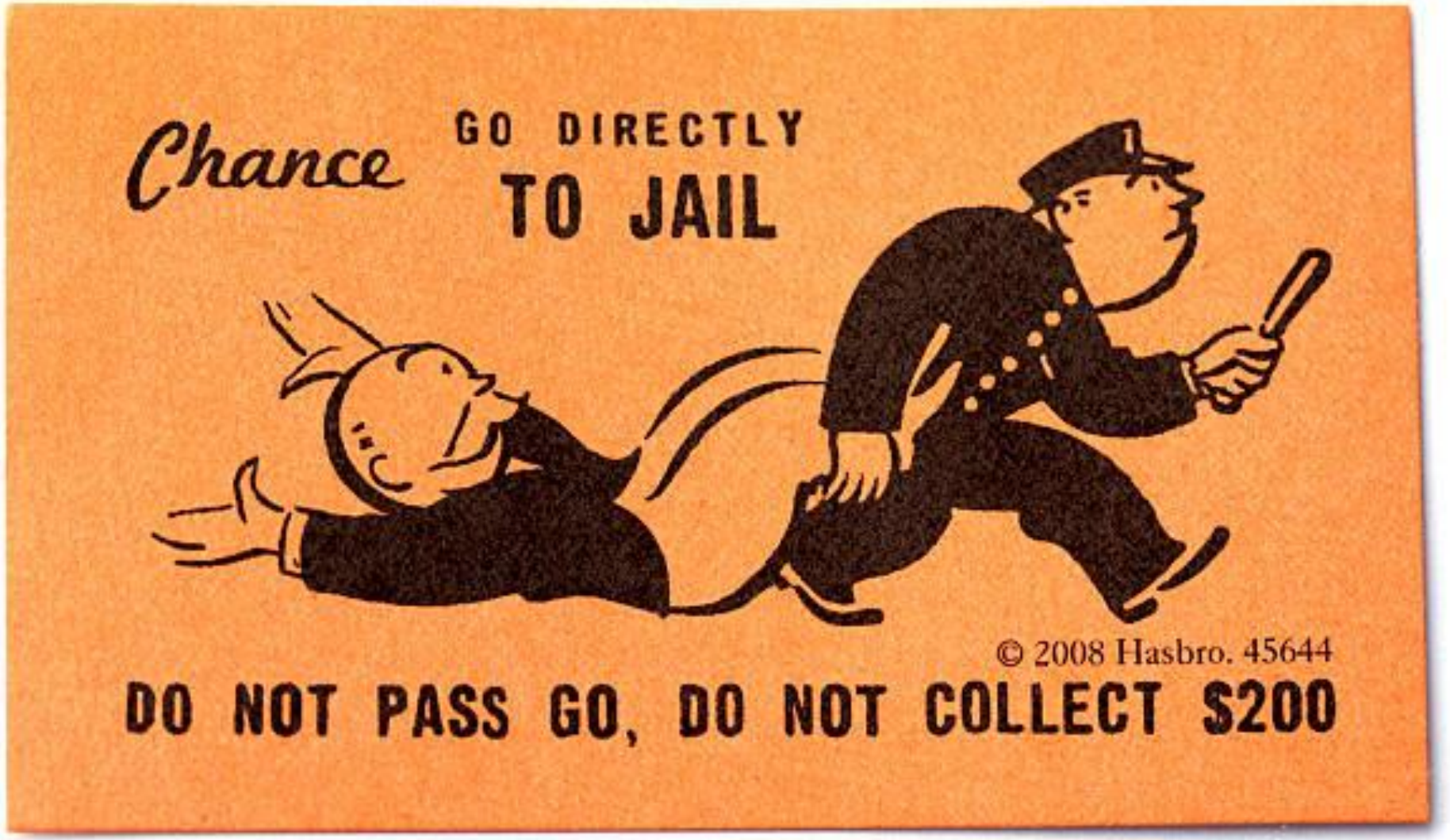
- Working day is Tuesday
- Covering the Oral Surgery Module on behalf of Dr Helen Grady

- Principal Dentist at All Saints Dental Group in Rockingham
- Private GA surgery at Southbank Day Surgery

Session Outcomes

- Appropriately refer a patient to the student extraction clinic
- Be aware of factors that complicate extractions
- Understand local anaesthetic techniques and doses as they apply to oral surgery
- Describe the instruments required for simple exodontia
- Understand the principles of mechanics for simple exodontia
- Demonstrate the safe use of luxators and forceps
- Demonstrate the safe use of sutures

Getting a patient to Clinic 5 – Extraction (Exo) Clinic



https://www.istockphoto.com/photo/go-directly-to-jail-chance-card-gm458656625-20373905?searchscope=image%2Cfilm

Extraction Clinic

All patients need to meet the criteria below to have the extraction done by DMD students:

- No impacted teeth
- Do NOT book for extraction of > 3 teeth at any one time*.
- No patients requiring sedation
- No patients requiring AB cover
- No patients who have had previous RadioTherapy (RT) to the head and neck
- No patients on anti-resorptive agents (e.g. Bisphosphonates or Prolia)
- No patients on immunosuppressants (e.g. Azathioprine or Methotrexate)
- Patients on warfarin must have their INR checked within 24 hours prior to the extraction. Patient to bring their INR results to the appointment.
- No patients on DUAL anti-platelets (e.g. Aspirin and Clopidogrel) or DUAL anti-coagulants (e.g Aspirin and Rivaroxiban)
  It is OK to book patients on a single anti-platelet or a new oral anti-coagulant (Aspirin OR on NOAC).

Extractions and Prosthodontics

- If bridge sectioning is required before extraction(s), please ensure you have done this prior to the patient attending exo clinic.
- Each chair in Exo clinic can accommodate two patients per session, with each appointment being **1hr 45mins.**
- Immediate complete and partial dentures can be inserted in Exo clinic, but the review appts will be organized by usual student clinician in CC session.
- **Patients must be warned that if the prosthesis fails to fit there is little that can be done in the exo clinic.**

What to do if they don't meet criteria?

1. Speak to the tutor covering the clinic on the proposed appointment. E.g Multiple teeth.

2. Refer to E Block
   I. "Add a new waitlist entry"
   II. "Oral Surgery"
   III. "Referral to Specialist"
   IV. Add relevant clinic information.

3. If urgent, add the referral on Titanium and then the student clinician is to come IN PERSON to E Block with the patient details and reason for urgency.
   I. If the referral is not found on Titanium, this will be immediately rejected.

Assessing complexity

Is this suitable for DMD extraction?

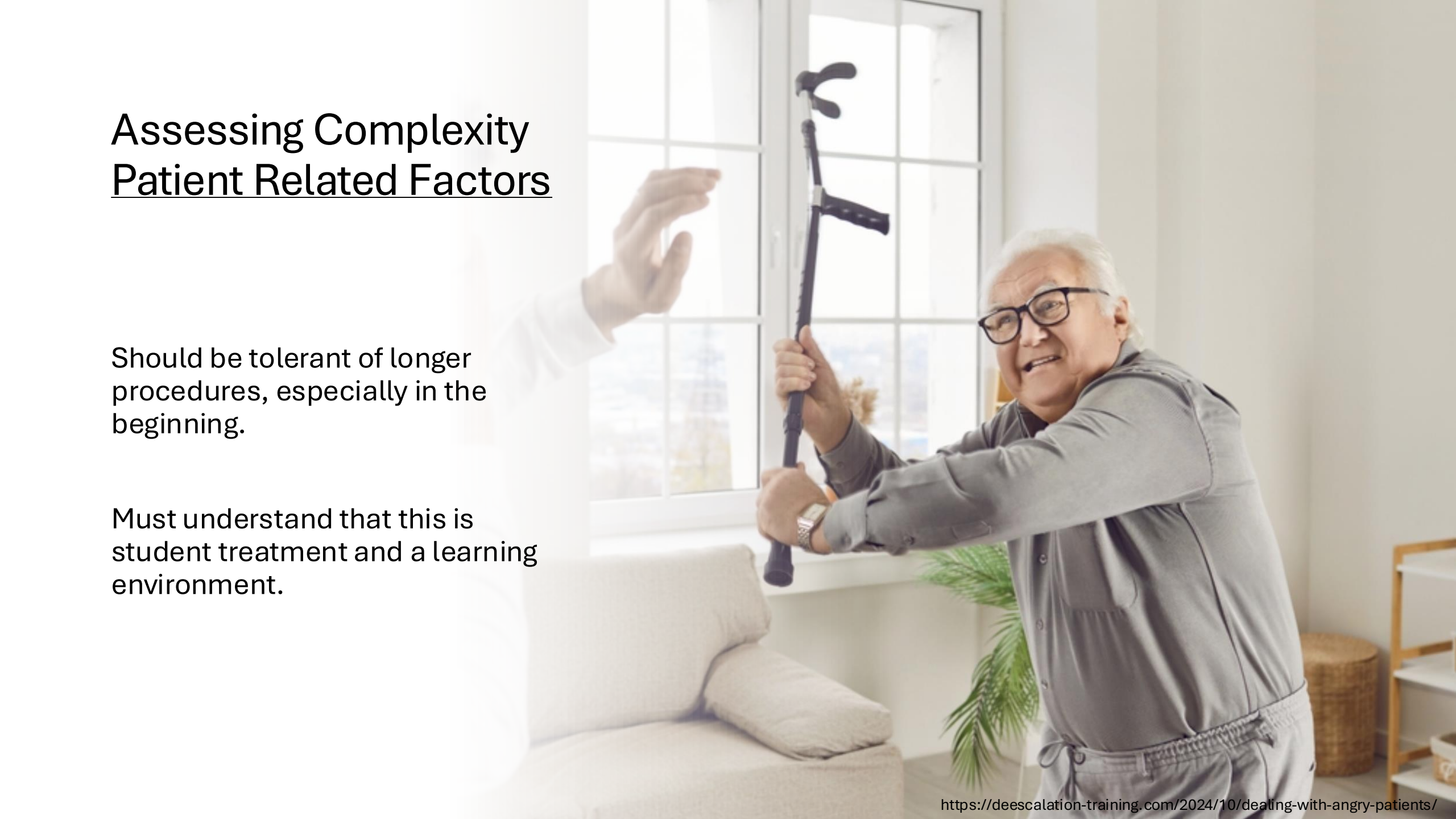
Assessing Complexity
Patient Related Factors

Should be able to be positioned in the dental chair according to operator needs.

Assessing Complexity
Patient Related Factors

Should be tolerant of longer procedures, especially in the beginning.

Must understand that this is student treatment and a learning environment.



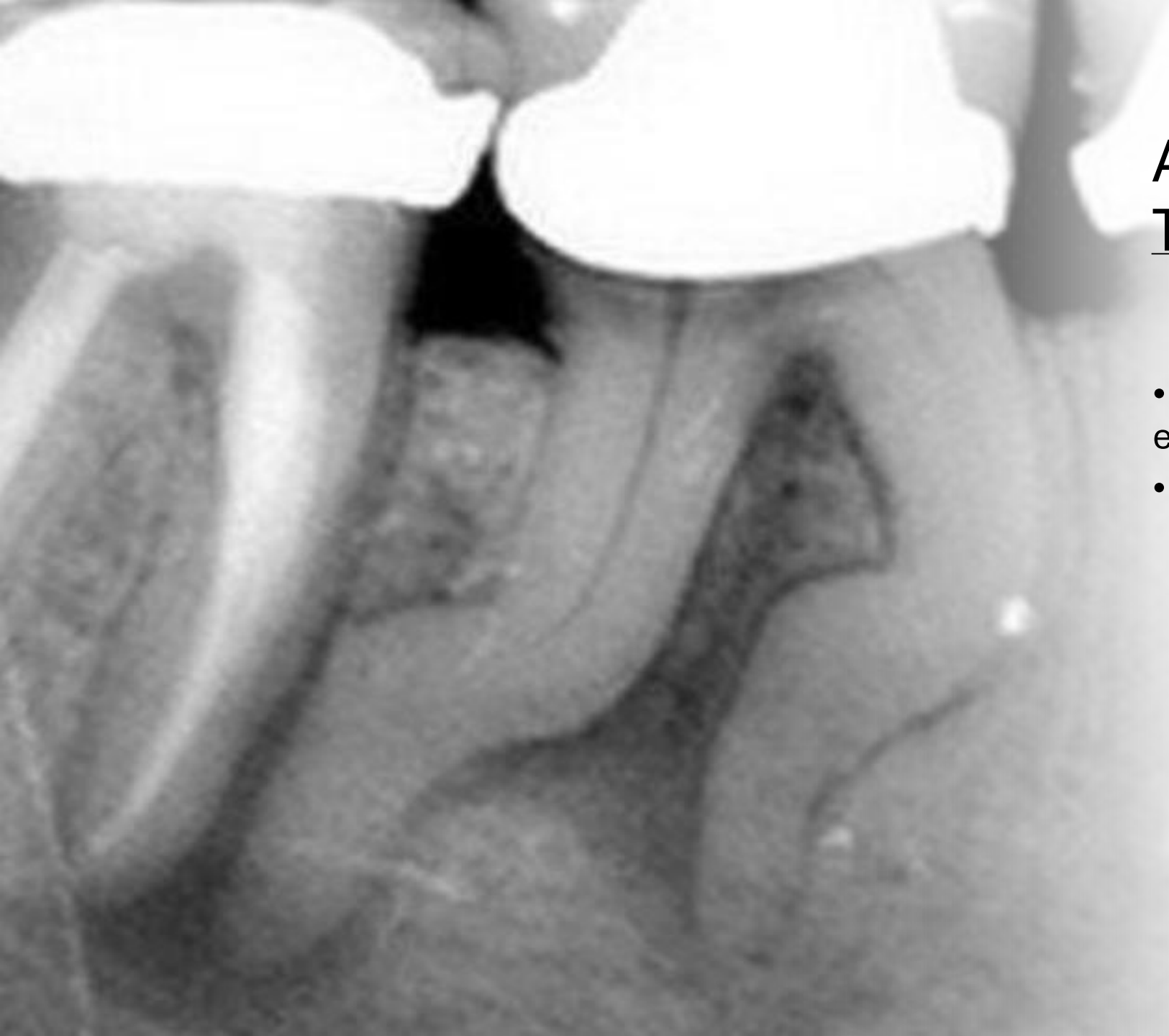
https://deescalation-training.com/2024/10/dealing-with-angry-patients/

Assessing Complexity
Patient Related Factors

Should be able to tolerate dental treatment with sights, sounds and stimulation.

Ideally should be able to undergo dental treatment without making loud noises/distractions to the operator.

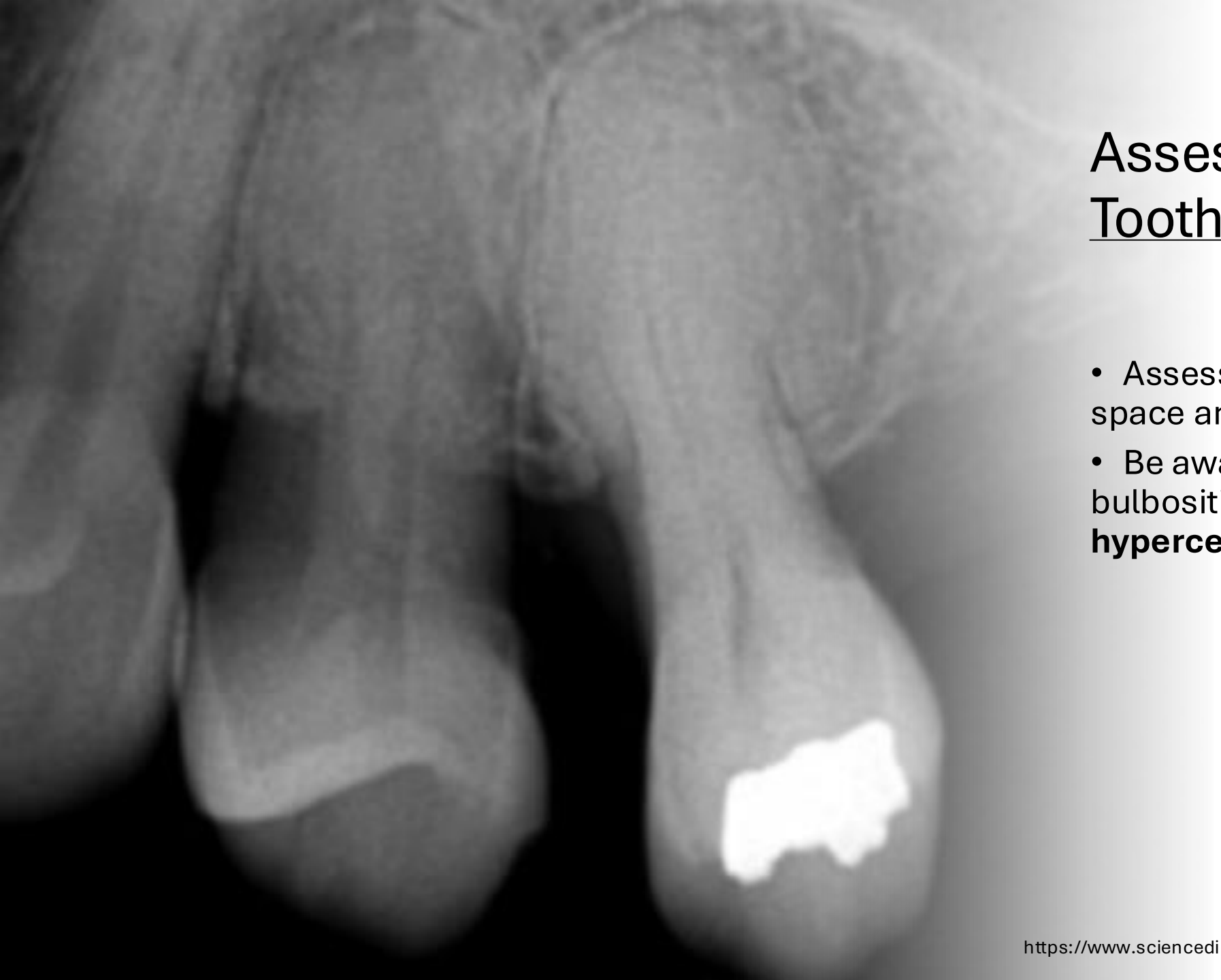
https://weybridge-dental-care.co.uk/wp-content/uploads/2025/08/2148396189.webp



Assessing Complexity
Tooth Related Factors

- Assess for **dilacerations**, or evidence of dilacerations.
- Some curvature is ok

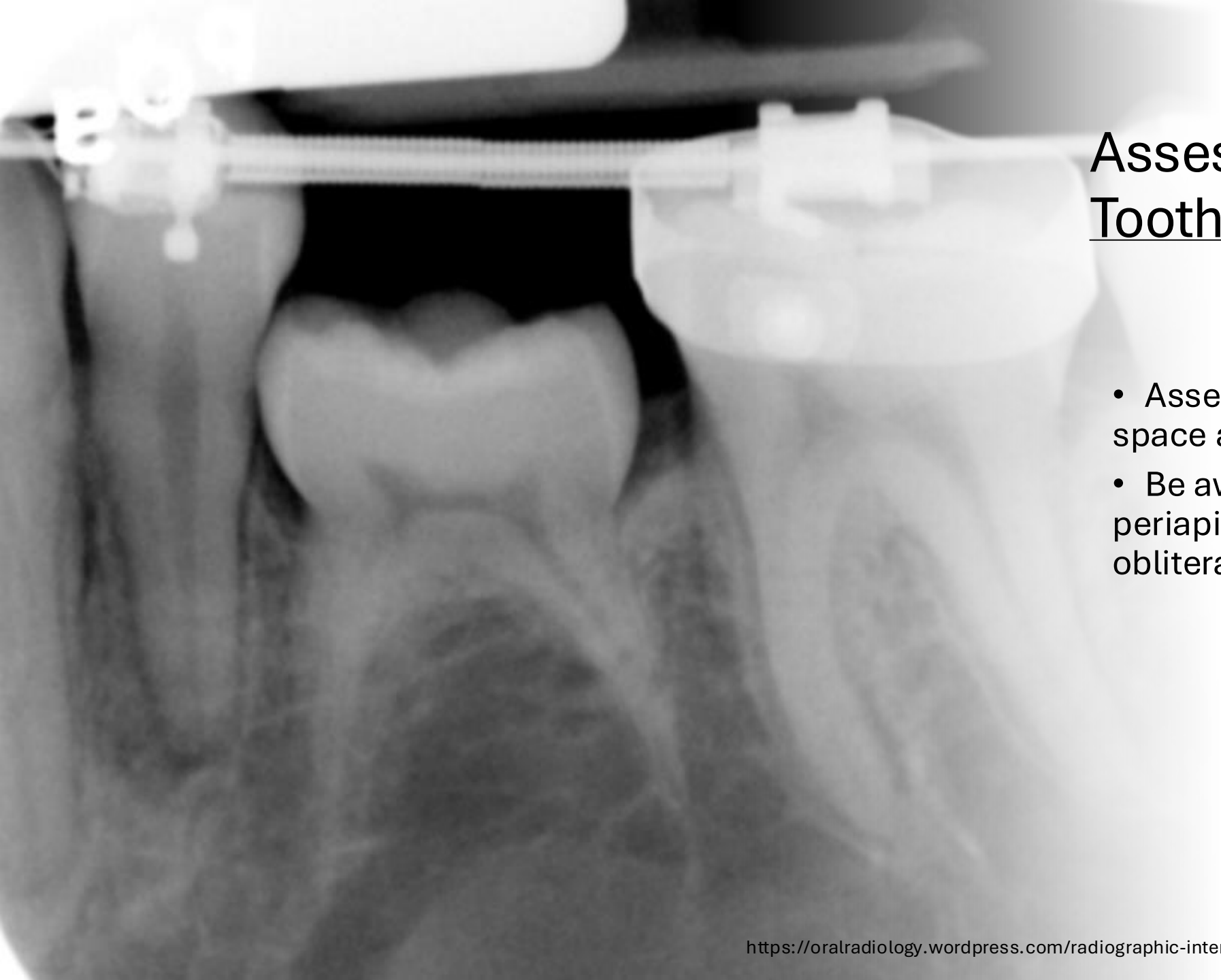
https://thefuturedentistry.com/dilaceration/



Assessing Complexity
Tooth Related Factors

- Assess the apical ligament space and trace it out.
- Be aware of teeth with bulbosities or areas of **hypercementosis**.

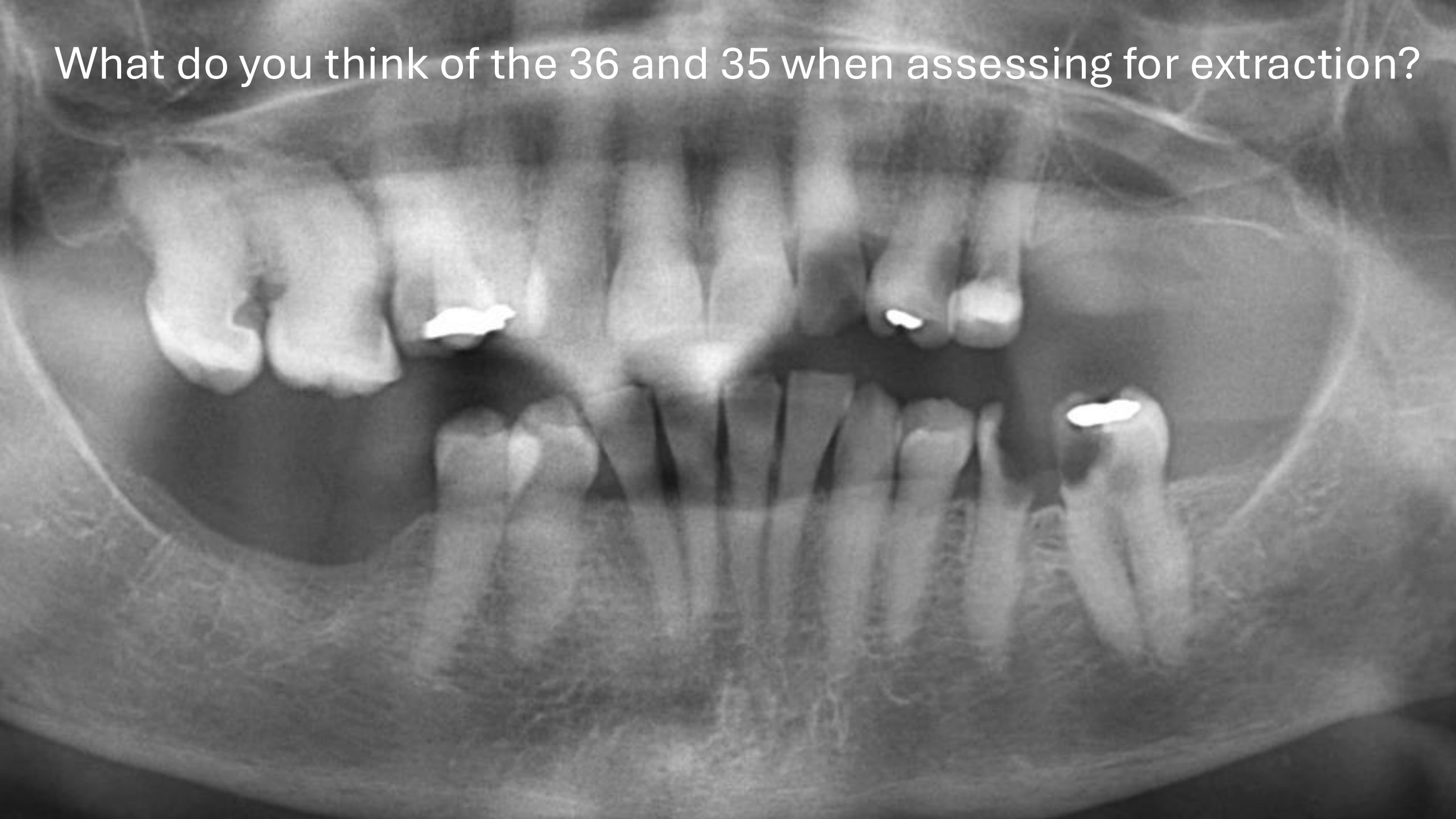
https://www.sciencedirect.com/topics/medicine-and-dentistry/hypercementosis



Assessing Complexity
Tooth Related Factors

- Assess the apical ligament space and trace it out.
- Be aware of teeth where the periapical ligament space is obliterated – risk of **ankylosis**.

https://oralradiology.wordpress.com/radiographic-interpretation/tooth-anomalies/eruption-variations/ankylosis/


What do you think of the 36 and 35 when assessing for extraction?

Consent

Consent for Oral Surgery

"Informed consent is a person's decision, given voluntarily, to agree to a healthcare treatment, procedure or other intervention that is made:

•Following the provision of accurate and relevant information about the healthcare intervention and alternative options available; and

•With adequate knowledge and understanding of the benefits and material risks of the proposed intervention relevant to the person who would be having the treatment, procedure or other intervention.

At the Commission, we believe informed consent is a key quality and safety issue."

Australian Commission on **Safety and Quality** in Health Care

The way I do it…

- “Like with all minor surgery there are some common things that might occur afterwards including bleeding, bruising, swelling, pain and infection”

- IF ON ANTICOAGULANTS: “Because you take [drug name] we usually find things are a little more oozy afterwards, and you might be prone to more significant bruising. It can sometimes look quite severe, almost like you’ve been in a boxing ring. I’m sure you know how easily you bruise when you knock your arm…”

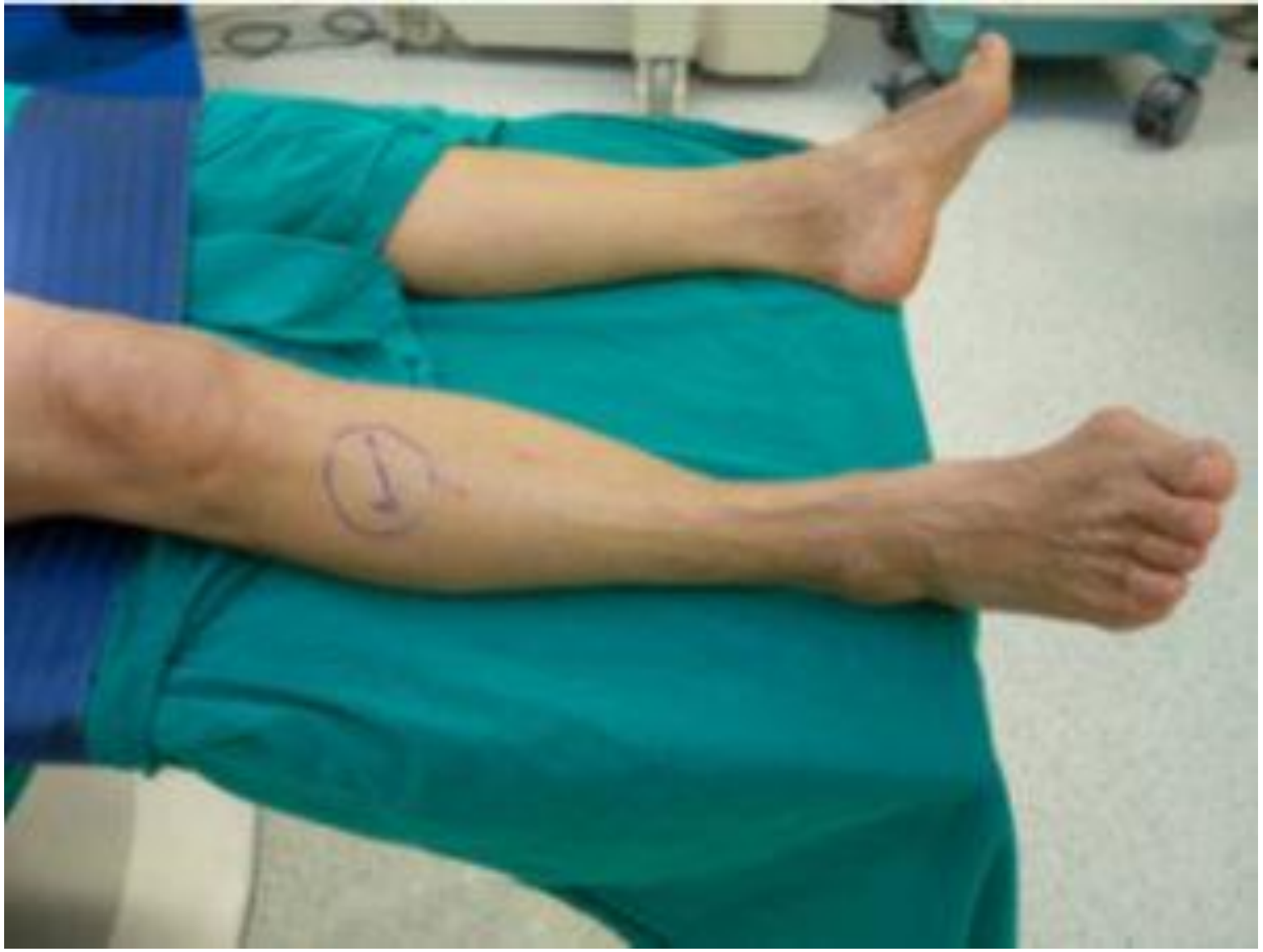
Procedure specific risks

- This is the part that we tailor to the specific procedure:
- e.g upper teeth close to the maxillary sinus:
  - “this tooth is close to your sinus. Your sinus is this big hollow space inside your cheek. Sometimes the tooth is actually forming part of the floor of this sinus. This means that when I remove it, a hole can be left behind between the sinus and the extraction site. If this happens we might need to give you some extra instructions and maybe put in some extra stitches. If it is small it will often close itself. Very rarely it might be significant and in which case we might need to refer you to a specialist to manage.

Procedure specific risks

- This is the part that we tailor to the specific procedure:
- e.g for teeth where there are large cavities/restorations or crowns adjacent
  - “Sometimes when we take out teeth, we can find that the tooth next door is compromised. This is sometimes only obvious when we either start to move or remove the tooth. This can sometimes mean that the …[point to x-ray] on this tooth can come off. If this happens we may usually be able to stick it back on or replace it with a temporary solution. Sometimes you might need to come back another day for more dental treatment.

Correct Site



THE UNIVERSITY OF WESTERN AUSTRALIA | Oral Health Centre of Western Australia

DENTAL SURGERY SAFETY CHECKLIST TOOL

BEFORE PROCEDURE - Patient identification at the dental chair (Dentist or DCA)

- [ ] Patient has confirmed Surname, First Name, Address & DOB

Comments:

BEFORE PROCEDURE COMMENCES - Time out at the dental chair

Dental staff, inclusive of students have:

- [ ] Introduced themselves
- [ ] Dentist confirms patient name and procedure
- [ ] Outlines procedure
- [ ] Discussed concerns if applicable
- [ ] Received Consent
- [ ] Completed Medical History including allergies

Confirms:

- [ ] Essential radiographs available if applicable
- [ ] Essential instruments and equipment available

Comments:

BEFORE PATIENT LEAVES CLINIC - Procedure completed

The Dentist/Student has:

- [ ] Confirmed the procedure with the patient
- [ ] Discussed post procedure effects and management of these
- [ ] Advised of how to contact OHCWA in an emergency
- [ ] Directs patient back to Reception

- [ ] The DCA if available; directs patient back to Reception

Comments

Student Name

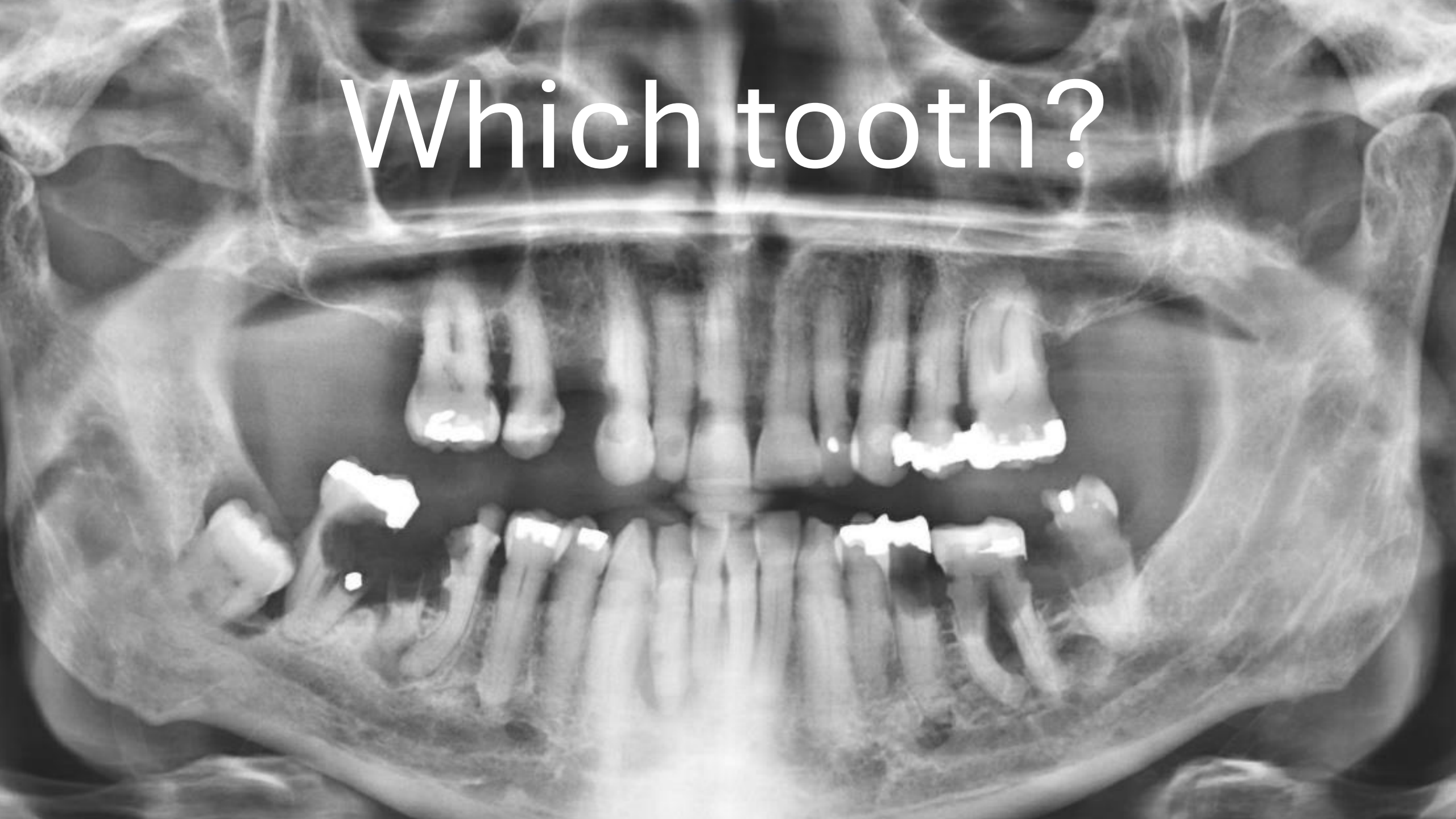
Tutor Name

Student Signature

Tutor Signature

Correct site checklist tool

- **Must** be done for all patients
- TOHM – eForms – Dental Surgery Safety Checklist Tool – Students
- Abridged and adapted version of the WHO safety checklist:
  - Right patient, procedure and site
  - X-rays available
  - Equipment available


Which tooth?

Local Anaesthetics

A quick recap…

Local Anaesthetic Considerations – 75KG

LA Drug	Maximum Dose (mg/kg)	Maximum Dose of Anaesthetic (mg) (75kg)	Weight of anaesthetic in a 2.2ml carpule (mg)	Weight of adrenaline in a 2.2ml carpule	Maximum number of 2.2mL carpules based on LA drug max dose (weight dependant)
Lidocaine 2% (1:80,000)	7	500 (525mg but absolute max dose 500mg)	44mg	27.5mcg	11.36
Articaine 4% (1:100,000)	7	500 (525mg but absolute max dose 500mg)	88mg	22mcg	5.68
Bupivicaine 0.5% (1:200000)	2	150 (175mg absolute max dose)	(comes in 20mL ampoule) – 100mg	(comes in 20mL ampoule) - 100mcg	30mL (1.5x20mL ampoule)
Mepivicaine 3%	Not stated in AUS Other countries 4.4	Adult: Maximum 6.6ml	66mg	-	3 (absolute maximum for adult)

*Stated figures are taken from TGA Therapeutic Guidelines V4 –correct as of January 2026
As per TGA “stated maximums do not take into account vasoconstrictor”

Local Anaesthetic Considerations

lidocaine 2% (20 mg/mL) with adrenaline (epinephrine) 1:80 000 (12.5 micrograms/mL) [NB2]	
maximum mg/kg dose of local anaesthetic [NB3]	7 mg/kg
approximate maximum volume for a 70 kg adult [NB4]	24.5 mL
approximate maximum volume for a 20 kg child [NB4]	7 mL

mepivacaine 3% (30 mg/mL)
a maximum mg/kg dose is not specified in the Australian product information. The Australian product information specifies: • child 3 to 6 years – maximum 1.8 mL • child 6 to 14 years – maximum 2.7 mL • adolescent 14 to 17 years – maximum 4.4 mL • adult – maximum 6.6 mL

articaine 4% (40 mg/mL) with adrenaline (epinephrine) 1:100 000 (10 micrograms/mL) [NB2] articaine 4% (40 mg/mL) with adrenaline (epinephrine) 1:200 000 (5 micrograms/mL) [NB2]	
maximum mg/kg dose of local anaesthetic [NB3]	7 mg/kg
approximate maximum volume for a 70 kg adult [NB4]	12.25 mL
approximate maximum volume for a 20 kg child [NB4]	3.5 mL

*TGA online

Local Anaesthetic Considerations

LIGNOSPAN SPECIAL 1/80000 2.2mL injection cartridge (49328)

Listen Print Share

ARTG ID 49328

ARTG Name	LIGNOSPAN SPECIAL 1/80000 2.2mL injection cartridge
Product name	LIGNOSPAN SPECIAL 1/80000 2.2mL injection
ARTG Date	13 July 1994
Registration Type	Medicine
Therapeutic good type	Medicines
Sponsor	Specialites Septodont Pty Ltd
Ingredients	adrenaline (epinephrine) lidocaine hydrochloride monohydrate
Licence category	RE
Licence status	A
Summary	Download PDF
Product Information	Download PDF
Consumer Medicine Information	Download PDF

AUSTRALIAN PRODUCT INFORMATION – LIGNOSPAN SPECIAL (LIDOCAINE HYDROCHLORIDE MONOHYDRATE, ADRENALINE (EPINEPHRINE) ACID TARTRATE) SOLUTION FOR INJECTION

1 NAME OF THE MEDICINE

Lidocaine hydrochloride monohydrate with adrenaline (epinephrine) (as acid tartrate)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Cartridge	**2.2 mL**	**1.8 mL**
Lidocaine hydrochloride monohydrate	44 mg	36 mg
Adrenaline (epinephrine) (as acid tartrate)	27.5 µg	22.5 µg
Sodium chloride	14.3 mg	11.7 mg
Potassium metabisulfite	2.64 mg	2.16 mg
Disodium edetate	0.55 mg	0.45 mg
Sodium hydroxide solution	(to adjust pH)	(to adjust pH)
Water for injection q.s. ad	2.2 mL	1.8 mL

For single patient use only. Contains no anti-microbial agent. Discard unused contents after use.

LIGNOSPAN SPECIAL contains a local anaesthetic of amide type, lidocaine hydrochloride monohydrate (2%), combined with a vasoconstrictor, adrenaline (epinephrine) as acid tartrate (1/80,000).

3 PHARMACEUTICAL FORM

LIGNOSPAN SPECIAL is an injection, solution – a clear colourless liquid.

4 CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

Lidocaine solutions are indicated for the production of local anaesthesia in routine dental procedures and oral surgery by means of infiltration and nerve block techniques.

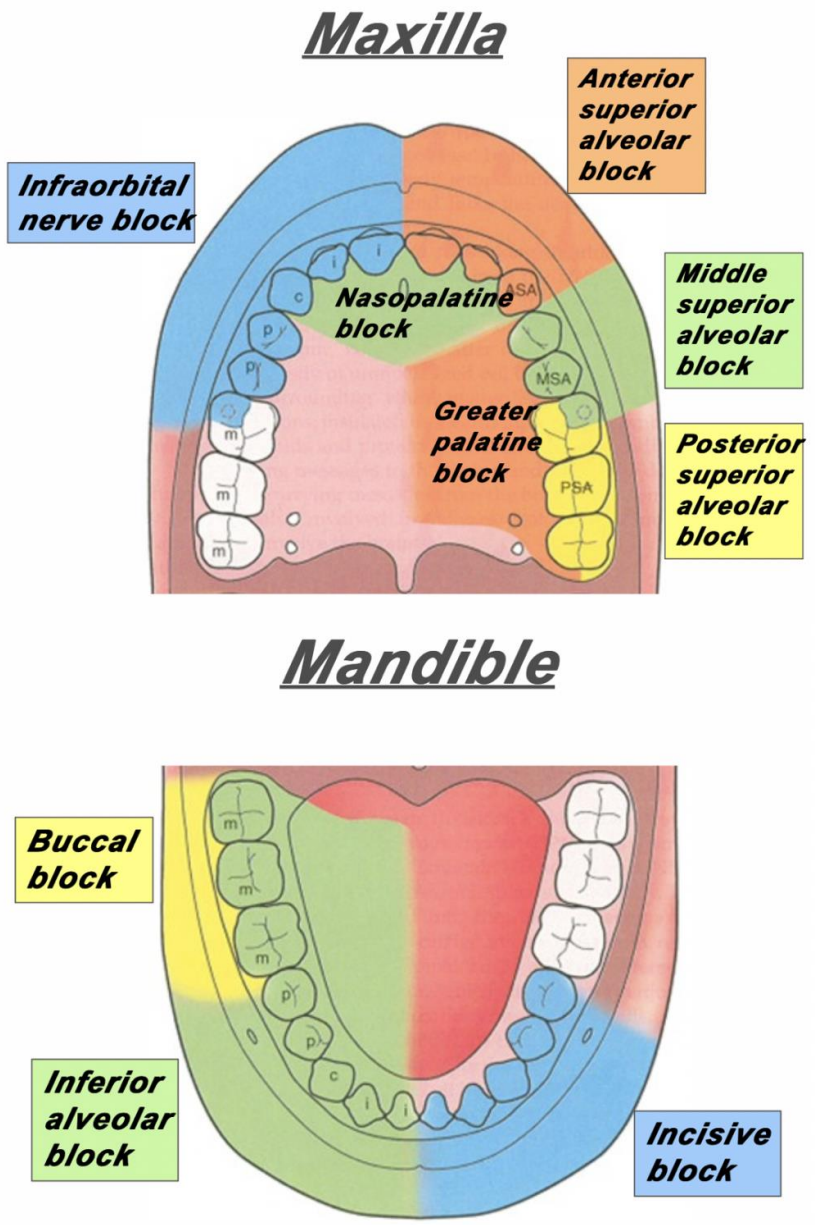
Lidocaine solutions with adrenaline (epinephrine) are recommended for oral surgery requiring prolonged duration of anaesthesia and haemostasis.

4.2 DOSE AND METHOD OF ADMINISTRATION

The lowest dosage that results in effective anaesthesia for the planned treatment should be used.

Local Anaesthetic Considerations

- Does this really matter?
  - Generally NO
    - Think about restorative work – usually giving 1 to 2 carpules
    - Simple extractions – giving 1 to 2 carpules
  - Exceptionally YES
    - Dental clearance – extracting multiple teeth in different quadrants. Upper clearance may require 4 to 5+ carpules
    - Combine this with a small patient – frail, elderly person OR adolescent (ortho extractions
    - Now dosages and timings need to be thought about – LA all at once, or in stages?

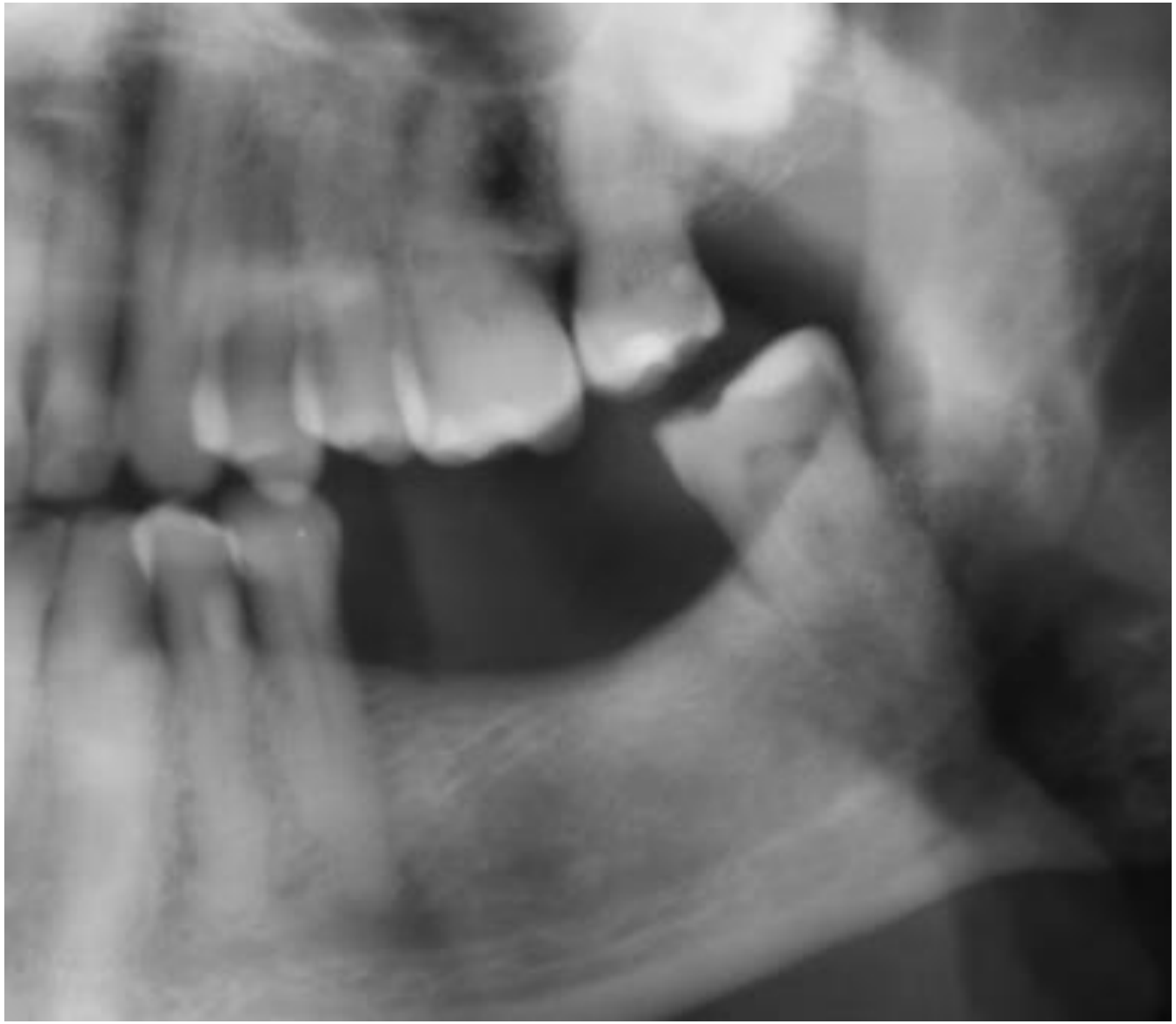


Local Anaesthetic Considerations

- What do we need to anaesthetise?
  - Tooth
  - Surrounding bone
  - Circumferential gingival tissues.

We have to remove 38

- What LA is needed?
  - Left Inferior Alveolar Nerve Block (+lingual)
  - Left long buccal nerve block



Ouch!

Does LA remove the sensation of pressure?

Ouch!

The patient is still feeling pain when you go to extract. What now?

- Did you miss (e.g IANB)?
- Did you partially miss (e.g IANB but not lingual)?
- Is it infected or inflamed? (e.g. pH reducing efficacy)?
- Is it weird? (e.g lower 1st molar and mylohyoid innervation)?

Exodontia - Principles

Make the hole bigger or the tooth smaller…

Make the hole bigger or the tooth smaller…

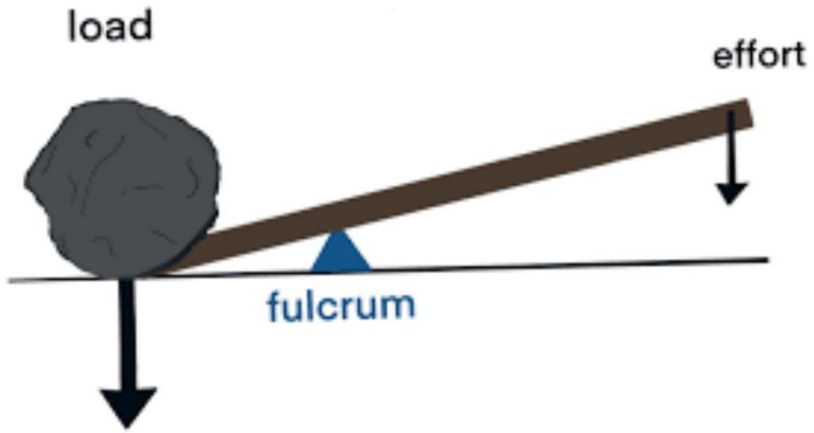
^with minimal trauma

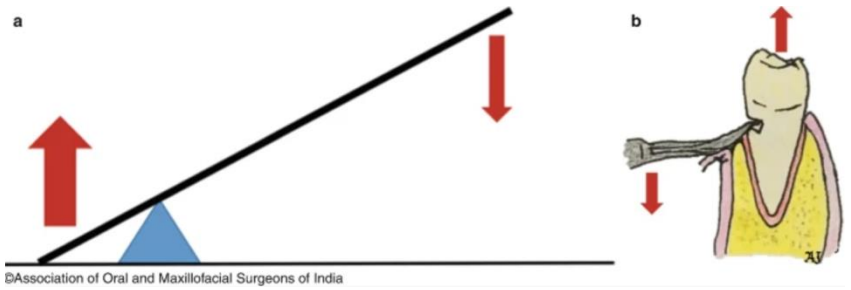
Today is only simple exodontia..

More advanced and difficult procedures will be in a later session

Principles of the mechanics

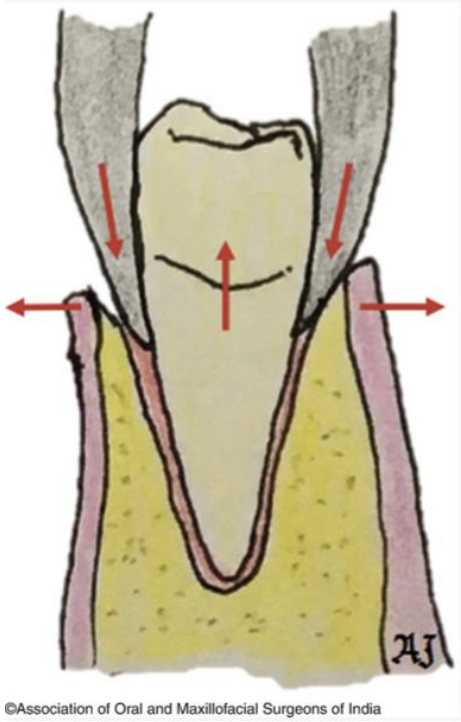
- Lever and fulcrum
  - A fulcrum is a support at a point in which a lever turns
  - There is a mechanical advantage of a long lever arm
  - The effort arm must be longer than the resistance arm, with increasing length reducing the force required.

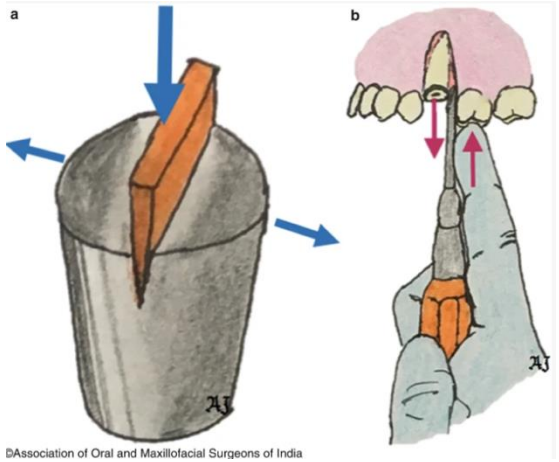




Principles of the mechanics

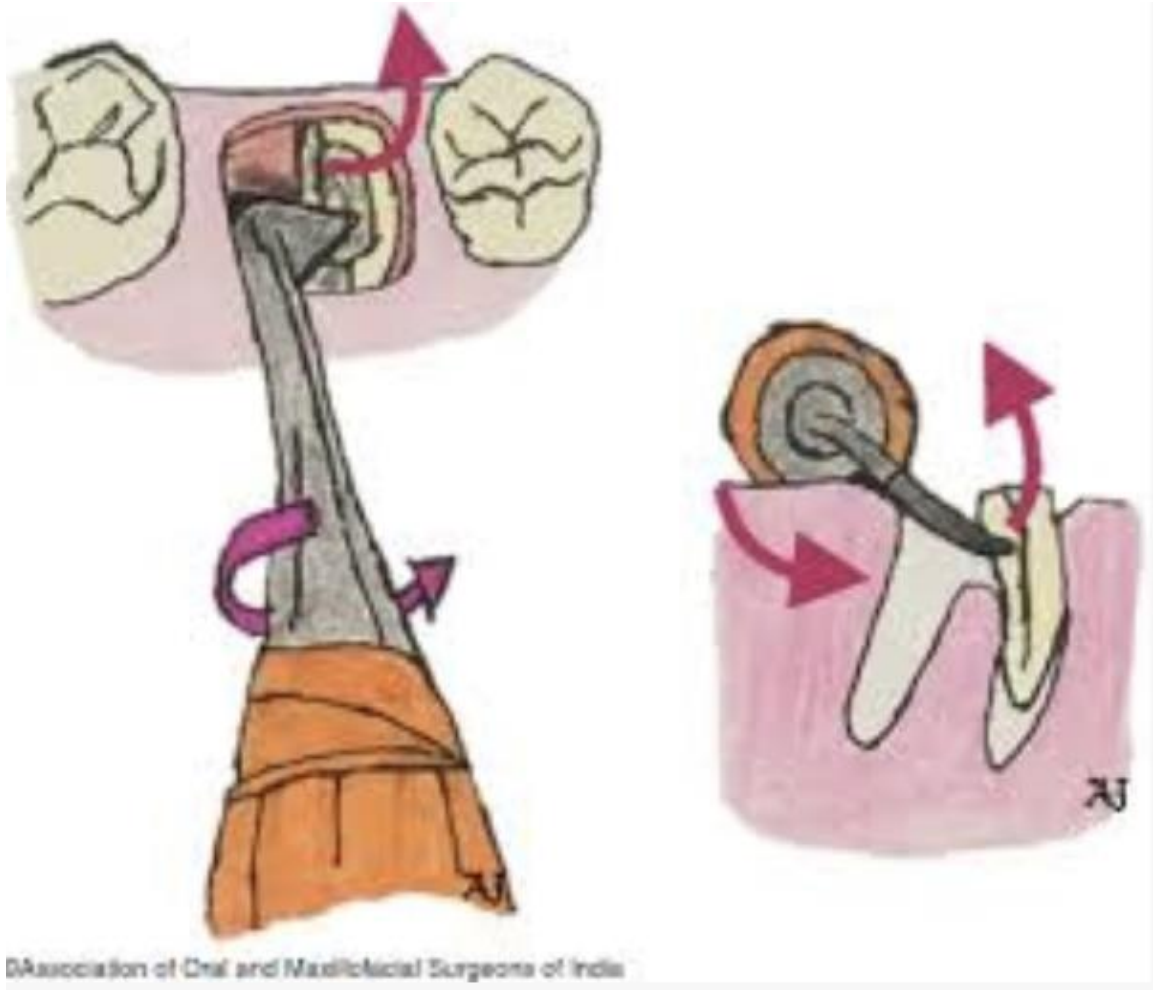
- Wedge
  - A wedge overcomes a larger resistance at right angles to the applied effort.
  - It can displace a tooth occlusally
  - Either by wedging the instrument in the long axis of the tooth or by delivering apical pressure with the forceps.





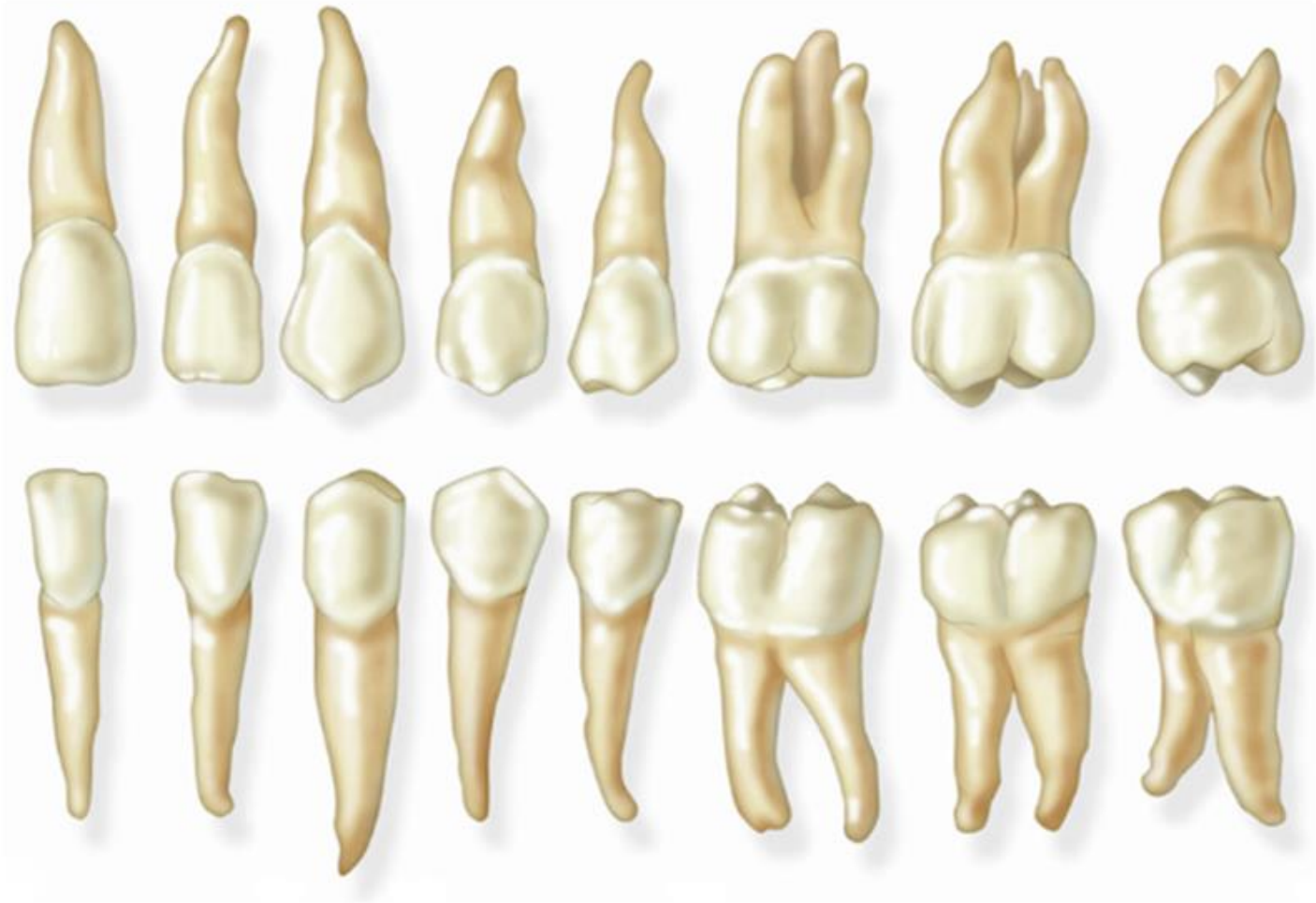
Principles of the mechanics

- Wheel and axle
  - Effort is applied to the circumference of a wheel, which turns the axle generating the force to raise a weight.
  - The tooth (or root) is engaged and rotated out.

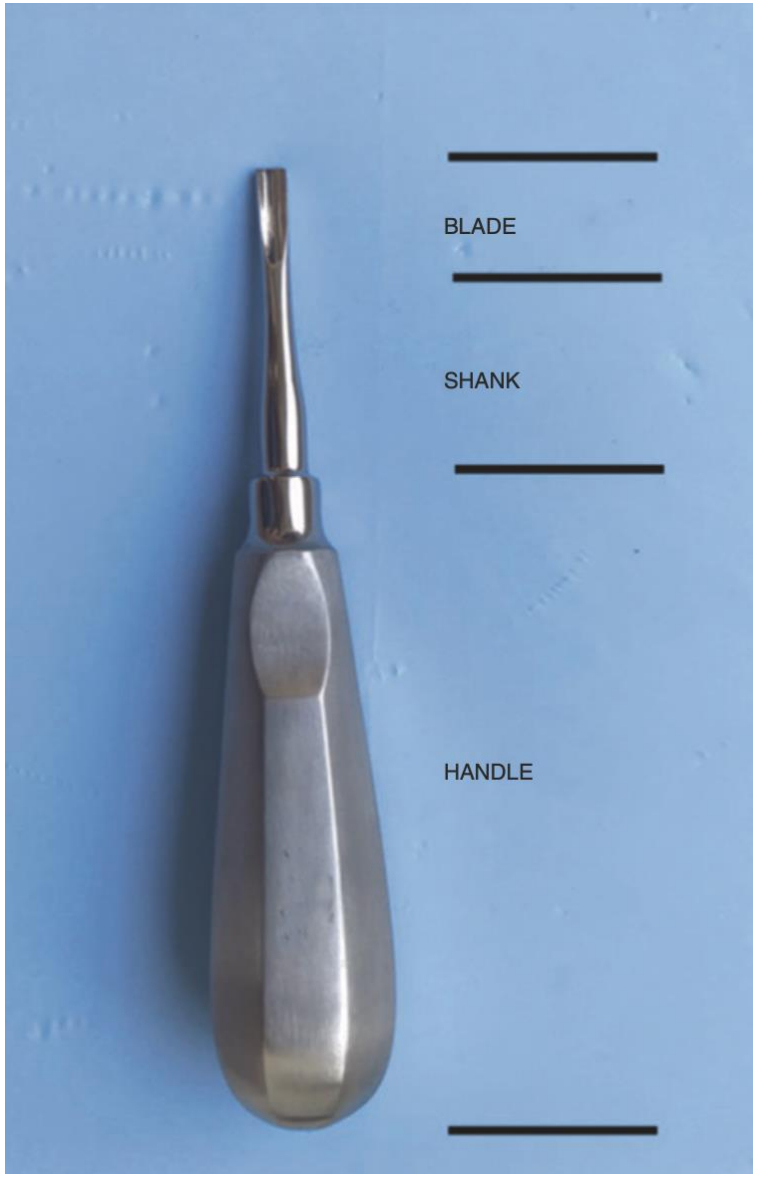


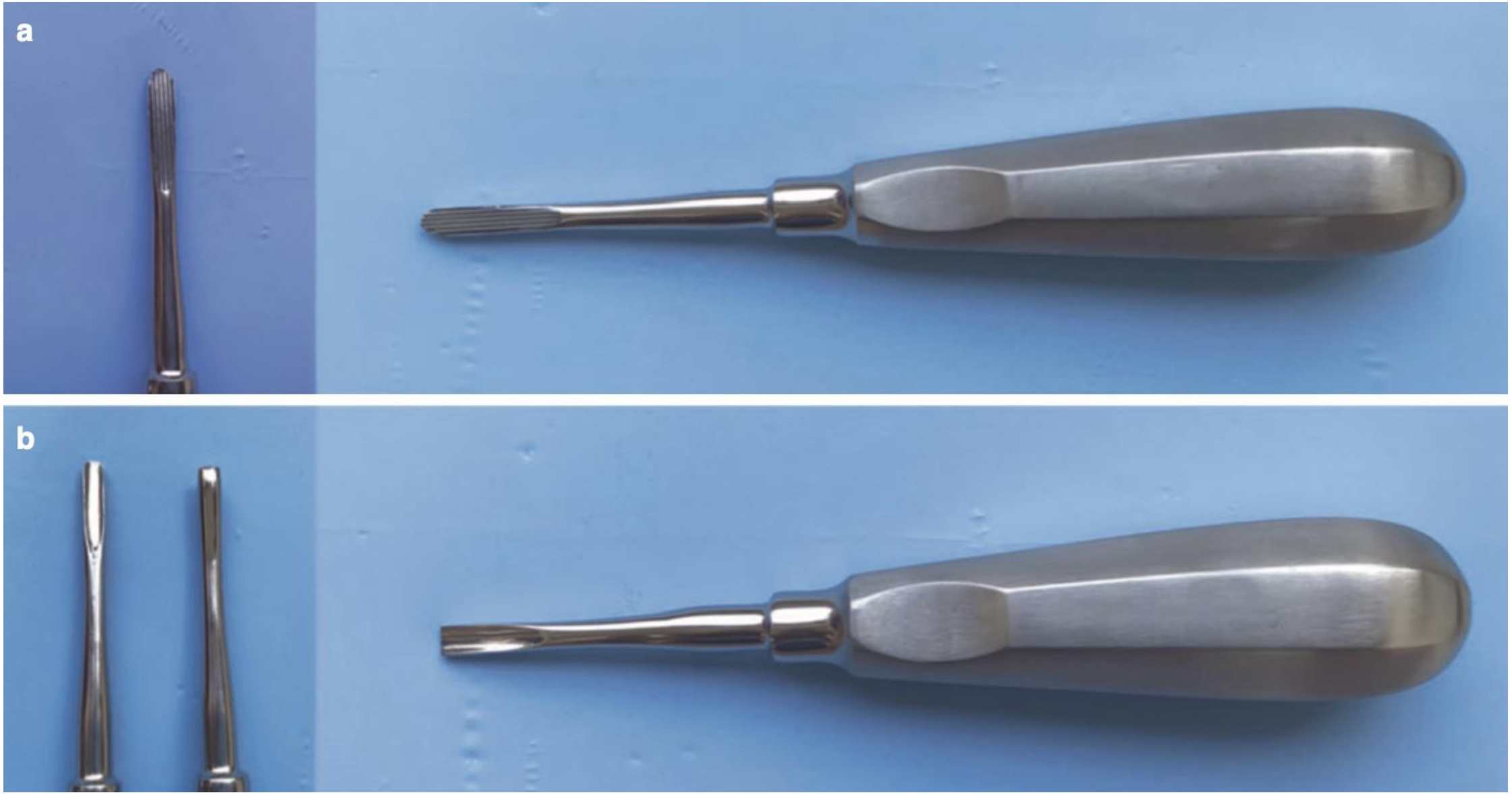
Dental Anatomy

Assume normal...



Basic Armamentarium


BLADE
SHANK
HANDLE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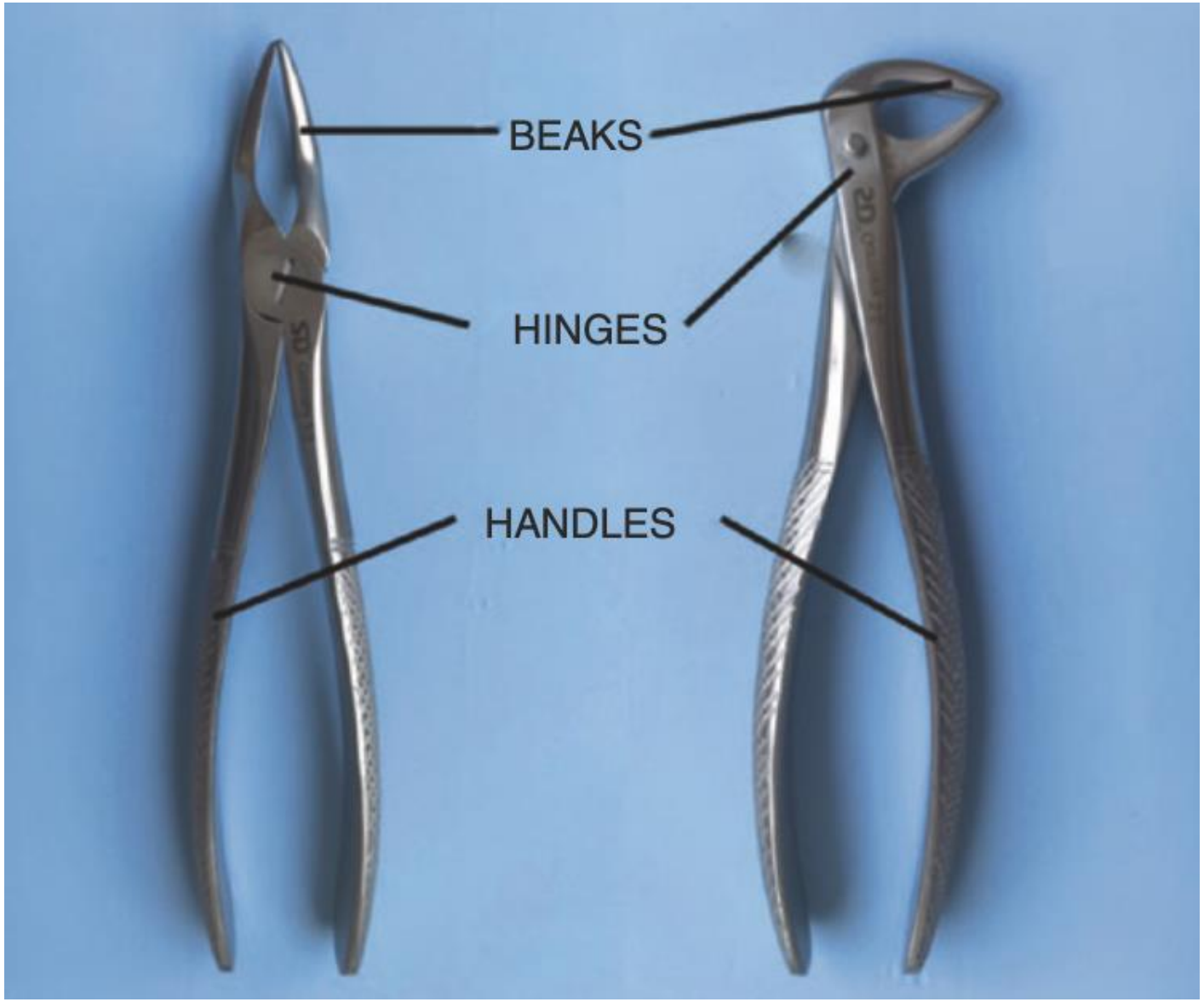
Youtube Video on Luxation

https://www.youtube.com/watch?feature=oembed&v=LxfWY7oobOc


BEAKS
HINGES
HANDLES

Number 29 Upper Straight Forceps

Number 107 Upper Straight (Short) Forceps

Number 76 Upper Universal Forceps

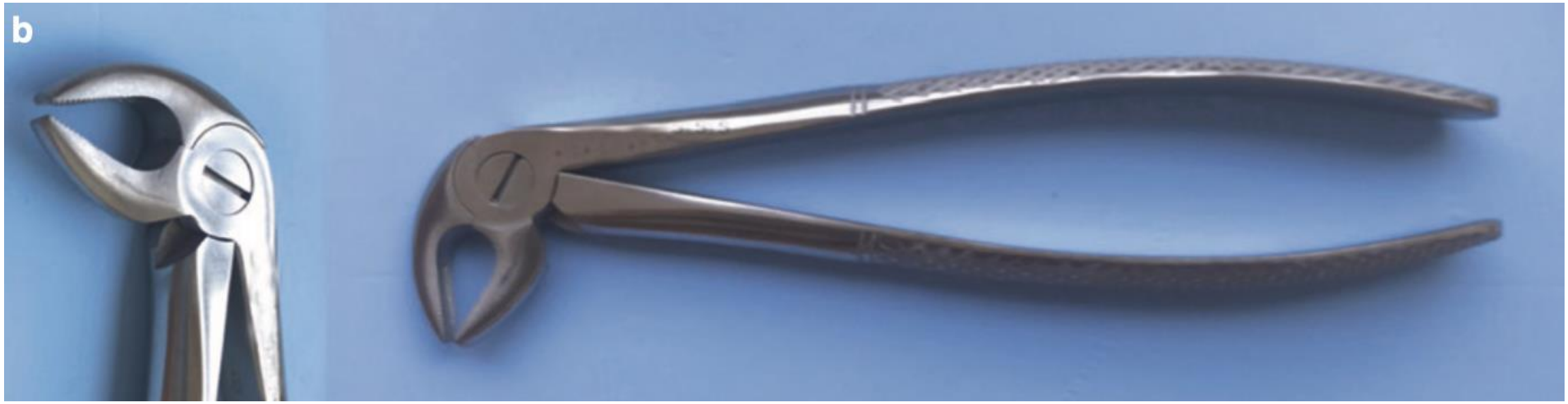
Number 76N Upper Universal (Fine) Forceps

Number 95 Upper Left Molar (Hawk) Forceps

Number 94 Upper Right Molar (Hawk) Forceps

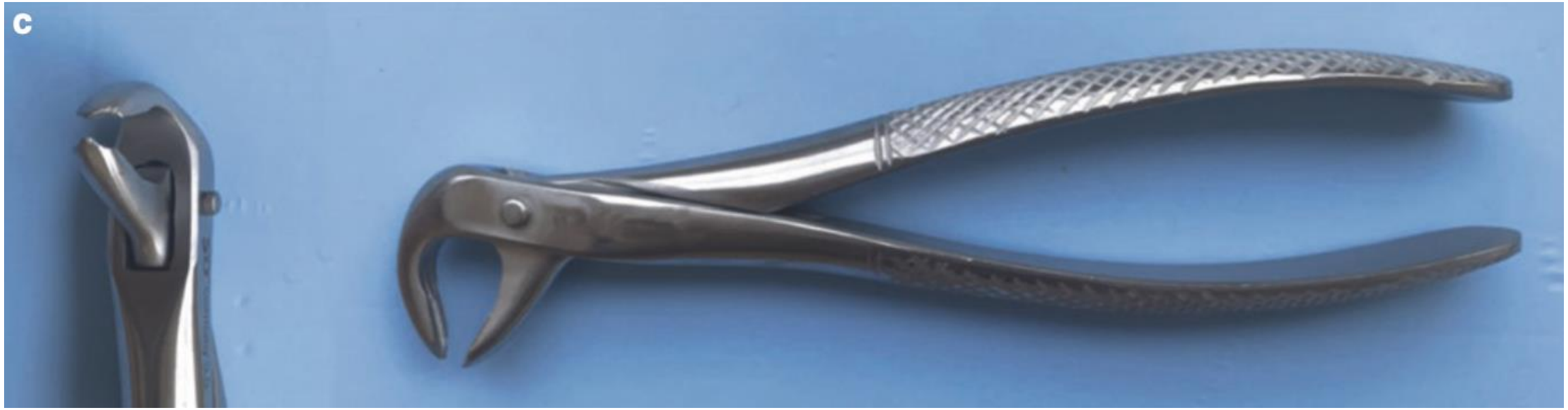
‘Beak to cheek’

Upper Bayonet Forceps

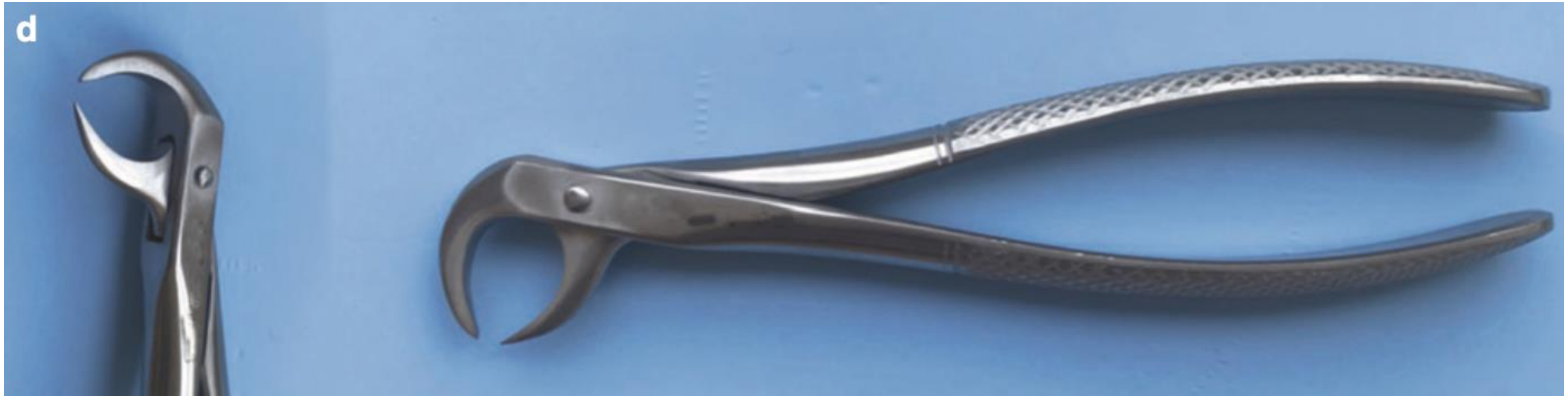


Number 74 Lower Universal Forceps

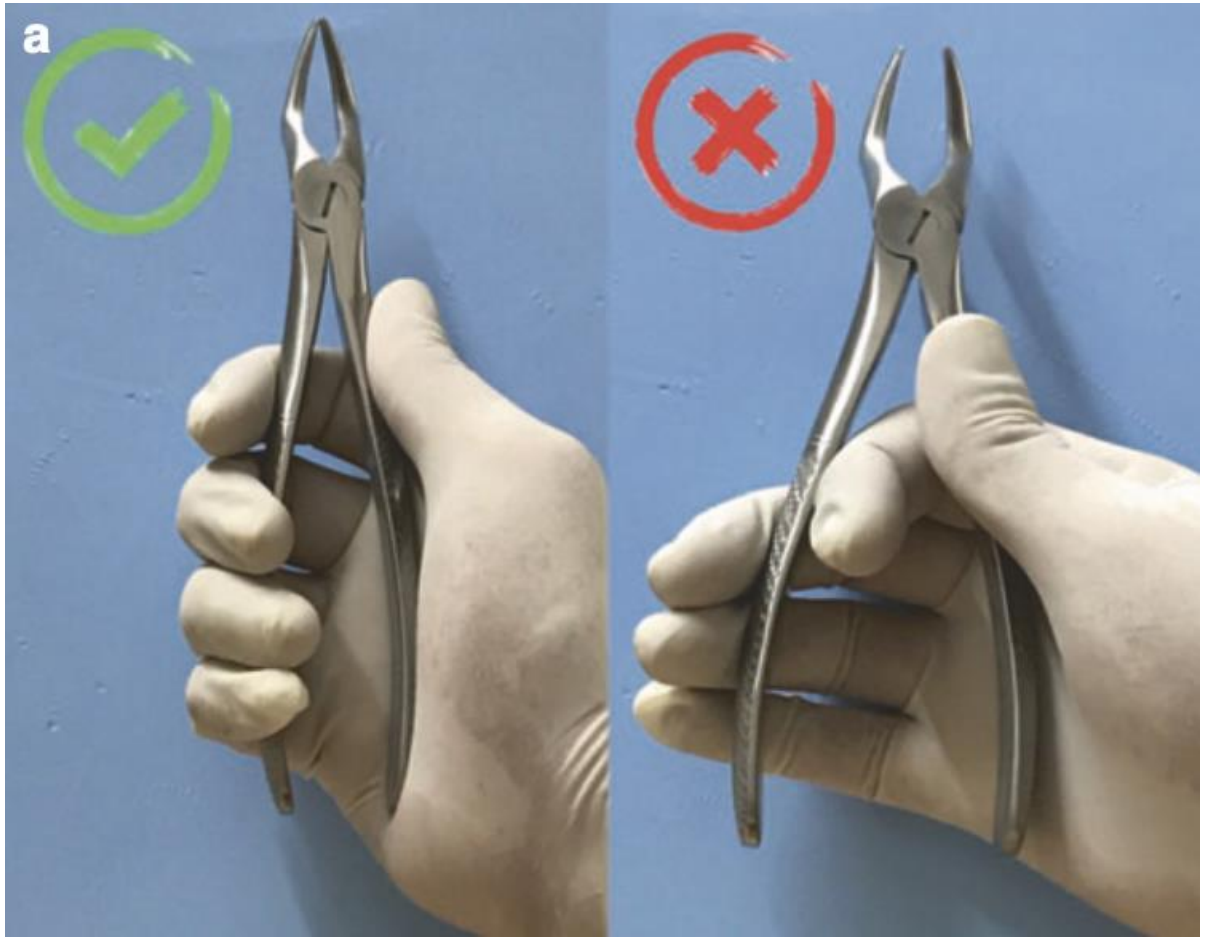
Number 74N Lower Fine Universal Forceps



Number 73 Lower Molar (Hawks) Forceps



Lower Cowhorn Forceps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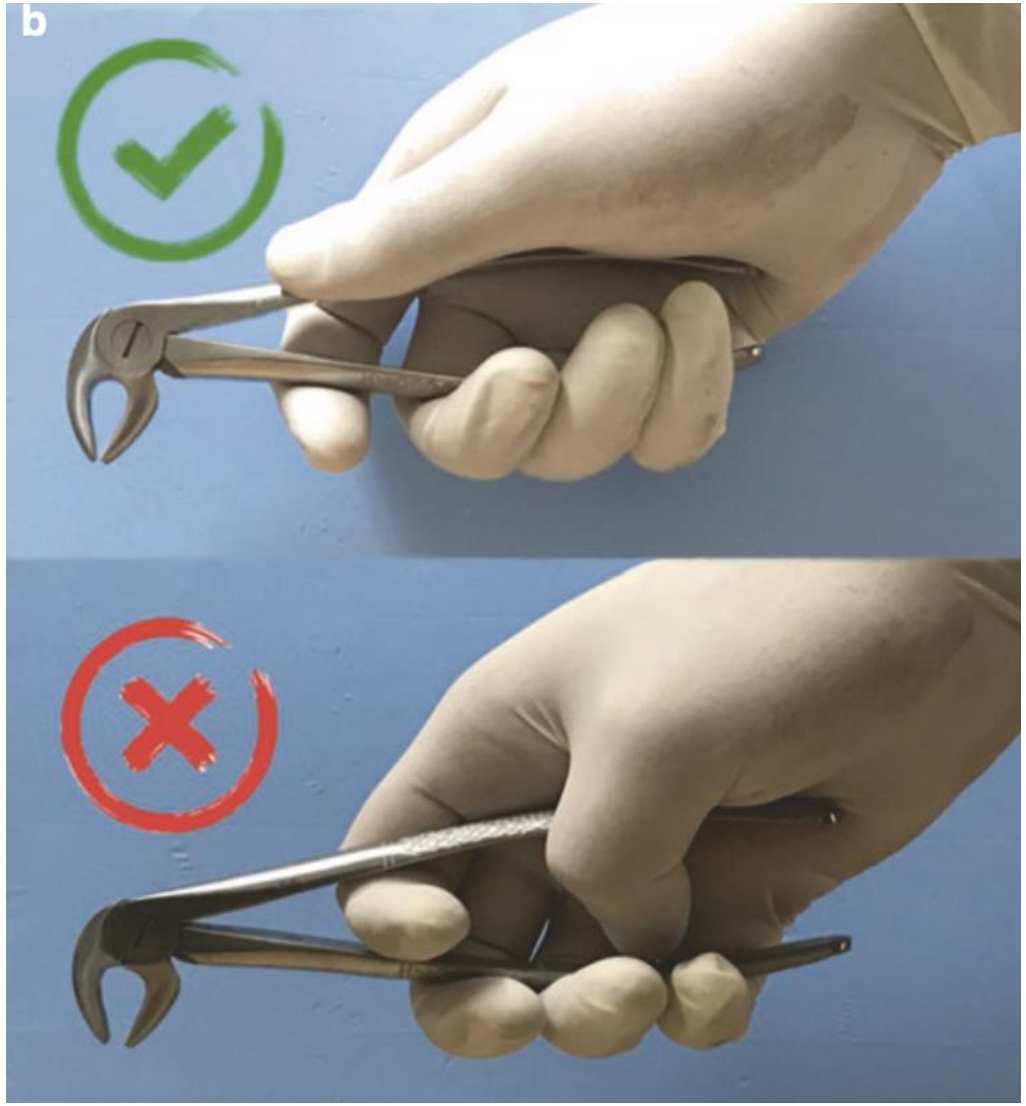
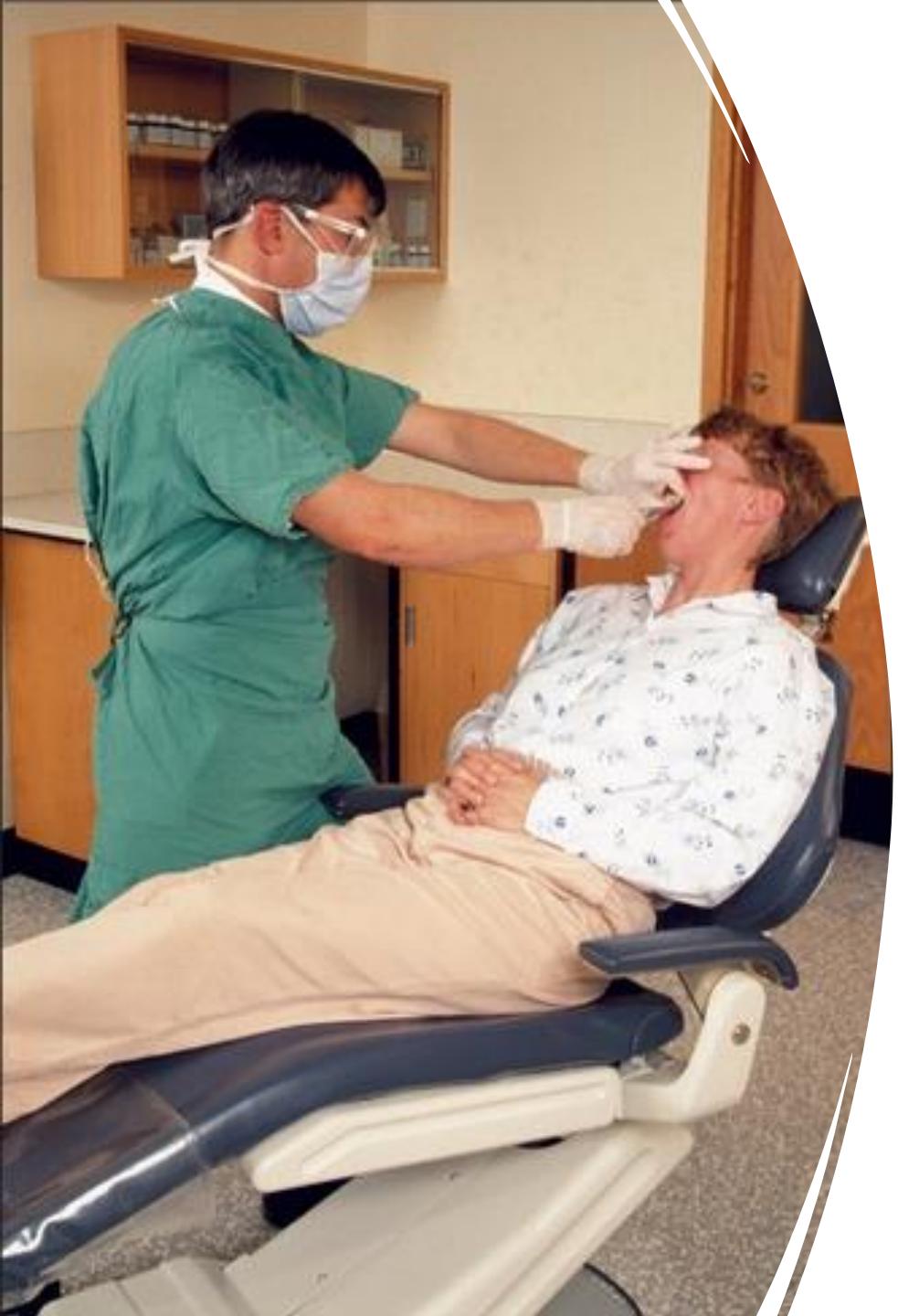

b

Positioning

*assuming ambidextrous chair is setup

Stand to the [dominant hand] and in front of the patient when extracting maxillary and mandibular [non-dominant hand teeth]

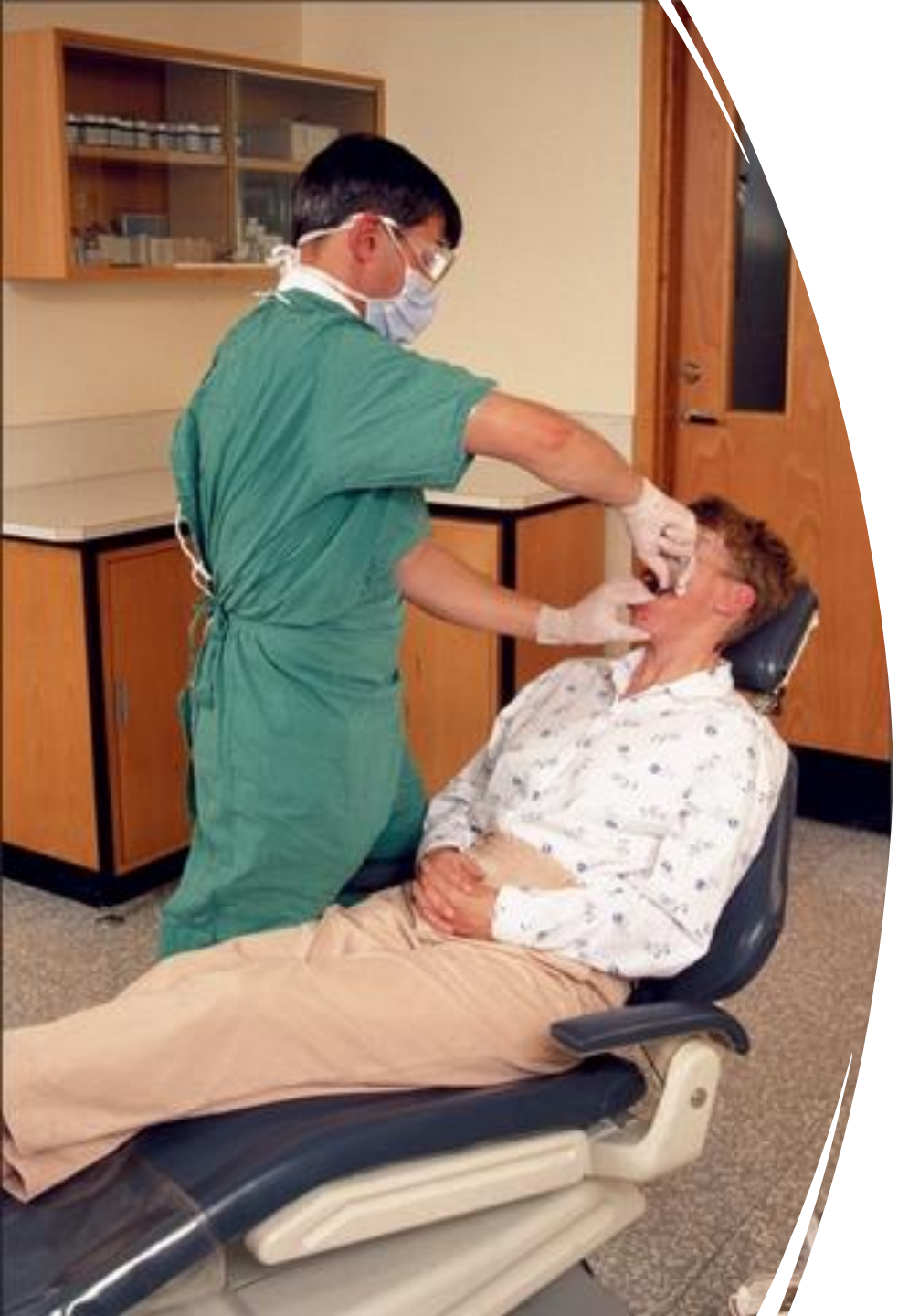
For the mandibular [dominant hand] stand to the [domininant hand] side.



Maxillary teeth (right handed operator)

- Operator standing:
  - In front and to the right of the patient
- Patient:
  - Elbow height, head tipped 30 degrees up

https://pocketdentistry.com/4-extraction-of-teeth/#:~:text=Extraction%20of%20maxillary%20teeth,for%20extraction%20of%20maxillary%20teeth.



Mandibular left teeth (right handed operator)

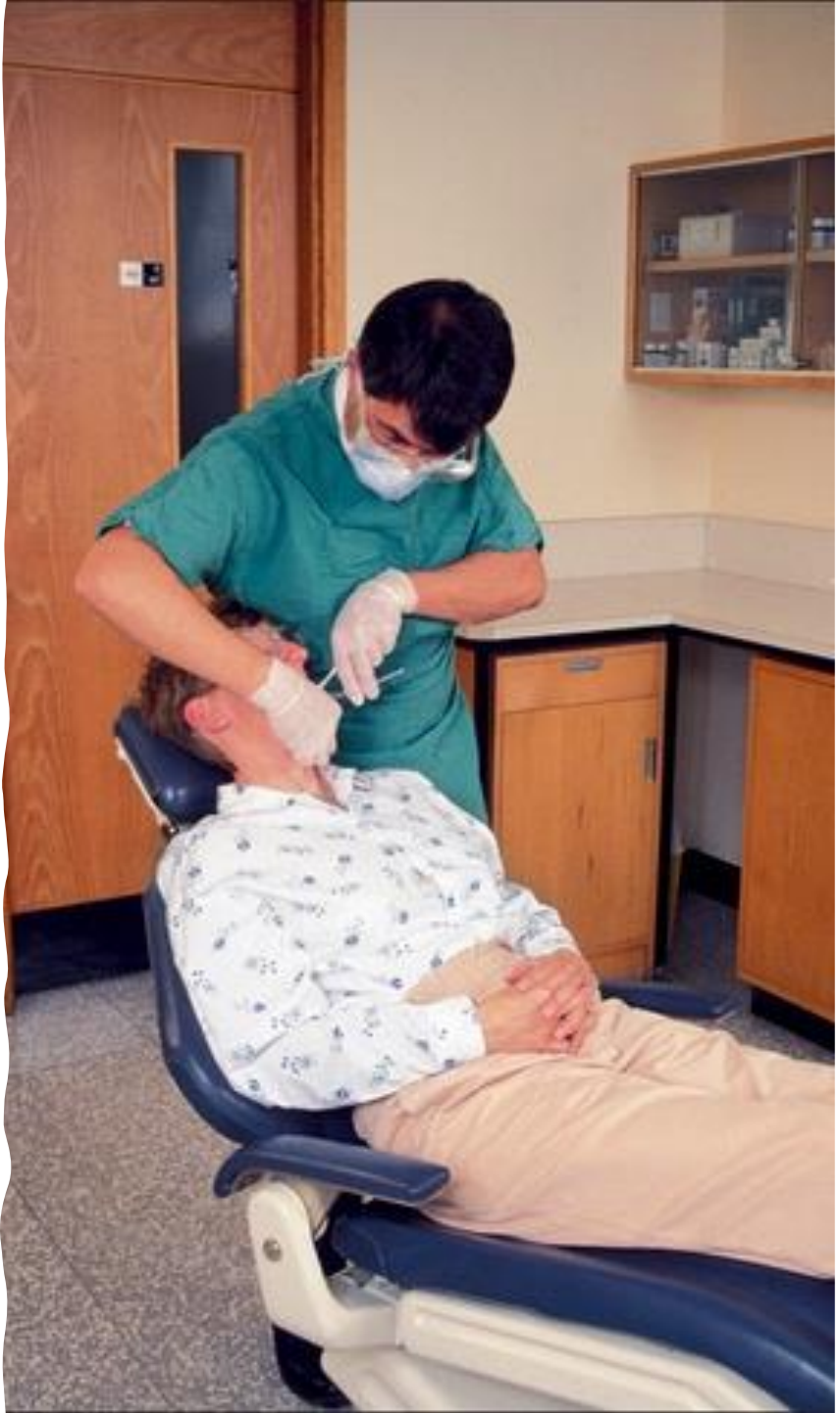
- Operator standing:
  - In front and to the right of the patient
- Patient:
  - Can be a little lower than elbow height and tipped back slightly more than for maxillary teeth.

https://pocketdentistry.com/4-extraction-of-teeth/#:~:text=Extraction%20of%20maxillary%20teeth,for%20extraction%20of%20maxillary%20teeth.

Mandibular right teeth (right handed operator)

- Standing:
  - Just behind and to the right of the patient
- Patient:
  - Can be a little lower than elbow height and tipped back slightly more than for maxillary teeth.

https://pocketdentistry.com/4-extraction-of-teeth/#:~:text=Extraction%20of%20maxillary%20teeth,for%20extraction%20of%20maxillary%20teeth.



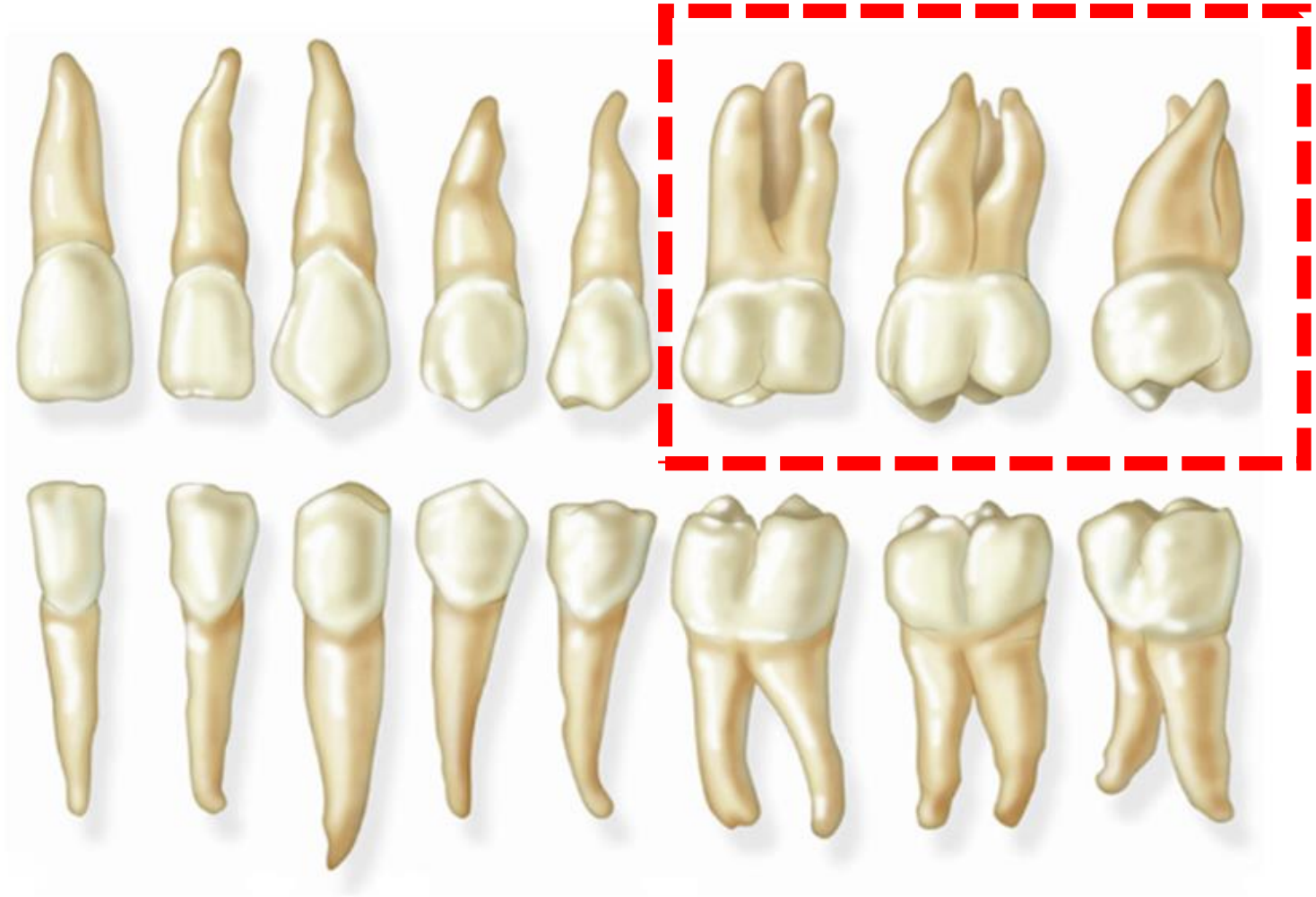
Mandibular left teeth (left handed operator)

- Standing:
  - Just behind and to the left of the patient
- Patient:
  - Can be a little lower than elbow height and tipped back slightly more than for maxillary teeth.

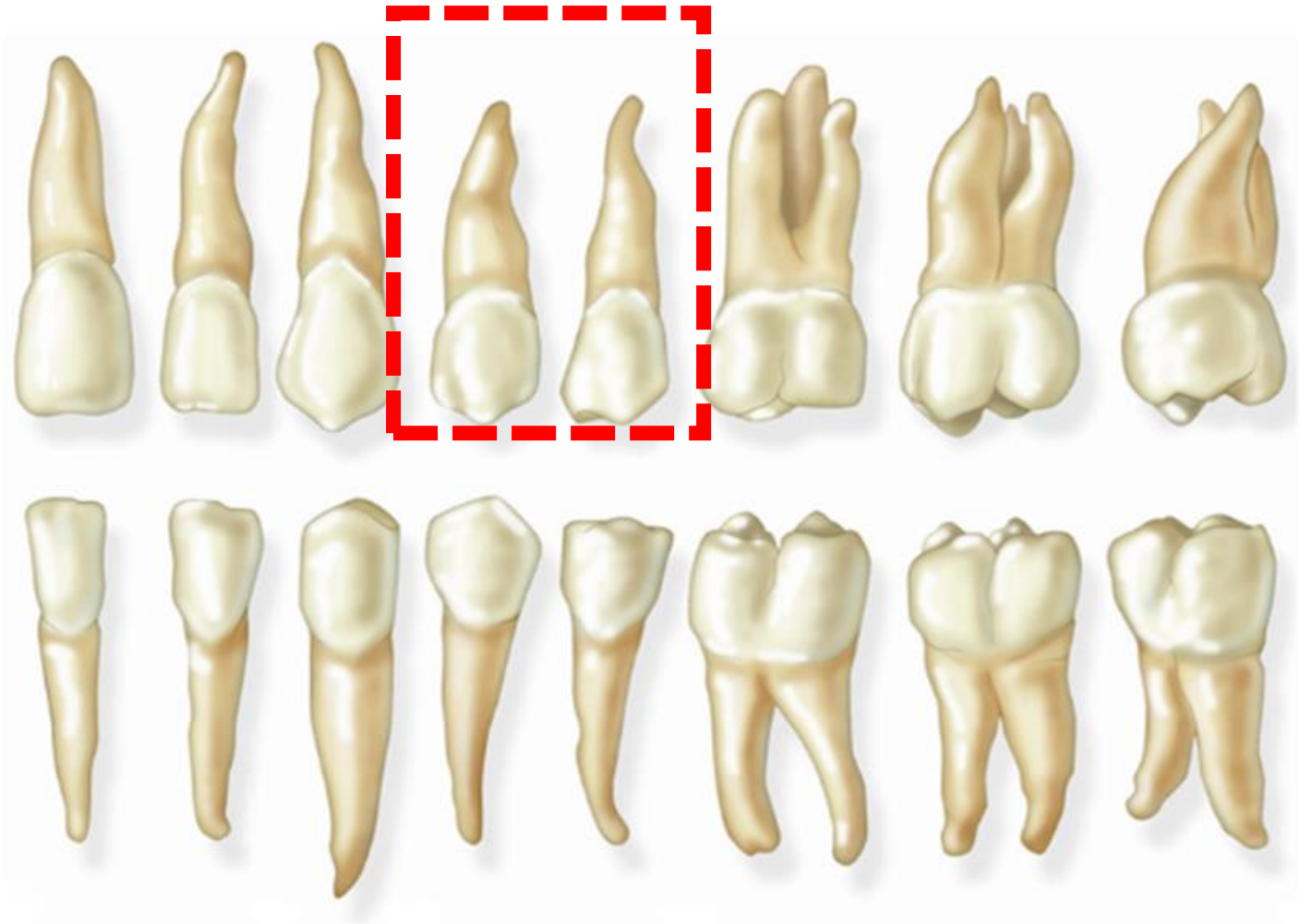
https://pocketdentistry.com/4-extraction-of-teeth/#:~:text=Extraction%20of%20maxillary%20teeth,for%20extraction%20of%20maxillary%20teeth.

Movements

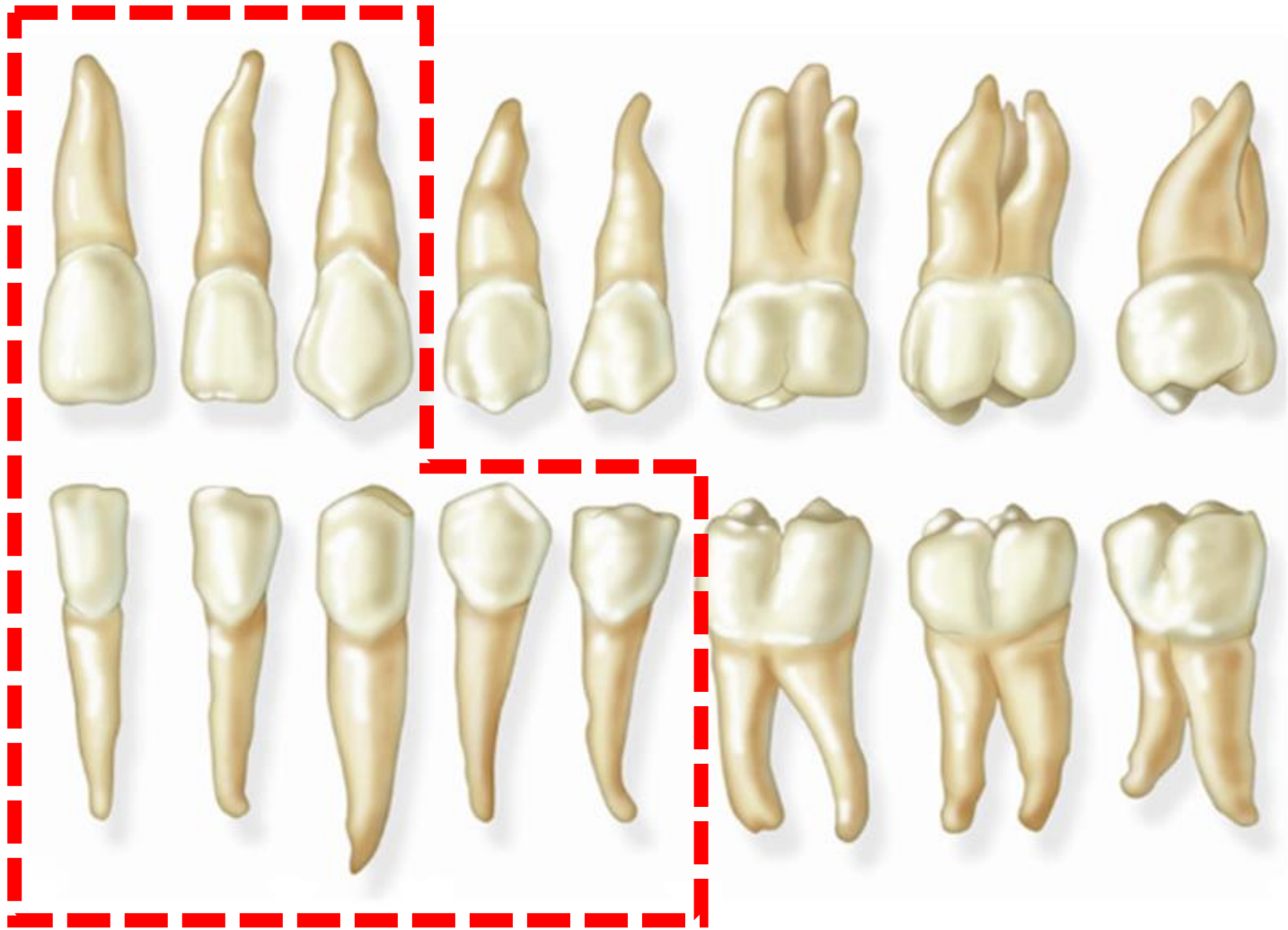
Apical Pressure + Buccal/Palatal Pressure

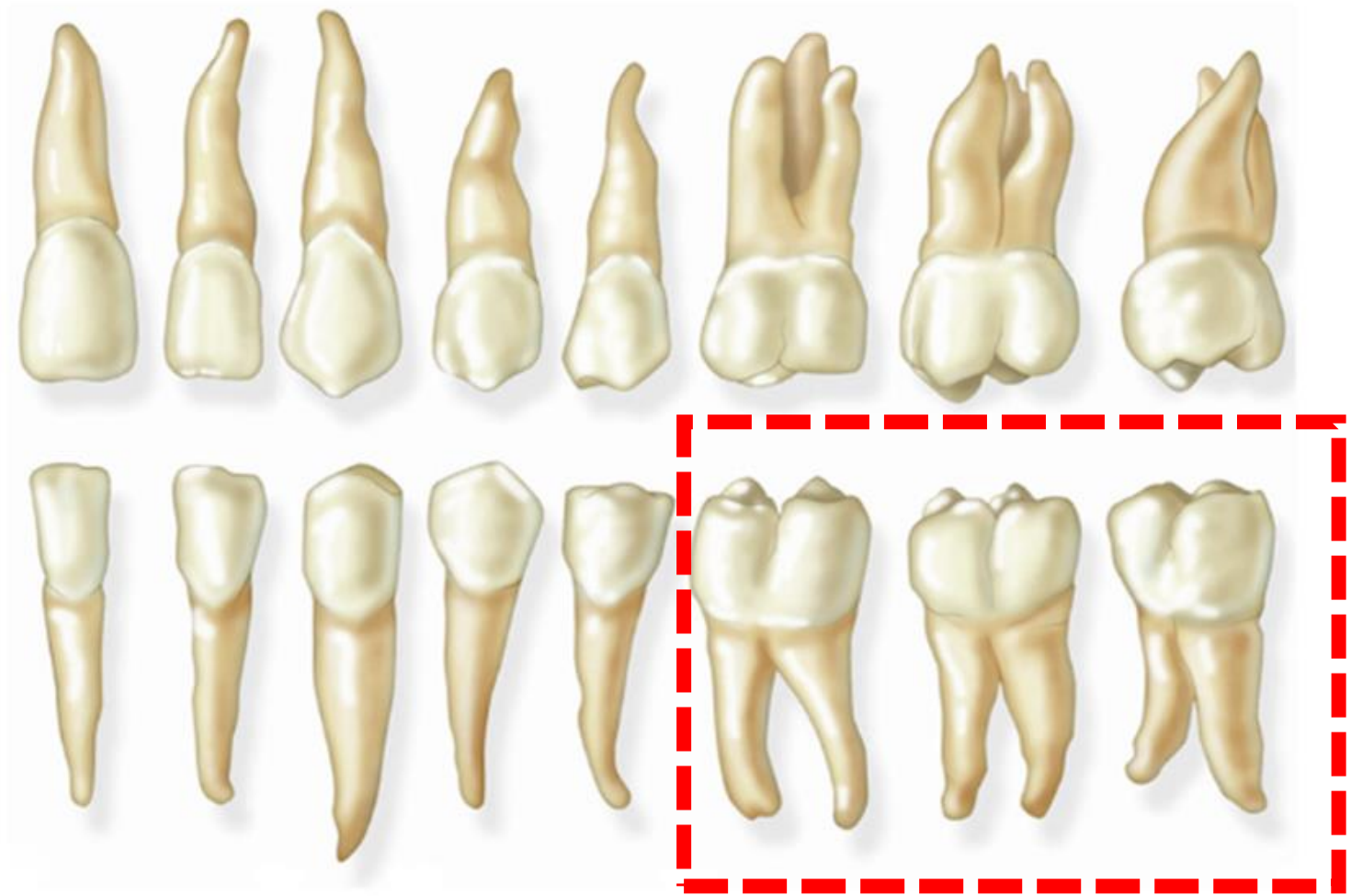


Apical Pressure + Buccal/Palatal Pressure + Rotation



Apical Pressure + Rotation





Apical Pressure + Figure of 8 motion

Youtube Video on Forceps

https://www.youtube.com/watch?v=Usu5pTTz2SY

After the extraction

What are we checking?

The tooth:

- Are the root apices intact?

The socket:

- Is there any evidence of OAC (for maxillary teeth in the proximity of sinus?)
- Is there any mucosal tears?
- Are there any loose pieces of alveolar bone?
- Are there any fragments of tooth left attached to the gingivae?
- Is there any major bleeding?

Post Operative Instructions


THE UNIVERSITY OF
WESTERN
AUSTRALIA
Advice following dental
oral surgery and oral

Post Operative Instructions

- Bleeding
- Pain
- Wound Care
- Sutures
- Emergency

Common* Emergencies

Syncopy (Fainting)

- “I feel dizzy” // “I feel light headed”
- Recognise EARLY – colour changes to lips
- Lie patient as far back as the chair will allow as fast as possible.
- Caution ‘you might feel like I’m tipping you upside down’
- Send for tutor
- Monitor
- Cold compress to forehead can help
- Occasionally may present as tonic-clonic syncope
- Recovery should be quick – offer sugary/electrolyte drink

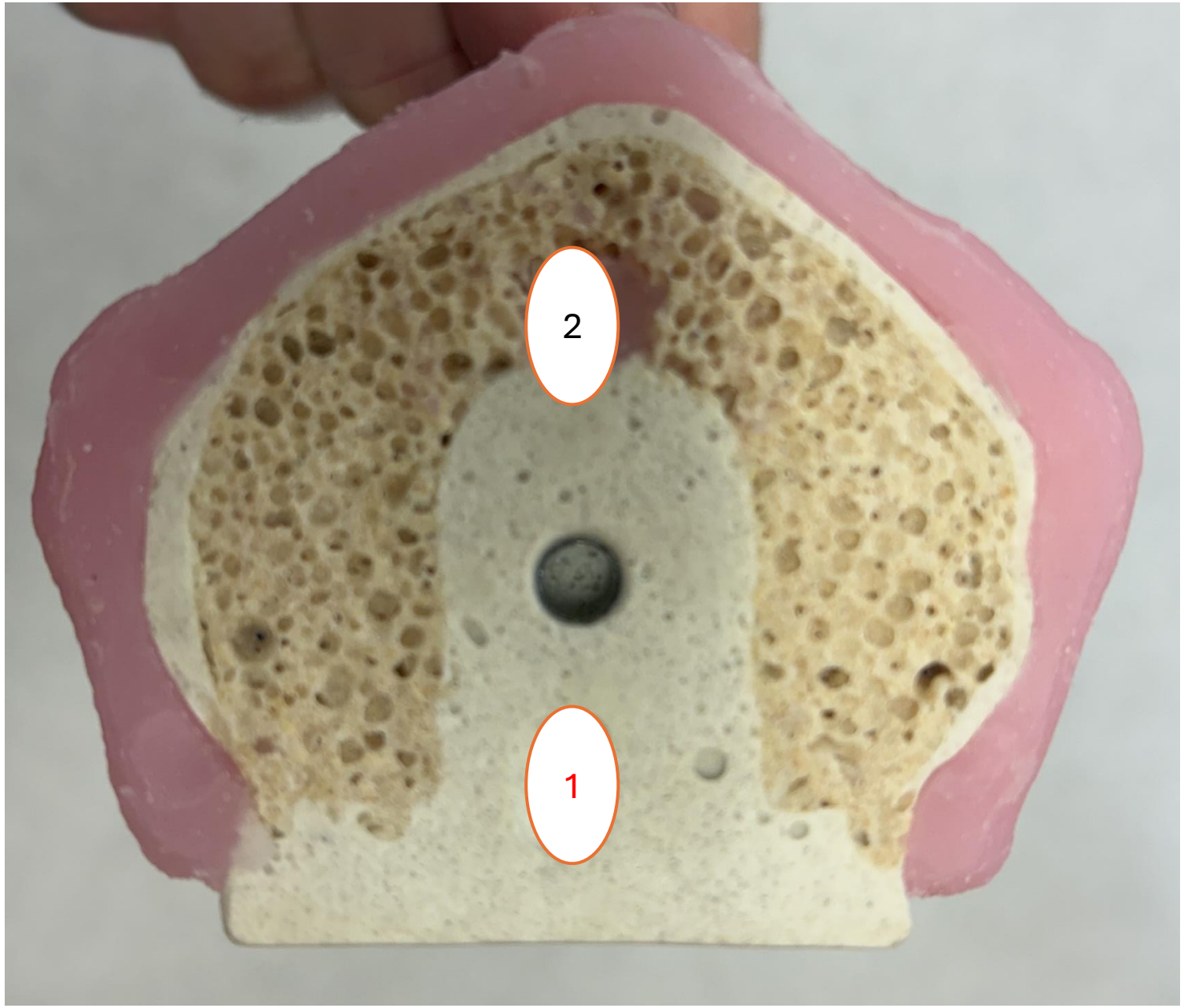
Palpitations

- Reassure patient it should pass and continue to monitor for deterioration. Take a moment to review medical history in case missed.
- Send for tutor
- Consider intravascular injection as cause
- Sometimes anxiety around procedure spikes adrenaline

Less commonly

- Hypoglycaemia
- Asthma
- Epileptic Seizure
- Cardiac emergencies
- Stroke
- Anaphylaxis

Practical Exercise: Extractions



Mount the models

- Using high speed drill dimple into the base using large round bur (1)
  - Must be deep enough to accommodate the mannequin pin (5mm)
  - A second dimple (2) may be required to mount flush.

Practical Exercise 1

- Extract premolars and canines (15 14 13 23 24 25)
  - Luxate – at least 20 seconds – make sure observed by tutor and then remove tooth with forceps.
  - Head to be positioned and stabilised by group member
  - **Everyone** to extract 2 teeth
  - If crown snaps – to attempt further luxation to remove the root

Practical Exercise
Suturing

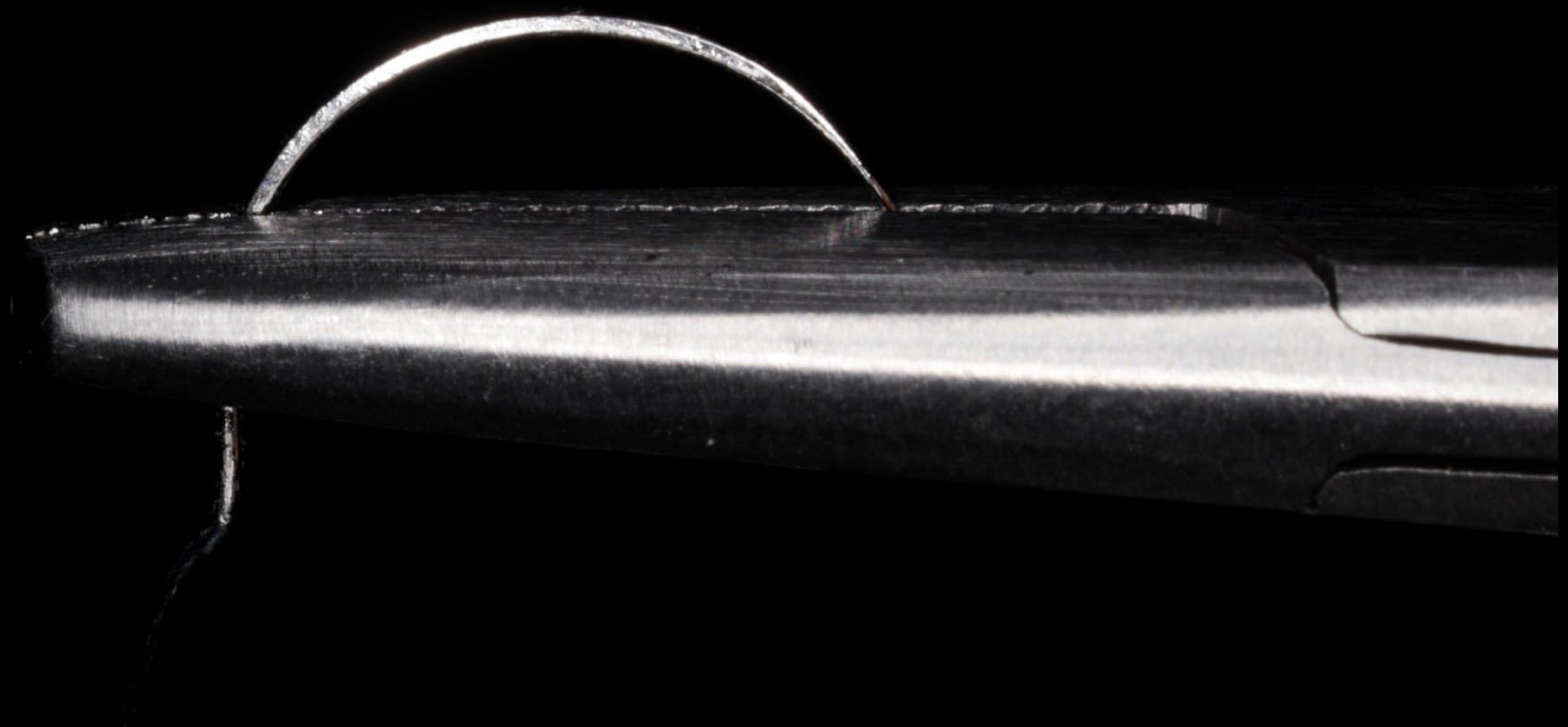
Practical Exercise 2

- Suture the extraction sites:
  - Everyone must:
    - Place one simple interrupted suture across a socket
    - Place one figure of eight suture across a socket.

Basic Safety

Never pass or leave sutures mounted like this!

Basic Safety



Control your sharps!

Basic Safety

Control your sharps!

Basic Safety

When finished dispose of the needle into the sharps container.

Video on removing a suture from the packet

Video on simple interrupted suture

Video on figure of eight suture

Practical Exercise 2

- Suture the extraction sites:
  - Everyone must:
    - Place one simple interrupted suture across a socket
    - Place one figure of eight suture across a socket.
  - Retractors are available to hold the cheeks out of the way
  - Take it in turns to suture, retract and cut

Finishing Off

- Dispose of the suture needle in the sharps bin
- Ensure everyone in your group has disposed of the sharps
- Remove the bone model from the head
- Replace the plate ready for the PM CSSL class