

SURGICAL EXTRACTIONS AND MINOR ORAL SURGERY

LEARNING OUTCOMES

- Describe indications for surgical asepsis techniques
- Describe a basic overview of wound healing
- Perform the basic steps to raise a simulated mucoperiosteal flap
- Discuss advantages and rationales for suture selection
- Explain common surgical complications and understand principles of management

RECOMMENDED READING



Fragiskos, Fragiskos D, *Oral Surgery* (Springer Berlin Heidelberg, 2007)
- Available online via UWA

MEDICAL CONSIDERATIONS

- Diabetes – medications, control, eaten before?
- Cardiac – hypertension, ischaemic heart disease
- Drugs - anticoagulants
- Neurological – seizures, recent TIA
- Immunocompromised by disease or medications
- Steroids (long term use and adrenal insufficiency)

MEDICAL CONSIDERATIONS

- If in doubt – speak to patients GP or specialist physician for advice






PERIOPERATIVE INFECTION CONTROL






- Enhanced precautions:
 - Sterile gloves
 - Surgical hand hygiene
 - Sterile drapes
 - Sterile irrigation solutions (note difference between irrigation and injection)
 - Surgical cap
- Apply when:
 - Elevation of a mucoperiosteal flap
 - Surgical penetration of bone

SHARPS MANAGEMENT

- Clinician who has used a disposable sharp item is responsible for immediate safe management AND disposal after use.
- OHCWA – Dispose of needles as soon as they have been used.
- Follow protocol with Ash Jenker

Safe Assembly & Disassembly of Local Anaesthetic

 <p>1 New needle</p>	<p>Choose the correct needle (25 or 27 gauge) and anaesthetic cartridge.</p>
 <p>2 Remove stub cap</p>	<p>Holding the sheathed needle in your dominant hand, use your other hand to remove the stub cap in the direction AWAY from the needle.</p>
 <p>3 Unlock syringe handle, fit sheathed needle to syringe</p>	<p>Next, pick up the syringe and screw the sheathed needle on to the syringe in a clockwise direction.</p>
 <p>4 Insert cartridge into syringe</p>	<p>Unlock the syringe handle and insert the correct end of the LA cartridge (i.e. the rubber diaphragm end first with the rubber plunger end furthest away) into the syringe with a firm push to ensure that the needle pierces the rubber diaphragm.</p>
 <p>5 Lock in position and pierce cartridge by pushing down on the syringe handle</p>	<p>Lock the syringe handle and gently push down on the plunger to confirm that the needle has pierced the cartridge – some LA solution should be seen to be ejected into the needle cap. This also confirms that the needle did not bend when engaging the rubber diaphragm.</p>

 <p>6 Remove sheath from needle</p>	<p>Holding the syringe in your dominant hand (with your thumb on the plunger), with your other hand, remove the sheath in the direction AWAY from the needle and place in the Needle Recapping Device.</p>
 <p>7 Place sheath in Jenker whilst injecting anaesthetic</p>	<p>Administer the local anaesthetic.</p>
 <p>8 After injection, fit the needle to the sheath with one hand and remove out of the Jenker</p>	<p>WITH ONE HAND, firmly fit the needle into the sheath and you will hear a click when the sheath is fitted. You must never hold the Needle Recapping Device with the other hand whilst fitting the needle into the sheath. Note that the Needle Recapping Device is stable enough and stays upright.</p>
 <p>9 Disconnect the sheathed needle from the syringe and place in sharps bin</p>	<p>Holding the syringe in your dominant hand, use artery forceps to grab on to the hub of the needle (not the sheath) with the other hand. While holding on to the hub with the artery forceps, unscrew the syringe in an anti-clockwise direction with your dominant hand, and remove syringe in the direction AWAY from the needle. Place the needle straight in the sharps bin.</p>
 <p>10 Remove empty cartridge by pulling back the syringe</p>	<p>Pull back the plunger, unlock the syringe handle, remove the empty cartridge and place in the sharps bin.</p>

SHARPS MANAGEMENT

- Additional sharps will be present with surgical extractions:
 - Scalpel blade
 - Must be placed down in a KNOWN location if intending to be re-used
 - In theatre a kidney dish is used
 - In my practice a disposable tray is used to hold sharps
 - Consider disposal once you identify it will no longer be used
 - Disposal will depend on whether disposable handle or disposable blade + reusable holder

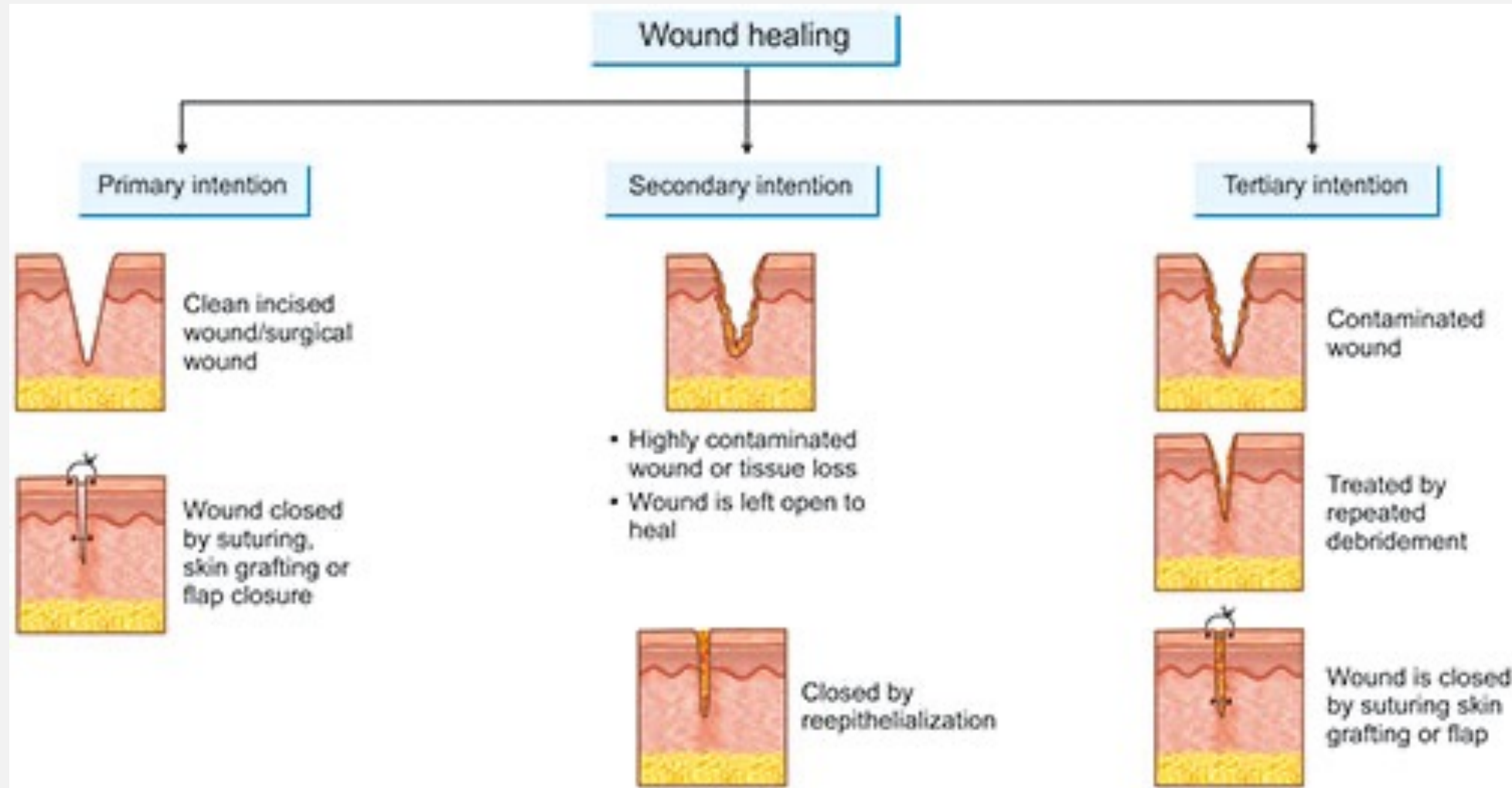
Videos of scalpel blade insert/removal and flask

SHARPS MANAGEMENT

- Additional sharps will be present with surgical extractions:
 - Suture needle
 - We have discussed safe mounting and unmounting protocols
 - Whilst at OHCWA try and minimise holding the needle or putting hands in the way of the sharps
 - Increased number of sharp injuries in 2025.

WOUND HEALING

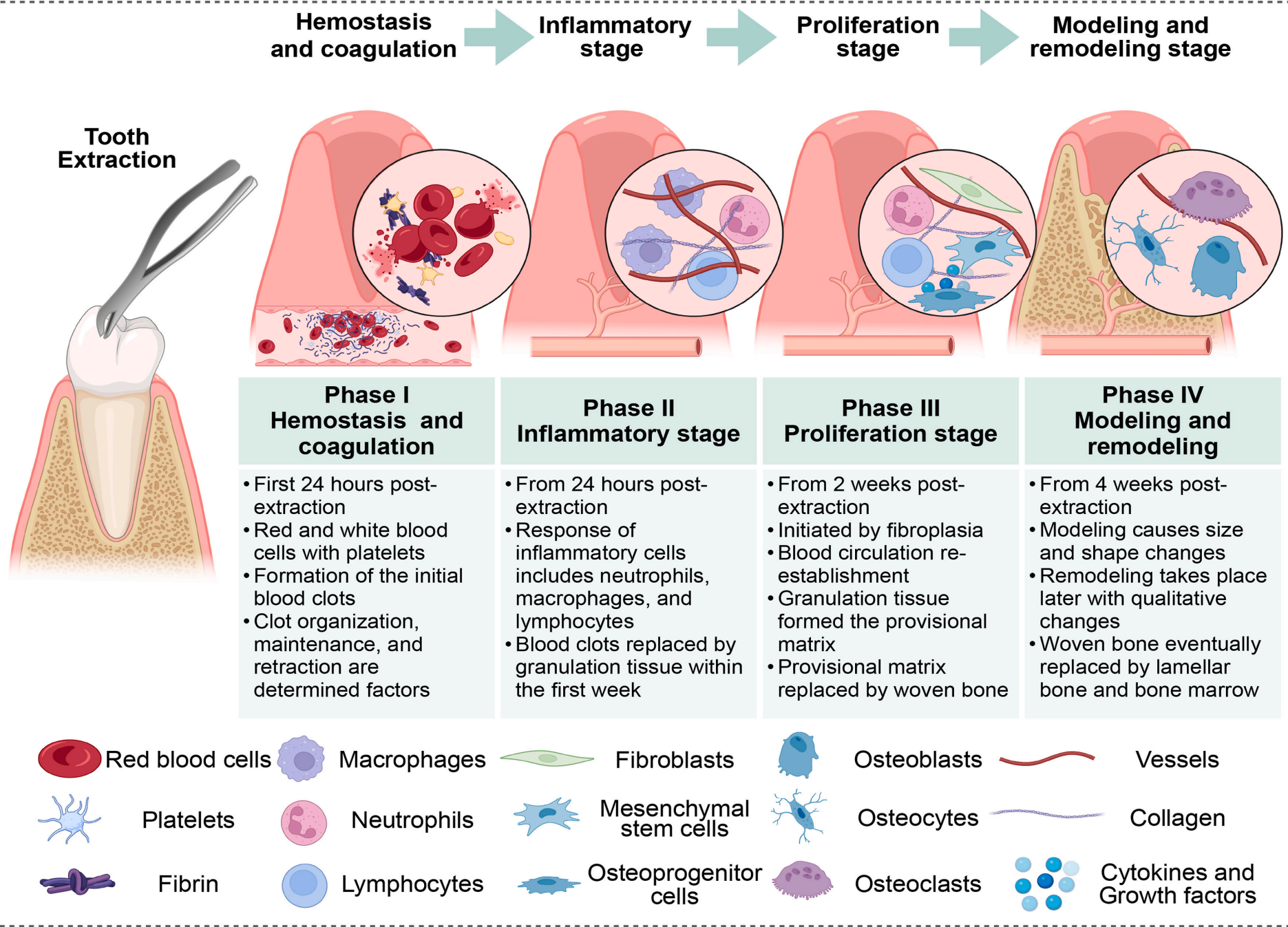
SOFT TISSUE WOUND HEALING



Regeneration > fibrosis

Fibrosis > regeneration

'Delayed primary closure'



A



Average horizontal bone loss of 3.4mm

Average vertical bone loss 1.33mm on the buccal and 0.5mm lingual

B



Socket preservation with synthetic materials may help to mitigate effects

SOCKET HEALING

- Socket healing is influenced by:
 - Local factors – infection and poor perfusion
 - Systemic factors – hormones, stress, blood glucose, other deficiencies
 - Iatrogenic – tissue trauma
- Socket healing is a process which results in volumetric changes to the alveolar bone.

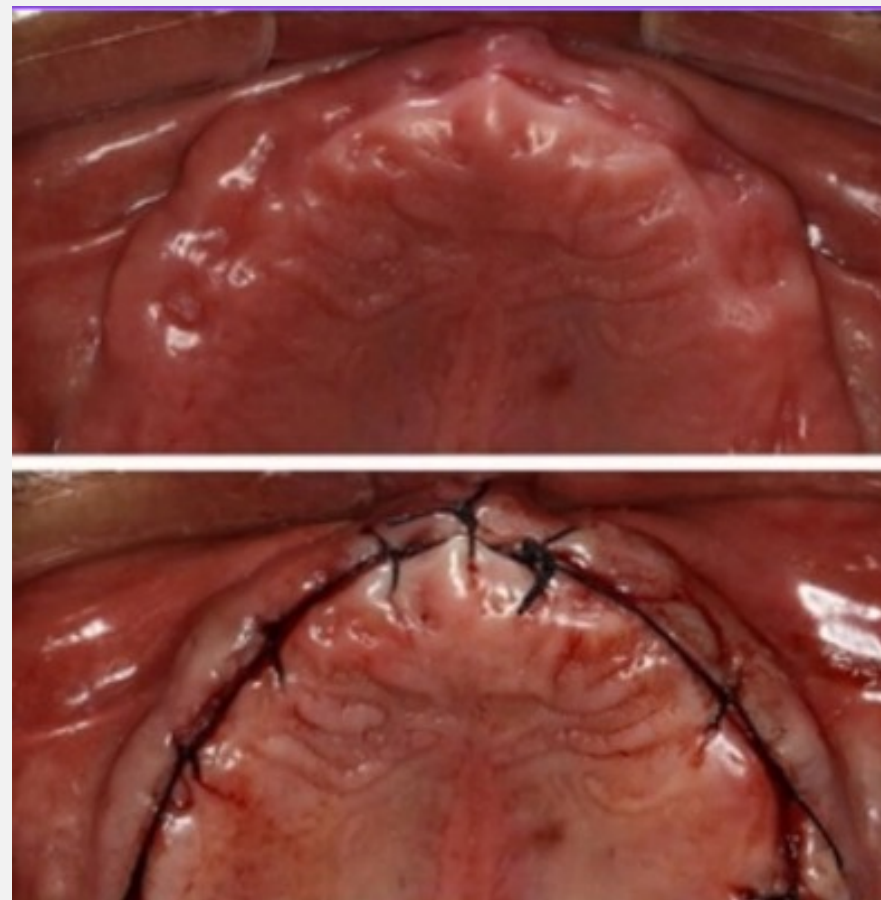
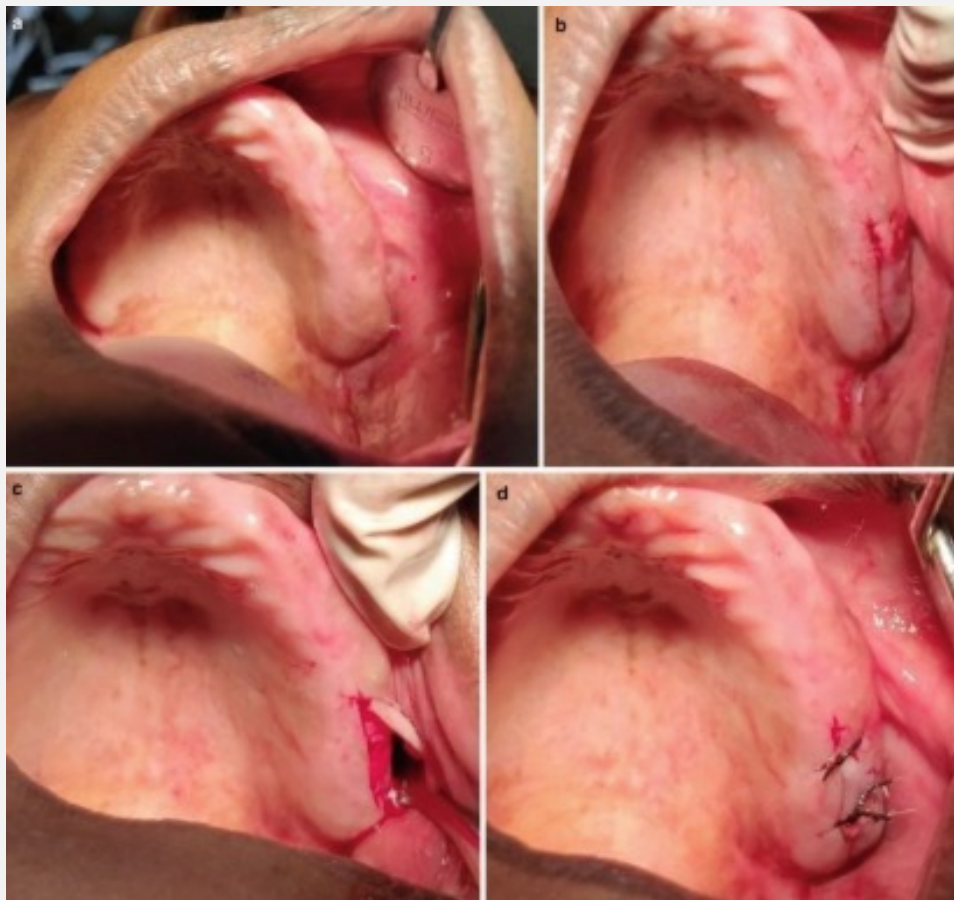
**MORE TO COME IN
PERIODONTOLOGY LECTURES**

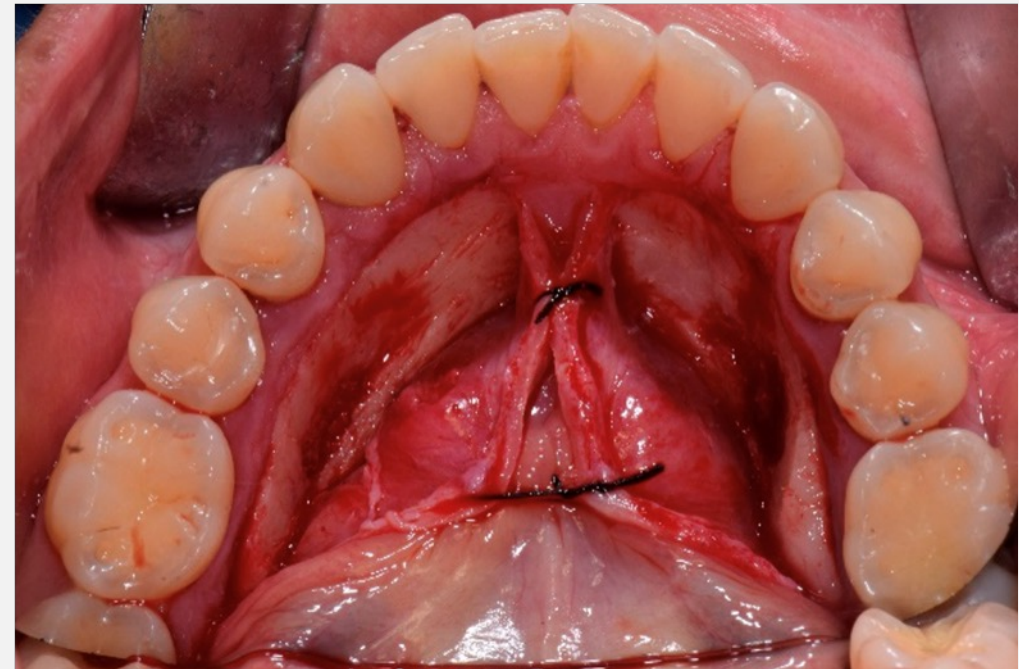
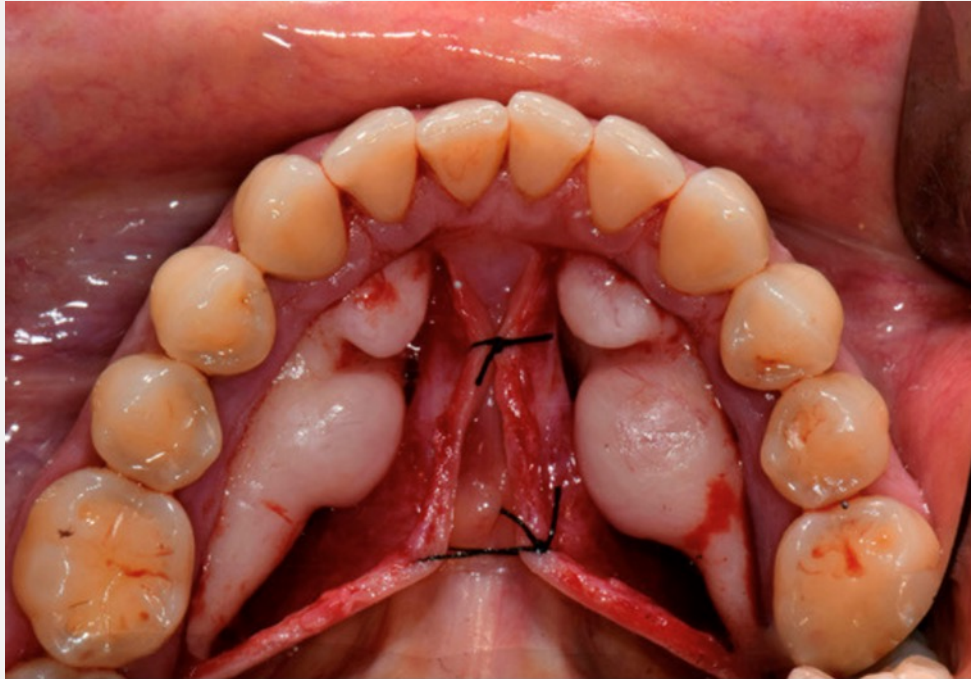
INDICATIONS FOR SURGICAL TREATMENT

- Difficult extraction anticipated
- Impacted/retained or buried tooth / root
- Pathological management eg cyst enucleation / marsupialization
- Pre-prosthetic surgery

PRE-PROSTHETIC SURGERY

Surgery prior to construction of a prosthesis to assist in its function or comfort





Note, that this is NOT a common surgery due to risks

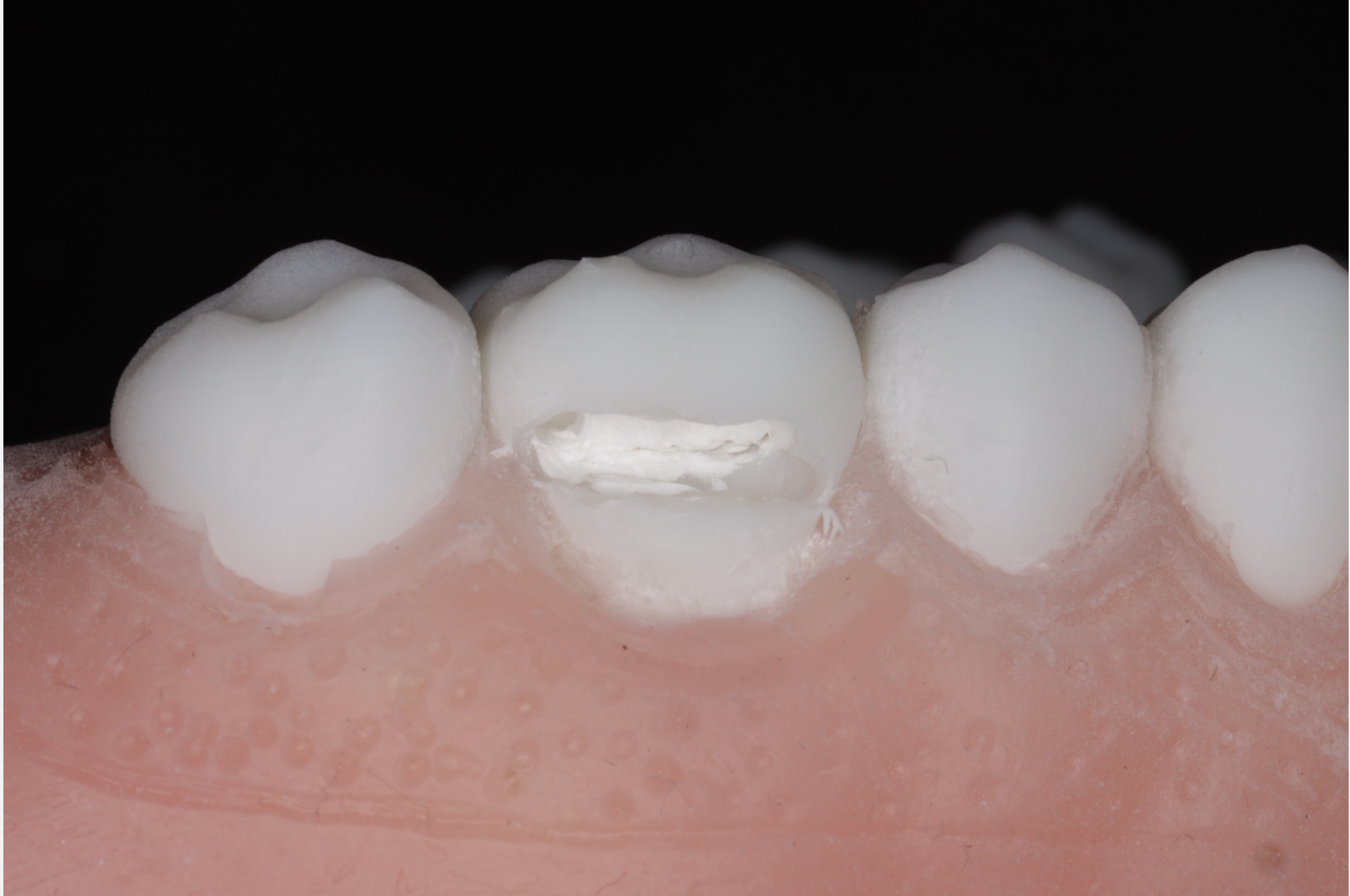
FLAPLESS SECTIONING (ITEM 314)

SECTIONING OF TEETH

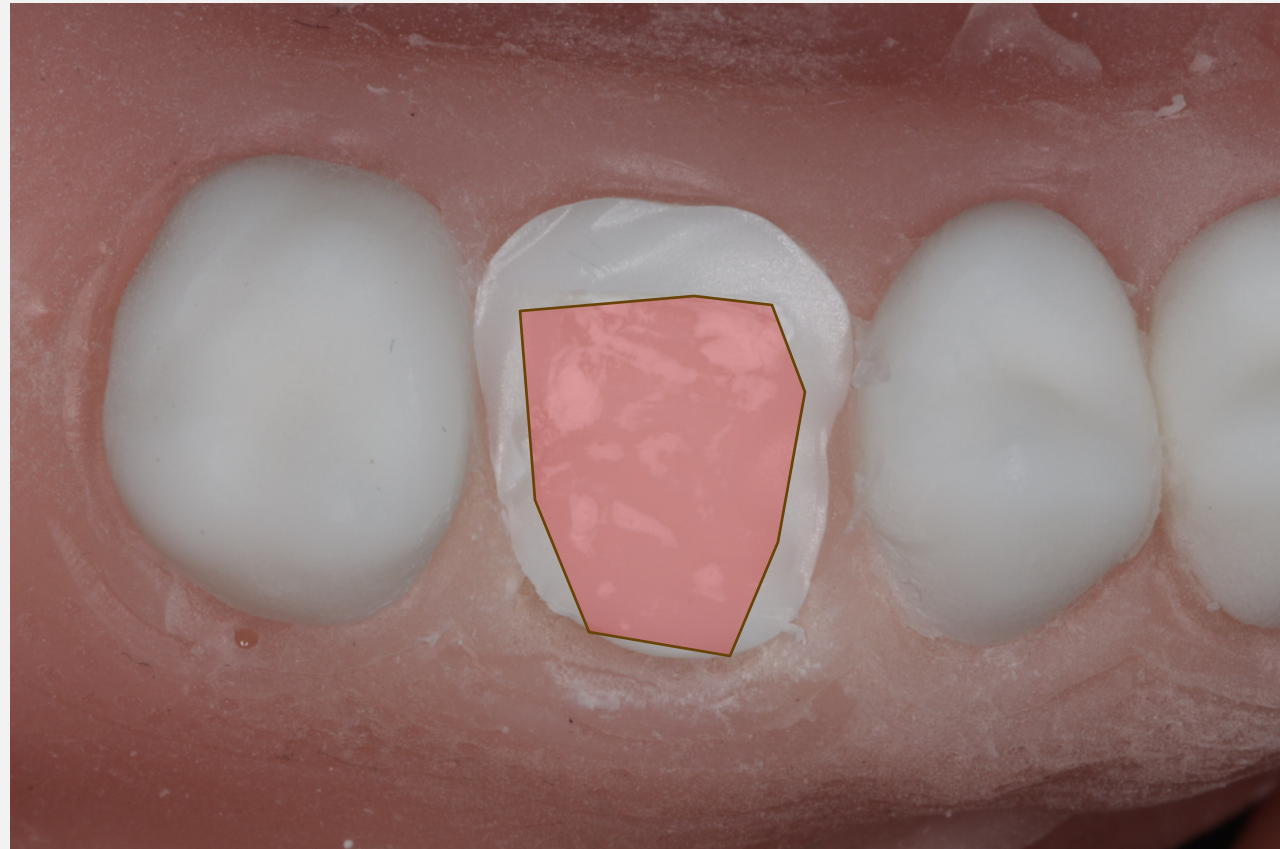
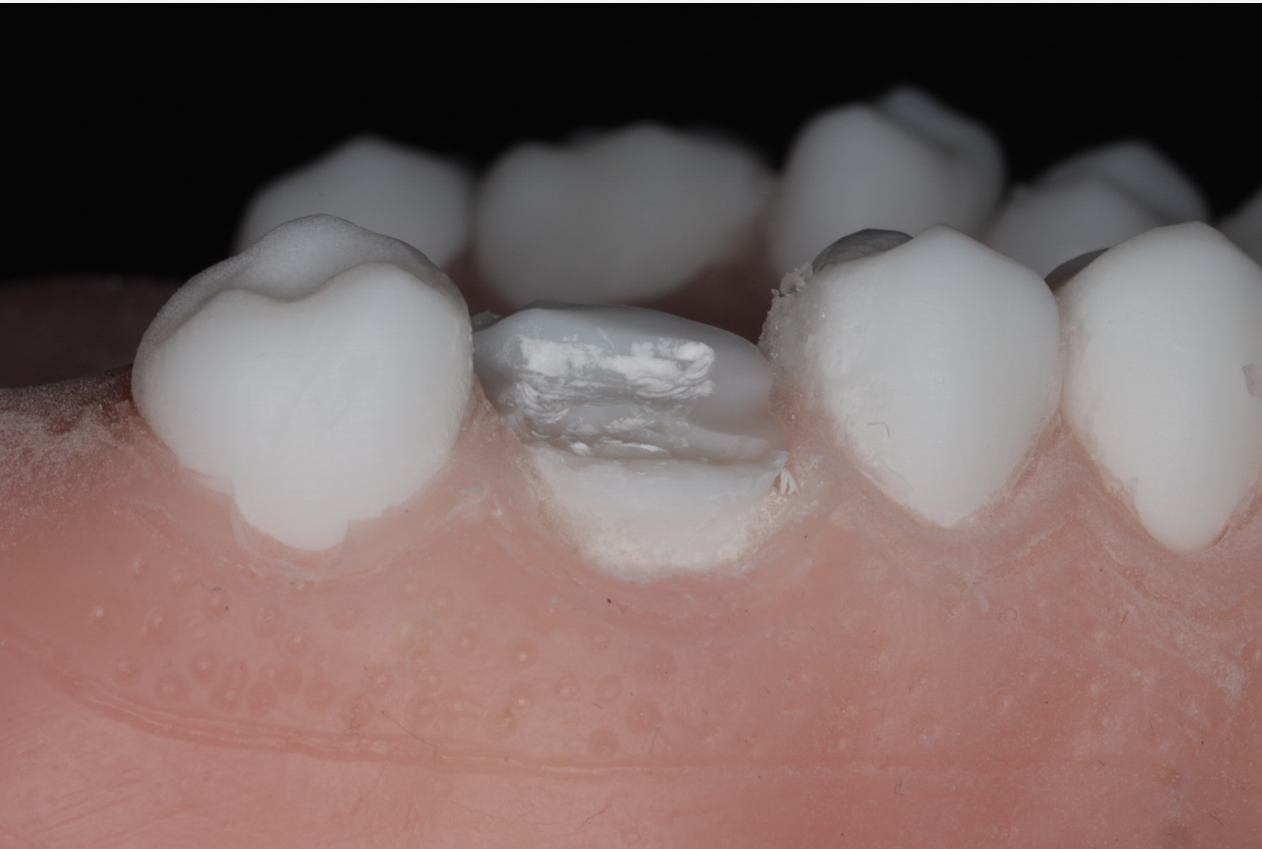
- Why section?
 - The tooth dictates it:
 - Complex anatomy (divergent roots OR higher risk of complications)
 - Gross caries and lack of purchase points
 - The long-term plan dictates it:
 - Minimising trauma and bone loss
 - Socket preservation
 - Prosthetic replacements – bridge/implants

INSTRUMENTS REQUIRED

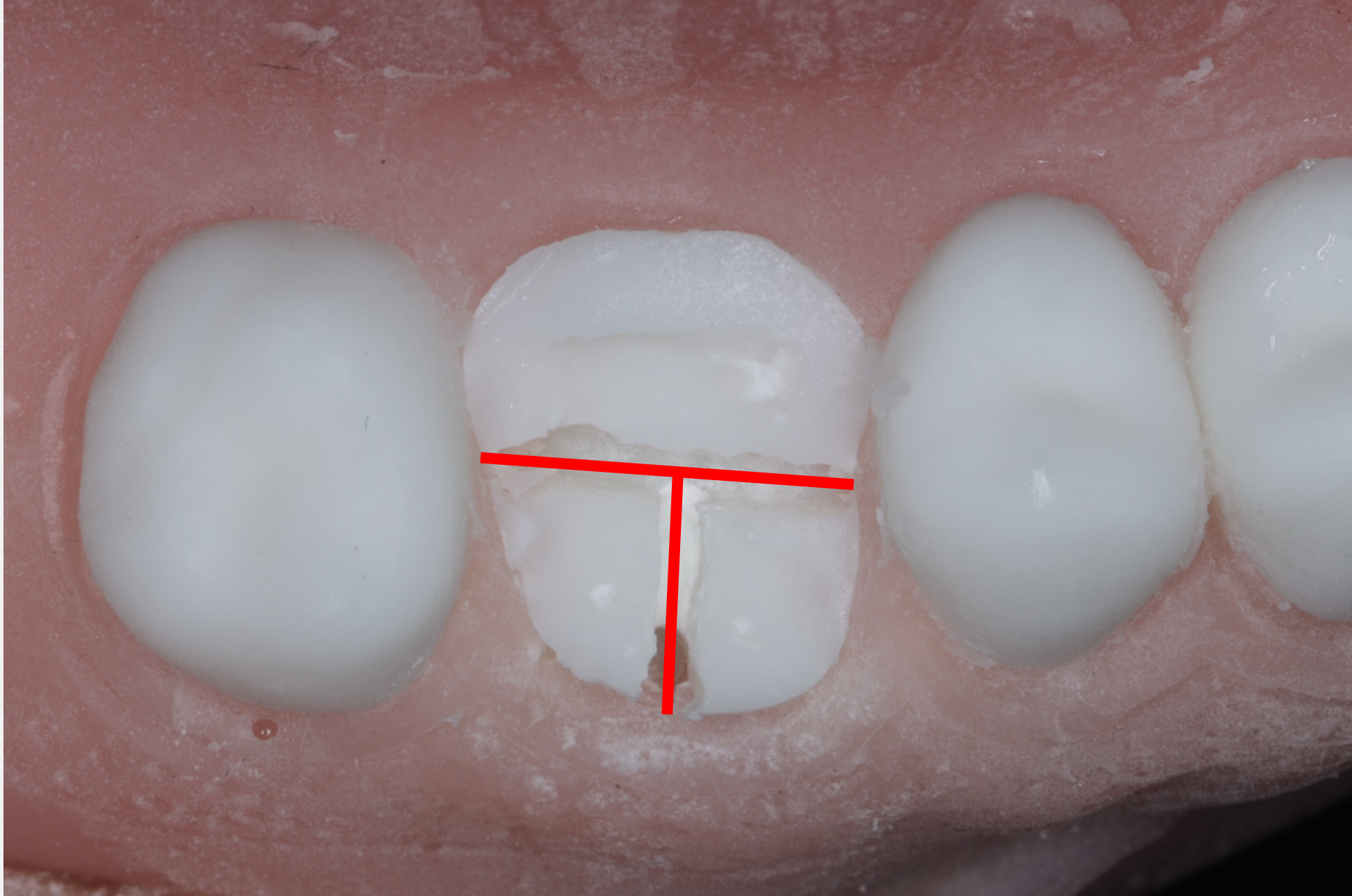
- Handpiece
 - If absolutely sure no flap raised then can use restorative high speed + course diamond (if taking this approach, must not fully section through – i.e must not touch bone)
 - If unsure about attached gingival tissue – straight handpiece and surgical bur
 - Round OR flat fissure (clinician dependant)
 - Will require manual irrigation (saline for irrigation)
- Elevator
 - For propagating the fracture
- Forceps
 - Usually the fine variation for singular root removal
 - May elect to use cowhorns to section



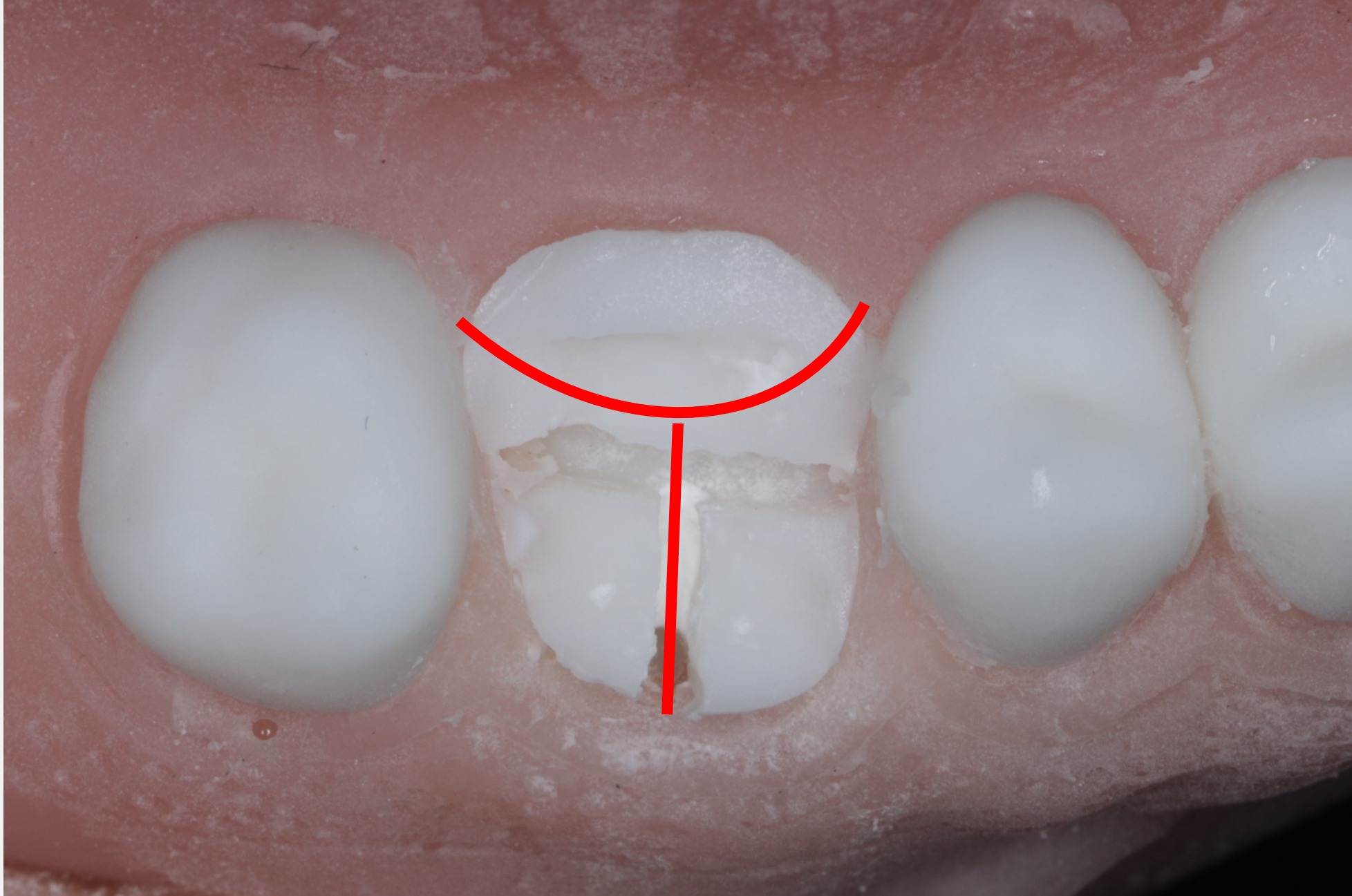
Section 80% through the crown.



Elevate off the crown, (in a non plastic tooth) this will expose the pulp chamber
Shaded area in red shows how bur penetrated into the crown and then 'swept'



Section through the furcation



Section through the furcation (alternate approach)



Elevate the roots out one-by-one



Elevate the roots out one-by-one



Elevate the roots out one-by-one

WHAT DO WE MEAN WHEN WE SAY SURGICAL EXTRACTION?

- Elevation of a mucoperiosteal flap
 - May be in isolation, e.g root
- Surgical penetration of bone

PRINCIPLES OF FULL THICKNESS MUCOPERIOSTEAL FLAP DESIGN

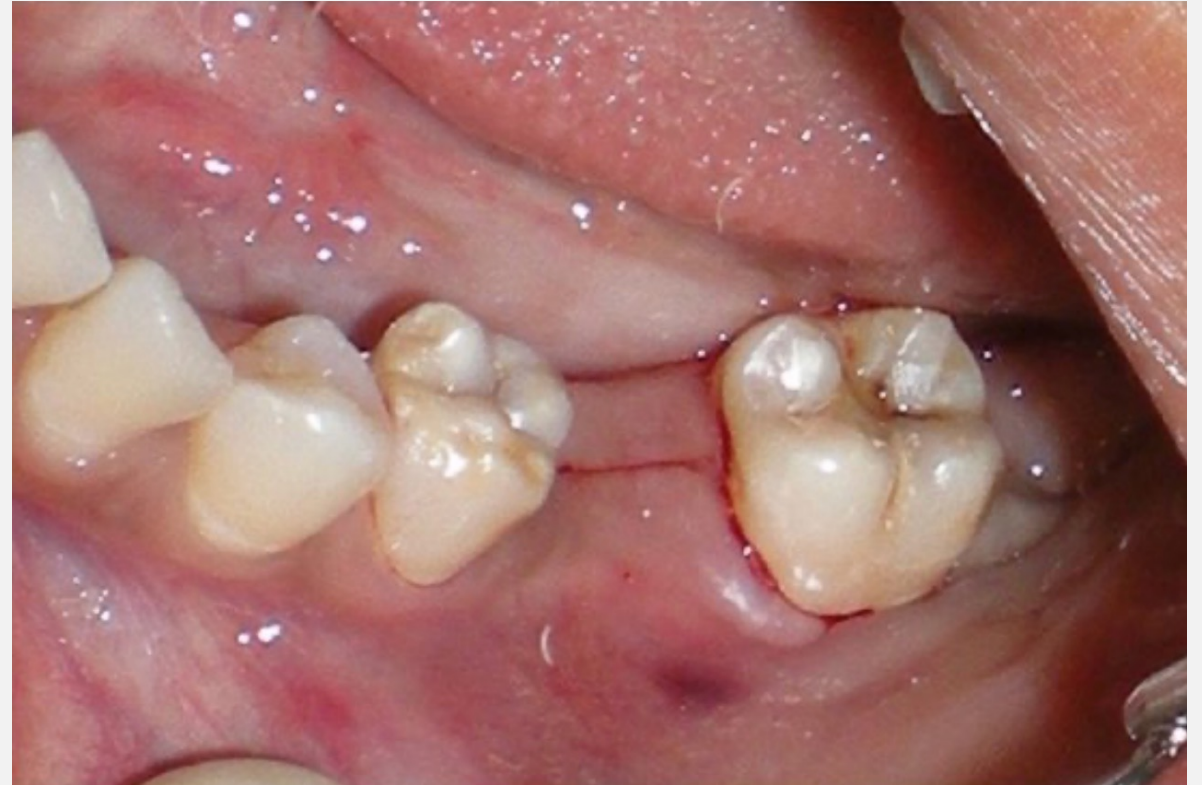
- Think clearly about what our surgical field needs to be – this dictates the flap
- Be conscious of how the flap will be closed
- When considering the flap design, ensure:
 - Broad base (base wider than the free margin)
 - Incision made perpendicular to the mucosa
 - Incision down to bone
 - Minimise trauma to the papillae

FLAP DESIGNS

Videos on different types of flap to raise

OTHER FLAP DESIGNS

- Crestal
 - Retained roots?
 - Implants



Beldar, Amol & Bhongade, Manohar & Byakod, Girish & Buregoni, Chandrashekar. (2013). Early Loading of Single-Piece Implant for Partially Edentulous Posterior Arch: A Prospective One-Year Case Report. Case reports in dentistry. 2013. 854062. 10.1155/2013/854062.

OTHER FLAP DESIGNS

- Crestal
- Semilunar

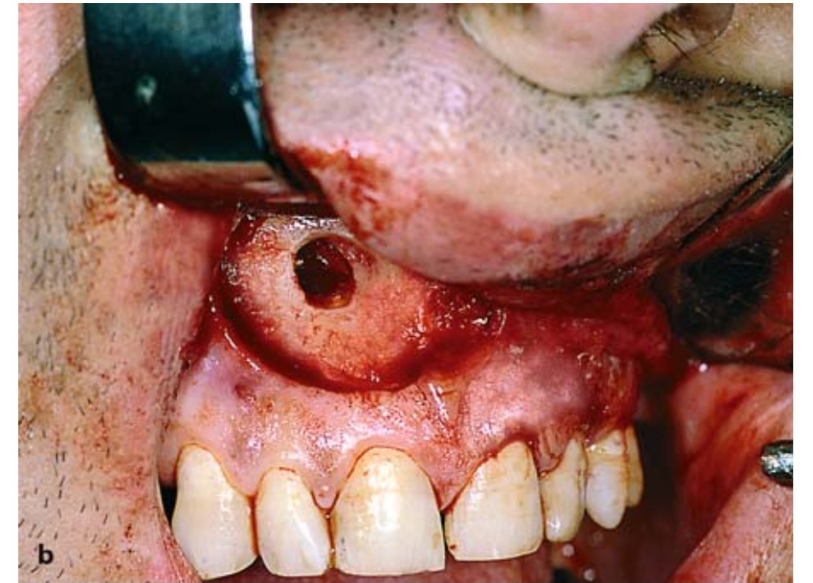
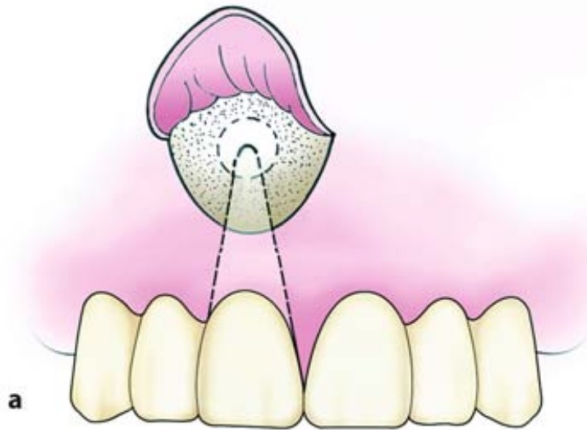


Fig. 3.12 a, b. Semilunar flap. **a** Diagrammatic illustration. **b** Clinical photograph. It is used in apicoectomies and removal of small cysts and root tips

OTHER FLAP DESIGNS

- Crestal
- Semilunar
- Pedicled flaps (see later slides on OAC)

**FLAP AND BONE REMOVAL +/-
SECTIONING**

FLAP AND BONE REMOVAL +/- SECTIONING

- The tooth may be grossly carious, or a retained root fragment
- It may not be possible to identify key landmarks or create any form of purchase point
- Sometimes it is necessary to raise a full thickness mucoperiosteal flap, remove bone:
 - Mesial/distal
 - Buccal
- Remember the point of this is to make space to help elevate out the tooth and **no more.**
 - Any bone removal will worsen the healing outcomes – larger buccal defects or periodontal defects

FLAP AND BONE REMOVAL +/- SECTIONING

- Manual irrigation is required to:
 - Wash out debris
 - Keep the bone cool
 - Necrosis of the bone has been demonstrated if the temperature of the bone exceeds 47 degrees for 1 minute or more¹

Video on bone removal on model

FLAP AND BONE REMOVAL +/- SECTIONING

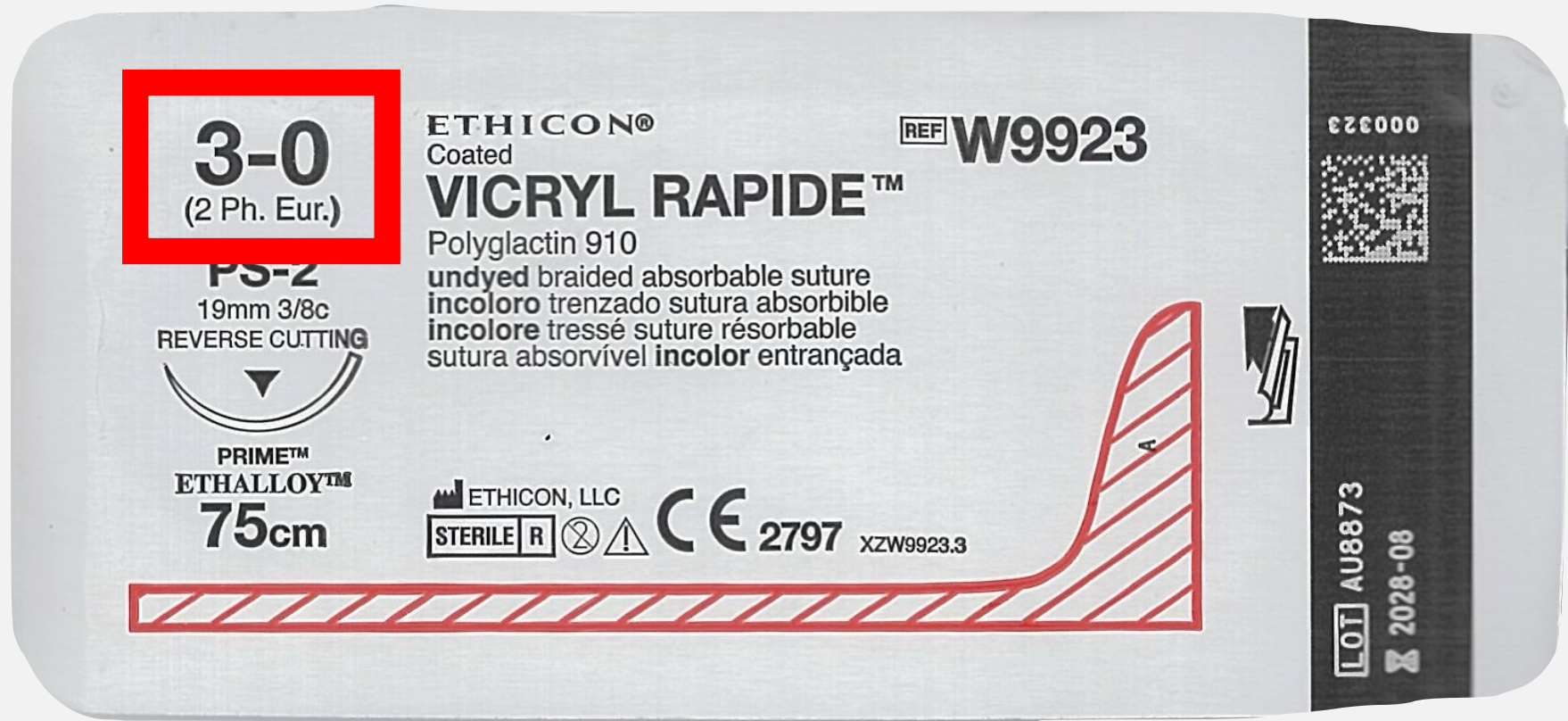
- If single rooted:
 - Enough space is made to elevate or grasp with forceps
- If multi-rooted:
 - A decision made as to whether to elevate/grasp with forceps OR
 - Section roots
 - Remembering now a mucoperiosteal flap has been raised, only the straight handpiece can be used

FLAP AND BONE REMOVAL +/- SECTIONING

- Once all fragments removed, as per previous discussion:
 - Ensure apices intact
 - Inspect socket walls
 - Consider curettage and irrigation to remove granulation tissue

ADVANCED SUTURING

THE SUTURE PACKET



THREAD SIZE

- Initially suture threads based on large sizes - 0, 1, 2, 3, 4 etc
- As technology improved threads could become smaller without breaking.
- The system couldn't cope with smaller than 0, so they developed:
 - 00 (2 zeroes = 2/0)
 - 000 (3 zeroes = 3/0)
 - 0000 (4 zeroes = 4/0)
 - And so on..

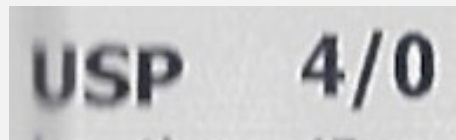
THREAD

Standardised?

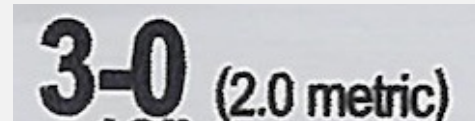
2 different standards you may see:

USP

United States
Pharmacopoeia



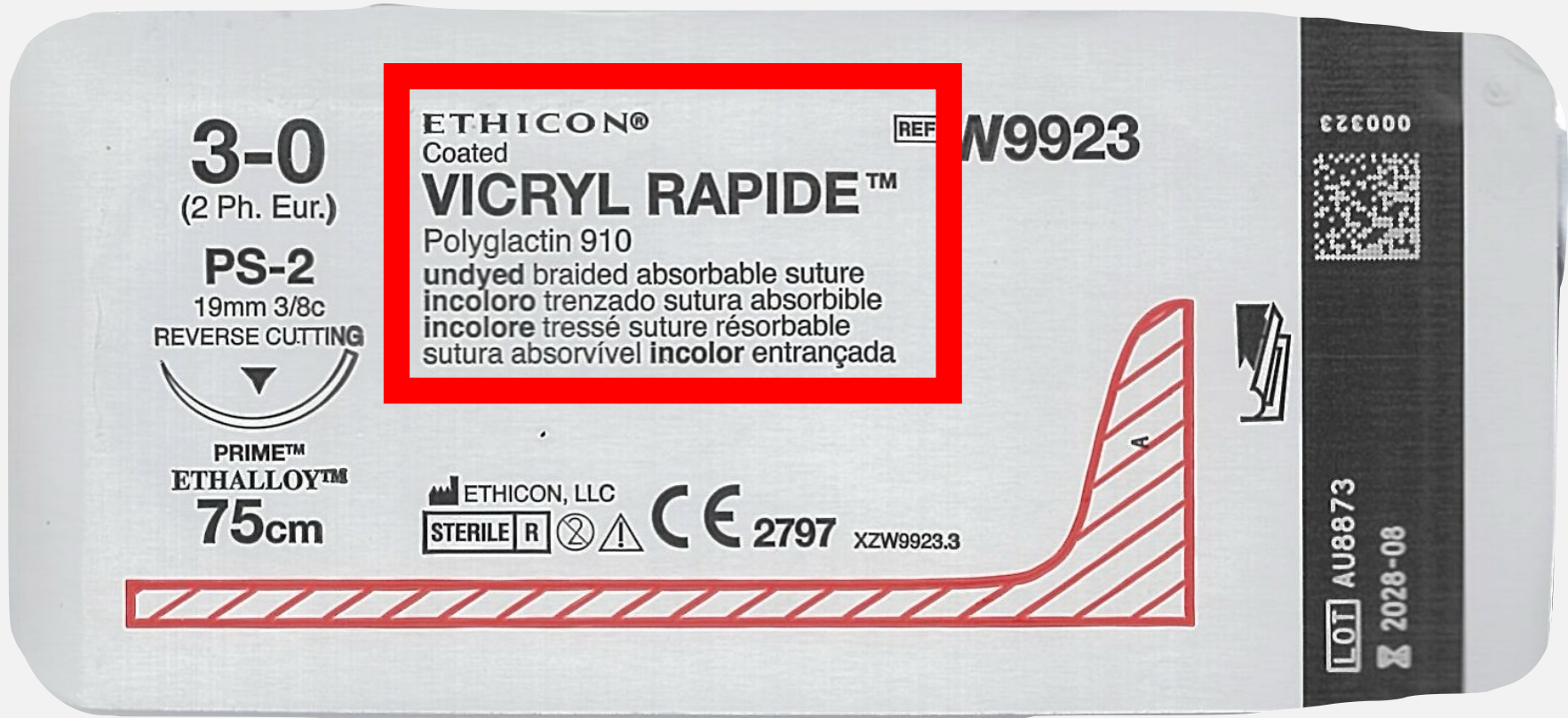
Ph. Eur // metric
European Pharmacopoeia



THREAD SIZE

EP / Metric	USP	Ø (mm)	Ø (mm) Absorbable monofilaments
0,2	10-0	0,020-0,029	-
0,3	9-0	0,030-0,039	-
0,4	8-0	0,040-0,049	-
0,5	7-0	0,050-0,069	0,050-0,094
0,7	6-0	0,070-0,099	0,095-0,149
1	5-0	0,100-0,149	0,150-0,199
1,5	4-0	0,150-0,199	0,200-0,249
2	3-0	0,200-0,249	0,250-0,339
2,5	-	0,250-0,299	-
3	2-0	0,300-0,349	0,340-0,399
3,5	0	0,350-0,399	0,400-0,499
4	1	0,400-0,499	0,500-0,570
5	2	0,500-0,599	0,571-0,610
6	3+4	0,600-0,699	-
7	5	0,700-0,799	-
8	6	0,800-0,899	-

THE SUTURE PACKET



SUTURE MATERIALS (DENTAL)

Absorbable

Synthetic

- Polyglactin 910
(Vicryl/rapide)
- Polydioxanone (PDS)

Natural

- (Chromic) Gut

SUTURE MATERIALS (DENTAL)

Absorbable

Synthetic

- Polyglactin 910 (Vicryl/rapide)
- Polydioxanone (PDS)

Natural

- (Chromic) Gut

Non-absorbable

Synthetic

- Polypropylene (Prolene)
- PTFE

Natural

- Silk

THREAD STRUCTURE

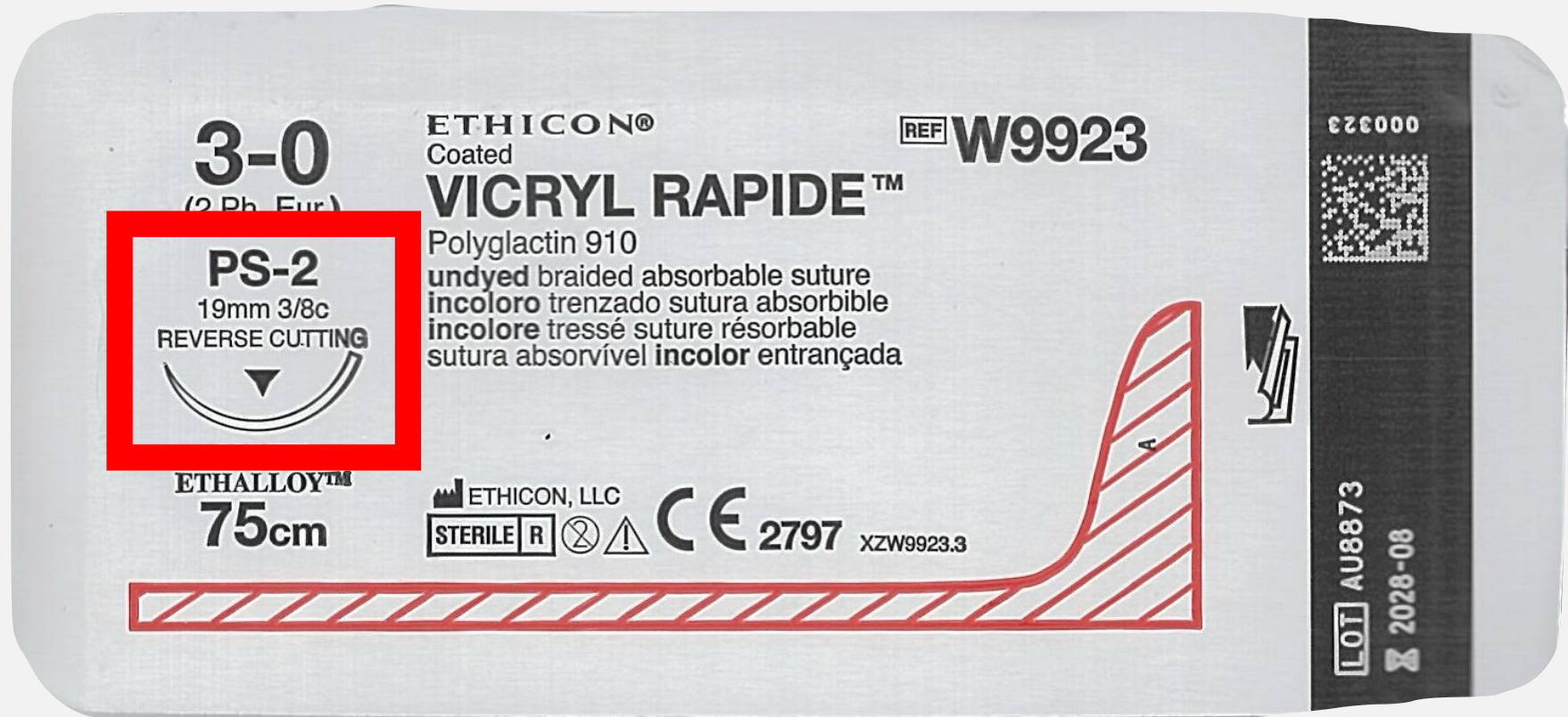
Monofilament

- Lower tissue drag
- Lower infection risk
- More difficult handling

Multifilament

- Higher tissue drag
- Higher infection risk
- Easier handling

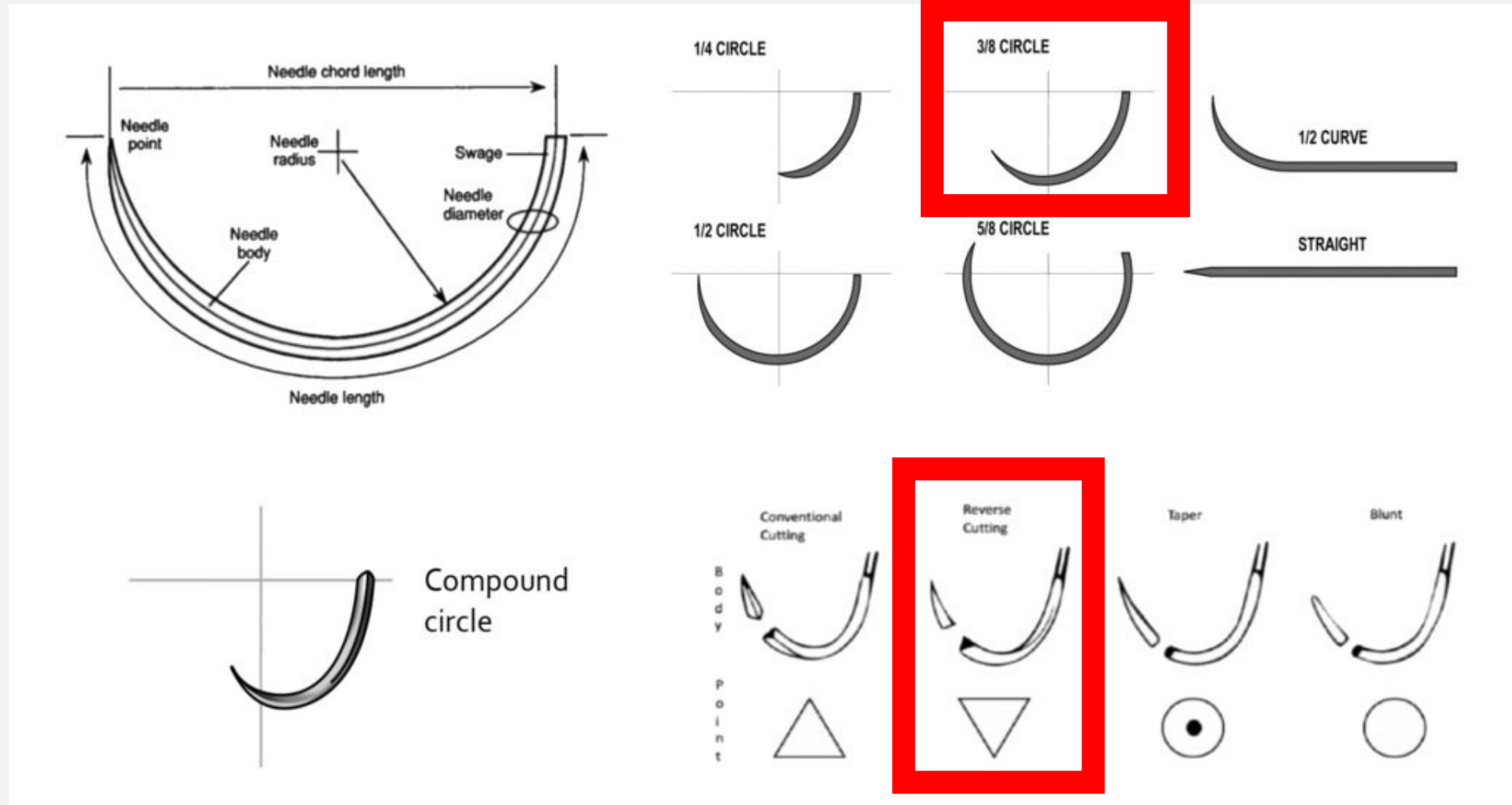
THE SUTURE PACKET



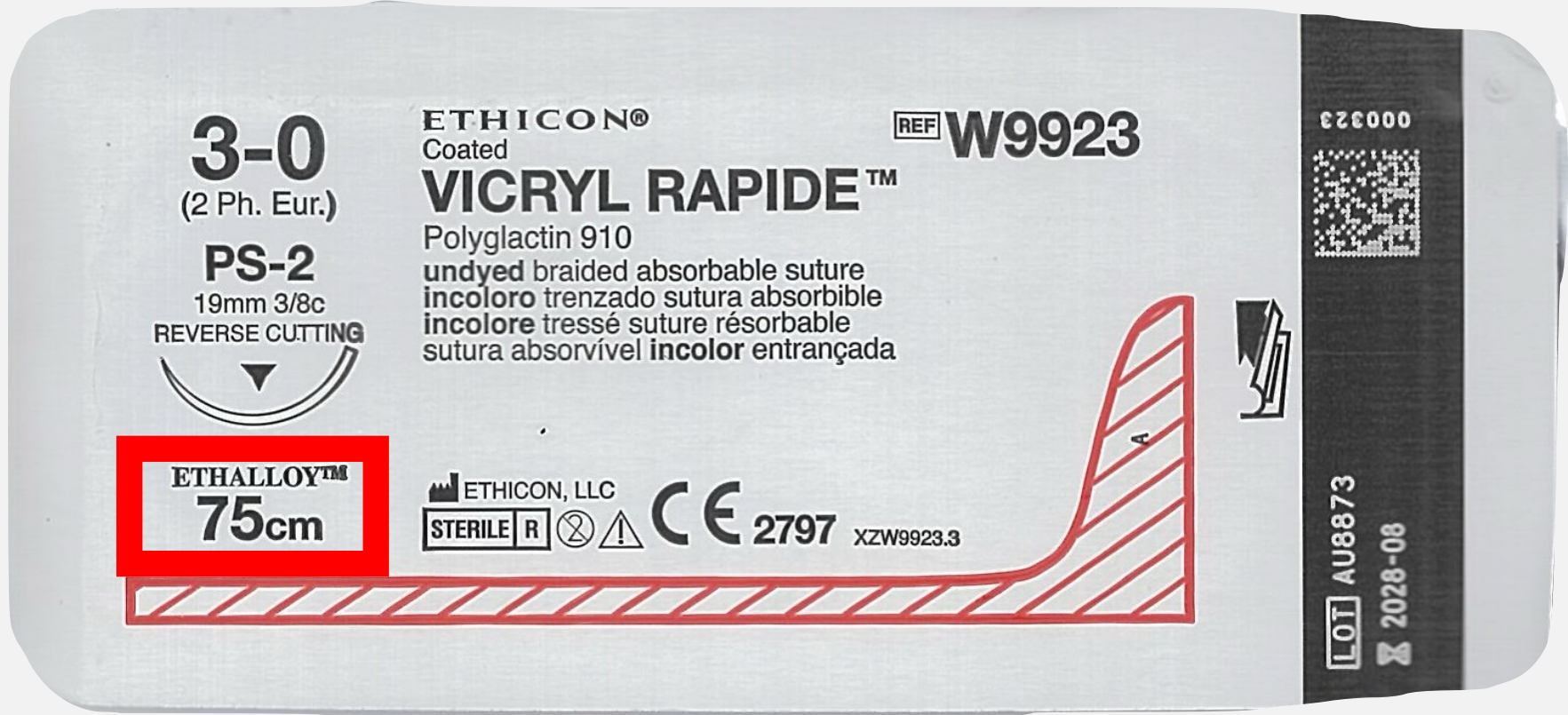
NEEDLE // ATRAUMATIC

CODE	MEANING	CODE	MEANING	CODE	MEANING
BB	Blue Baby	FSLX	For Skin Extra Large	STB	Straight Blunt
BIF	Intraocular Fixation	G	Greishaber	STC	Straight Cutting
BN	Bunnell	GS	Greishaber Spatula	STP	Straight Taper Point
BP	Blunt Point	J	Conjunctive	TE	Three-Eighths
BV	Blood Vessel	KS	Keith Straight	TF	Tetralogy of Fallot
BVH	Blood Vessel Half	LH	Large Half	TG	Transverse Ground
C	Cardiovascular	LR	Larger Retention	TGW	Transverse Ground Wide
CC	Calcified Cornary	LS	Large Sternotomy	TN	Trocar Needle
CCS	Conventional Cutting Sternotomy	M	Muscle	TP	Taper Pericostal / Point
CE	Cutting Edge	MF	Modified Ferguson	TPB	Taper Pericostal /Point Blunt
CFS	Conventional for Skin	MH	Medium Half (circle)	TS	Tendon Straight
CIF	Cutting Intraocular Fixation	MO	Mayo	TQ	Twisty Q
CP	Cutting Point	MOB	Mayo Blunt	UCL	5/8 Circle Colateral Ligament
CPS	Conventional Plastic Surgery	OPS	Ocular Plastic Surgery	UR	Urology
CPX	Cutting Point Extra Large	OS	Orthopaedic Surgery	URB	Urology Blunt
CS	Corneal-Scleral	P	Plastic	V	TAPERCUT Surgical Needle
CSB	Corneal-Scleral Bi-Curve	PS	Plastic Surgery	VAS	Vas Deferens
CSC	Corneal-Scleral Compound Curve	RD	Retinal Detachment	X or P	Exodontal (dental)
CT	Circle Taper	RH	Round Half (circle)	XLH	Extra Large Half (circle)
CTB	Circle Taper Blunt	RV	Retinal-Vitreous	XXLH	Extra Extra Large Half (circle)
CTX	Circle Taper Extra Large	S	Spatula		
CTXB	Circle Taper Extra Large Blunt	SC	Straight Cutting		
CV	Cardiovascular	SFS	Spanulated for Skin		
DC	Dara Closure	SH	Small Half (circle)		
DP	Double Point	SIF	Ski Intraocular Fixation		
EN	Endoscopic Needle	SKS	Sternotomy Keith Straight		
EST	Eyed Straight Taper	SM	Spanulated Module		
FN	For Tonsil	ST	Straight Taper		
FS	For Skin				
FSL	For Skin Large				

NEEDLE // ATRAUMATIC



THE SUTURE PACKET



LENGTH

18" or 45cm

What are you doing?

30" or 75cm

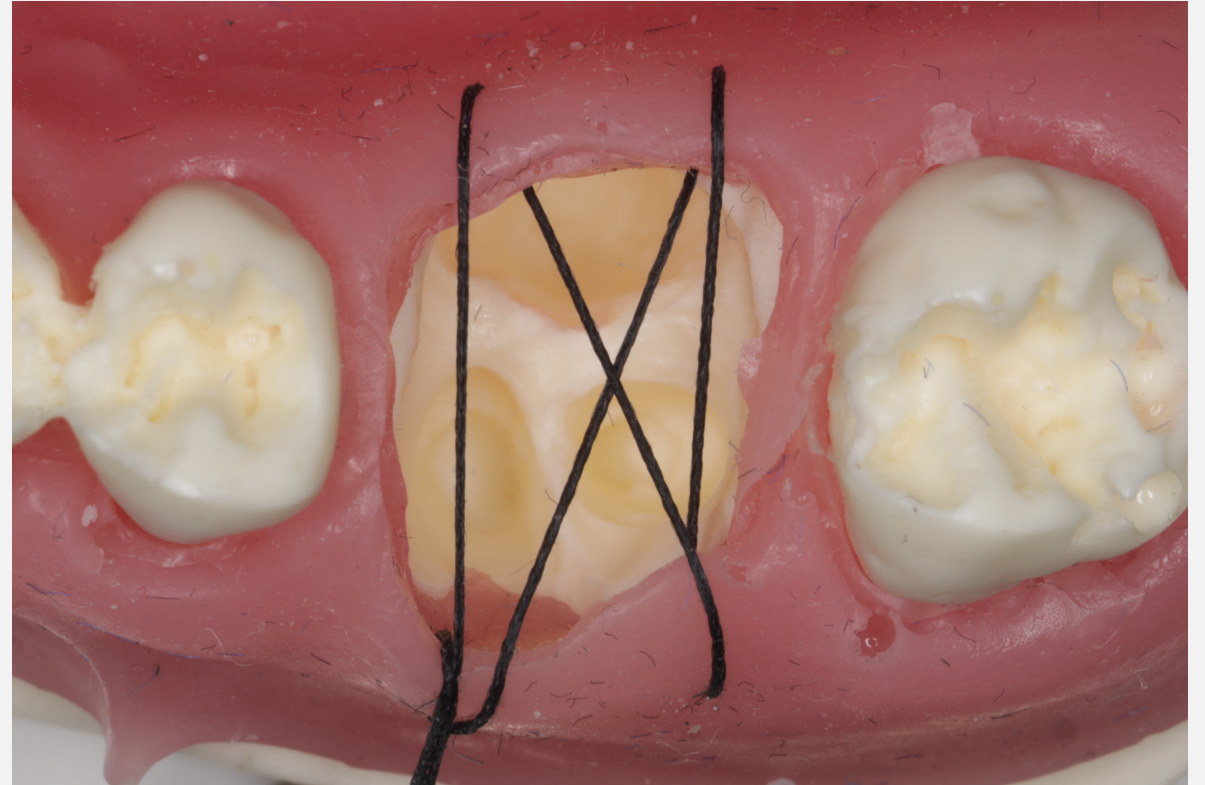
Common Suture Knots in Dentistry

Simple interrupted



Common Suture Knots in Dentistry

Figure of 8



Common Suture Knots in Dentistry

Horizontal mattress



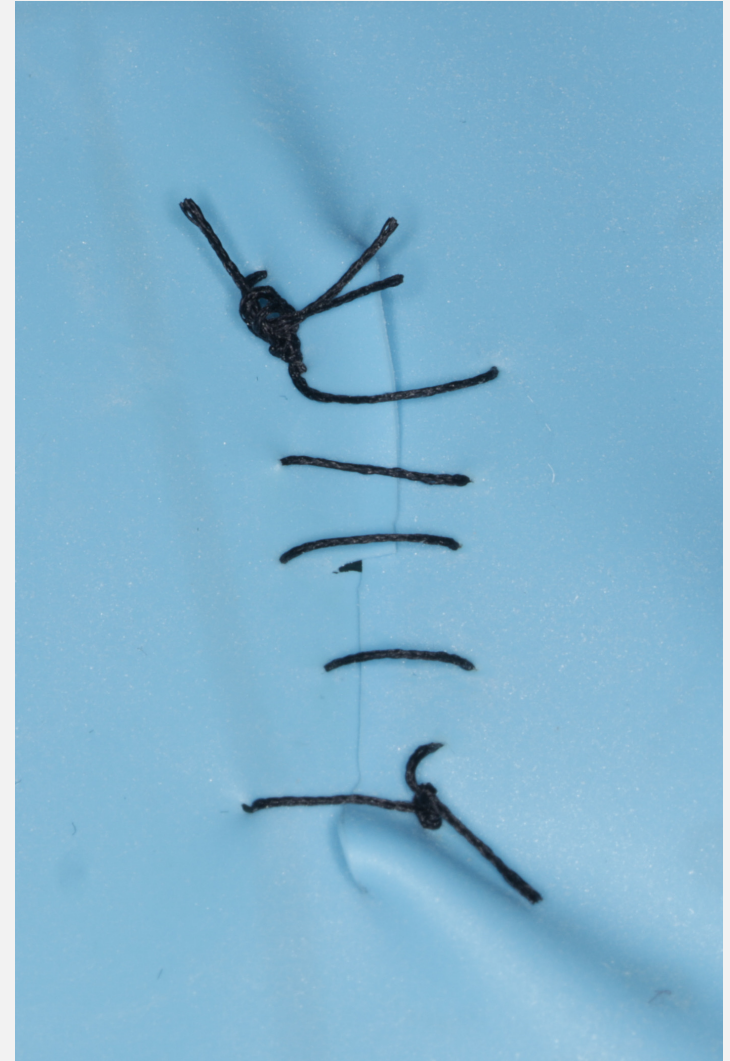
Common Suture Knots in Dentistry

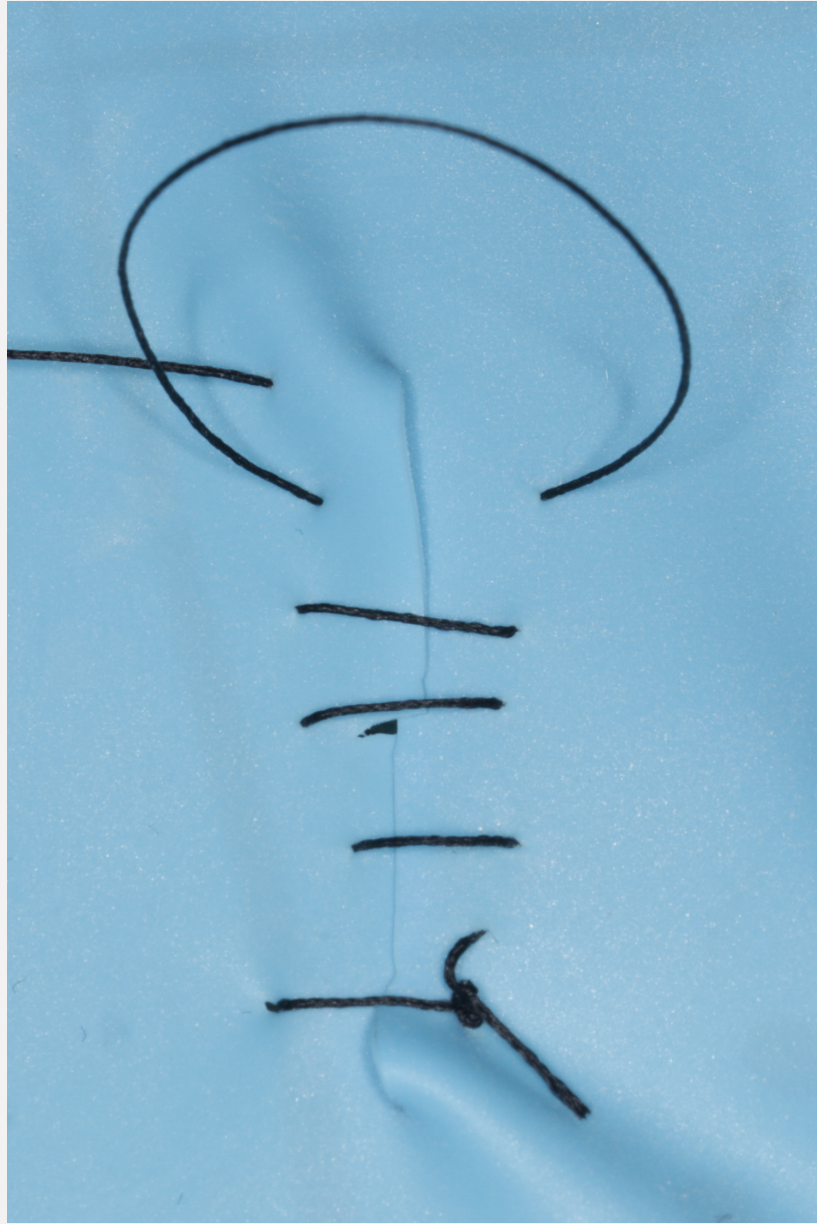
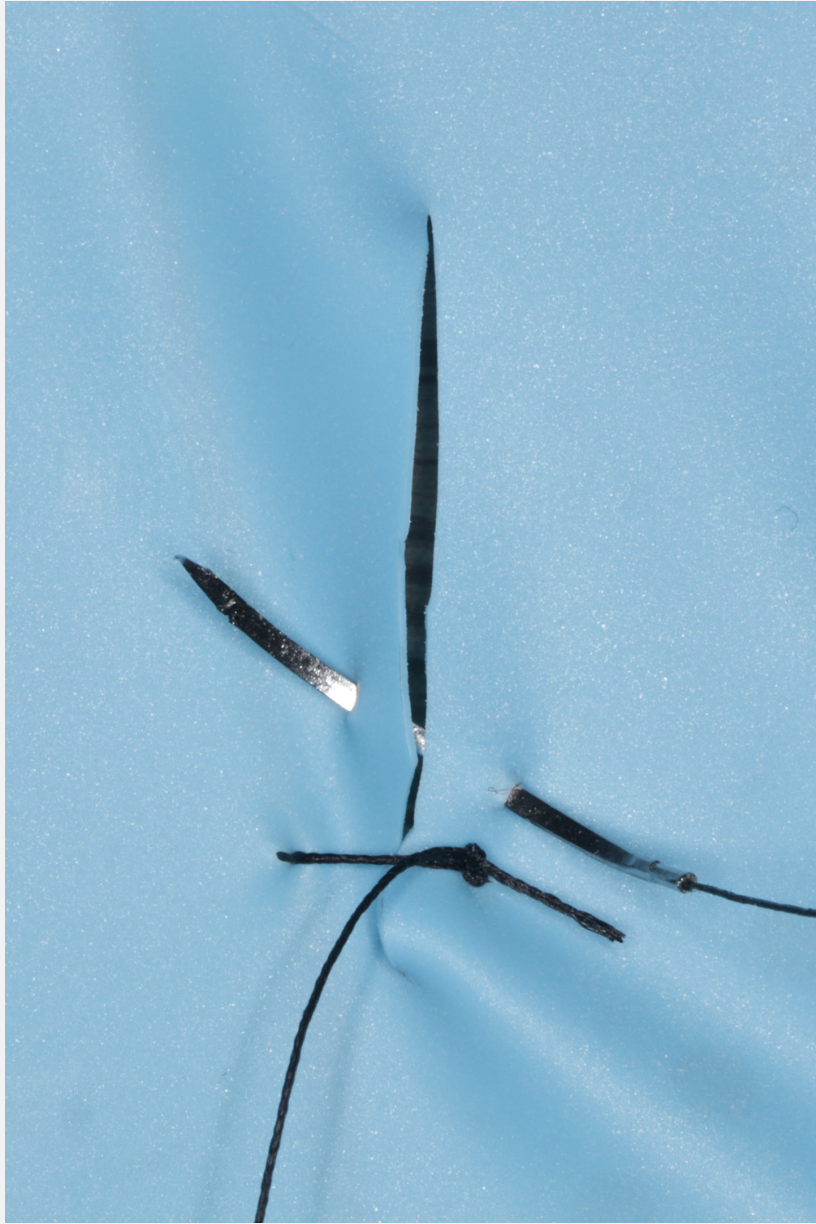
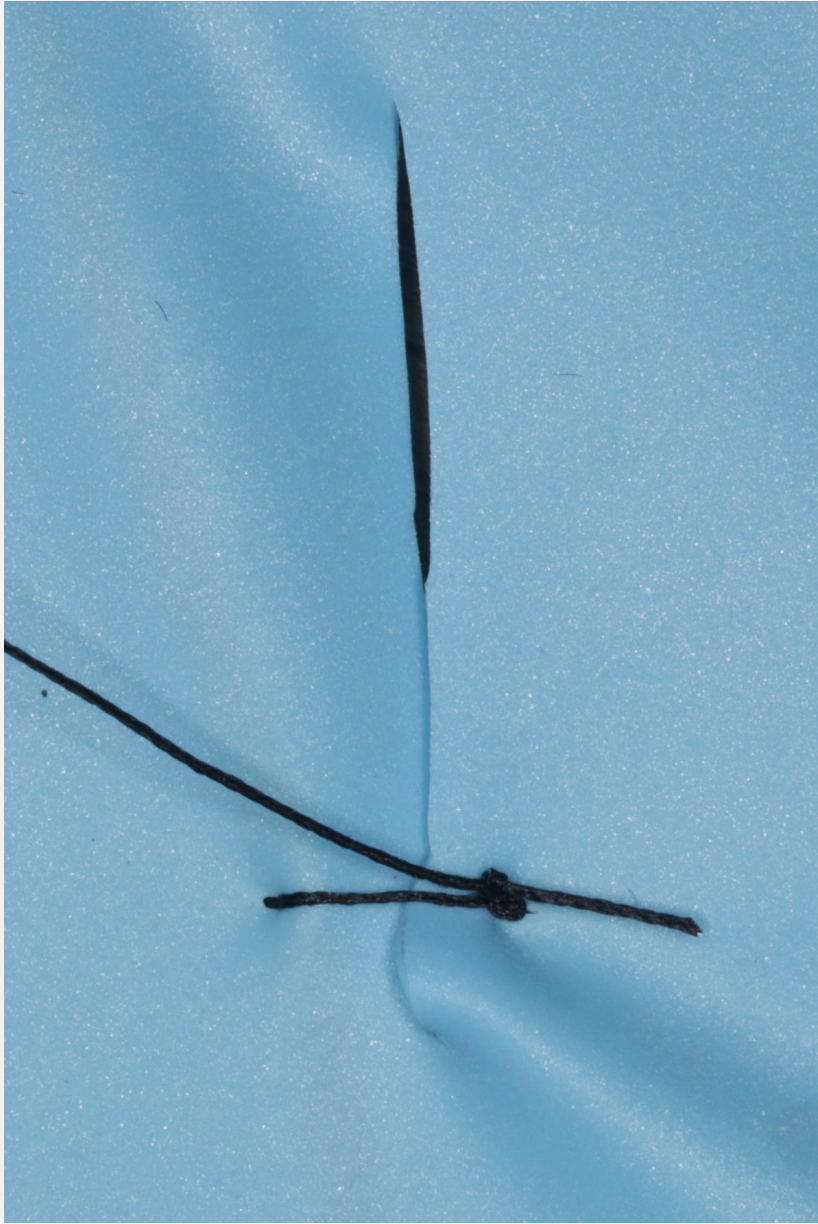
Vertical mattress



Common Suture Knots in Dentistry

Continuous

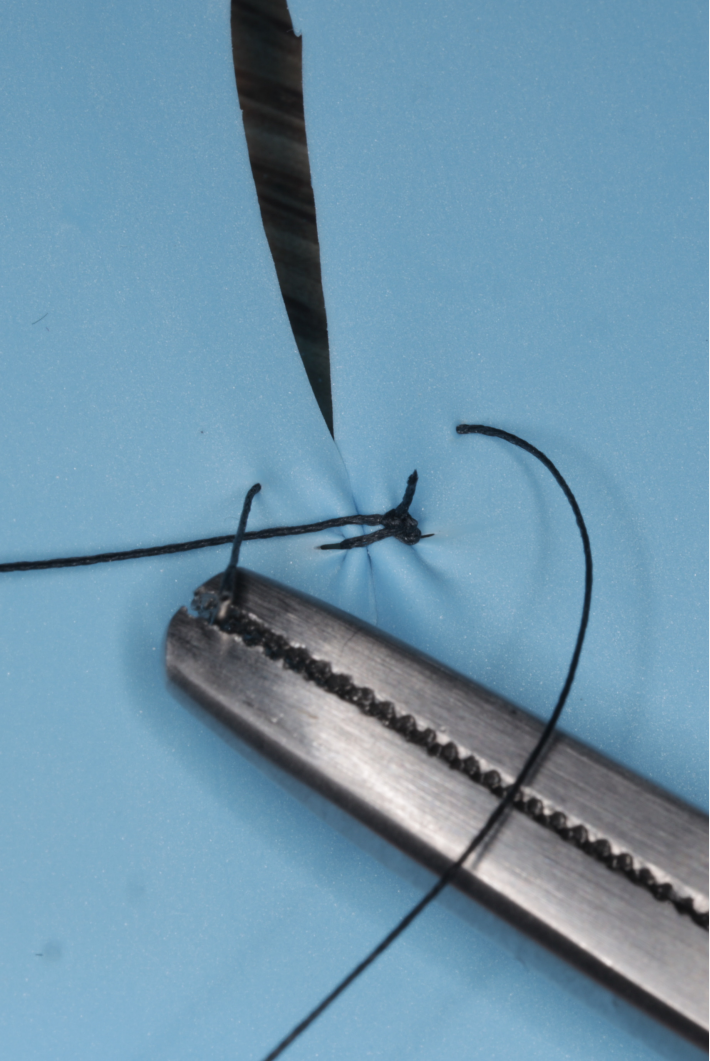
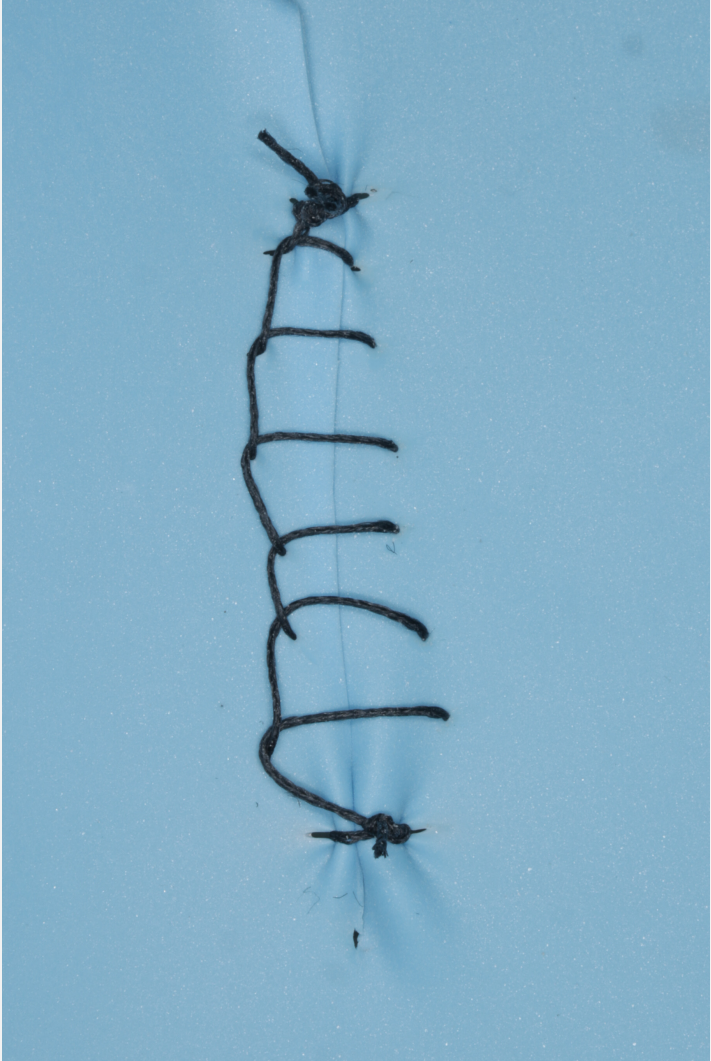






Common Suture Knots in Dentistry

Continuous Locking



Troubleshooting - Suturing

- Blunting of the needle



Troubleshooting - Suturing

- Blunting of the needle
- Straightening of the needle



Troubleshooting - Suturing

- Blunting of the needle
- Straightening of the needle
- High friction - thread and needle driver
 - Usually dried/drying blood

Troubleshooting - Suturing

- Blunting of the needle
- Straightening of the needle
- High friction - thread and needle driver
- Loose knots

Troubleshooting - Suturing

- Blunting of the needle
- Straightening of the needle
- High friction - thread and needle driver
- Loose knots
- Pulling through

COMPLICATION MANAGEMENT

BLEEDING

- Keep calm
- Assess – flow rate – minor/major
- Ensure suctioning – blood is a gastric irritant
- Think about cause – extraction socket ooze? minor artery during bone removal?
- Pressure – how it is applied is dependant on the cause
 - If extracted
 - Can you see where it is coming from?
 - Consider patient biting on some thick gauze
 - Consider firm digital pressure or pressure with an instrument
 - Think packing (haemostatic agent) and suturing
 - Bone wax?

HAEMOSTATIC AGENTS

- Spongostan
 - Off white sponge
 - Porcine gelatin sponge matrix for scaffolding to structure the clot
 - Used at OHCWA



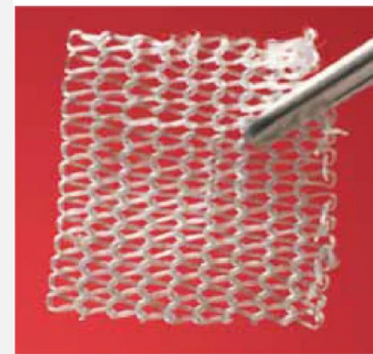
HAEMOSTATIC AGENTS

- Gelatamp
 - Several varieties but the version containing colloidal silver is generally most common
 - Gelatine sponge provides scaffold
 - Colloidal silver provides broad antibacterial effect



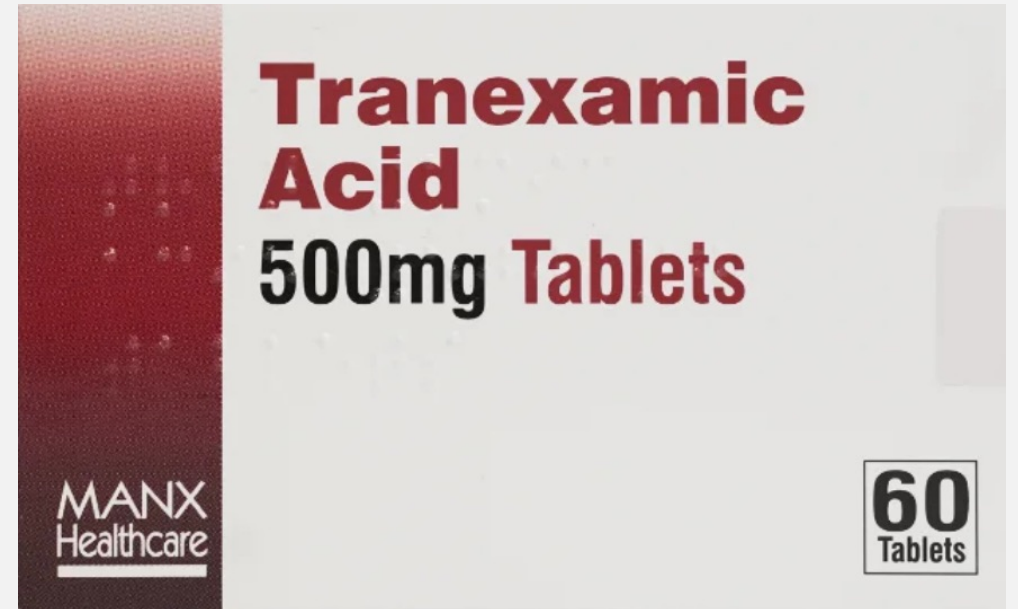
HAEMOSTATIC AGENTS

- Surgical
 - Oxidised regenerated cellulose
 - Plant based
 - Matrix for platelet adhesion and aggregation



HAEMOSTATIC AGENTS

- Tranexamic acid
 - Anti-fibrinolytic
 - In dental uses:
 - Tablet is NOT TAKEN ORALLY
 - Tablet is crushed and dispersed into 10mL water (5% solution)
 - Gauze soaked in solution and pressure applied to wound OR
 - Gentle rinses 2mins QDS 2-5 days post operatively. Do not spit out, gently dribble out



HAEMOSTATIC AGENTS

- Tea bag
 - Steeped in boiling water for 3-5mins
 - Allowed to cool
 - Patient bites on the bag, applying pressure to the wound
 - Natural tannins help vasoconstriction
 - Can be good verbal advice if patients call for advice



SURGICAL EMPHYSEMA

- Caused by the extrusion of air into tissues.
- DO NOT use front exhausting handpiece if mucoperiosteal flap raised.
- DO NOT use triple to dry surface if mucoperiosteal flap raised.
- Usually self limiting as the air will be reabsorbed by tissues.
- Consider whether antibiotics are of benefit



RETAINED ROOT

- Consider size and pathology present
 - Size – generally accepted if under 3mm OK but no definitive evidence*
 - Pathology – no periapical lesion pre-operatively
- If attempting retrieval:
 - Consider use of a root pick
 - Consider proximity of anatomy e.g. maxillary sinus and risk of displacement
 - Consider bone removal to create space for the instrument

LOST ROOT/TOOTH

- Stop. Breathe. Think about where this could have gone?
 - If posterior lower tooth – is this in the lingual? Is this something you can see with gentle pressure?
 - If upper tooth – has this gone into the sinus - fully/partially?
- If easily seen/visible – GENTLY attempt retrieval
- If not easily seen and conceding retrieval is not possible:
 - Priority is to the patient – stabilise (e.g suture) and explain
 - Ask a senior colleague/principal dentist for advice
 - Call local OMFS rooms for advice or consider calling local OMS department on call registrar for advice

WRONG TOOTH EXTRACTION

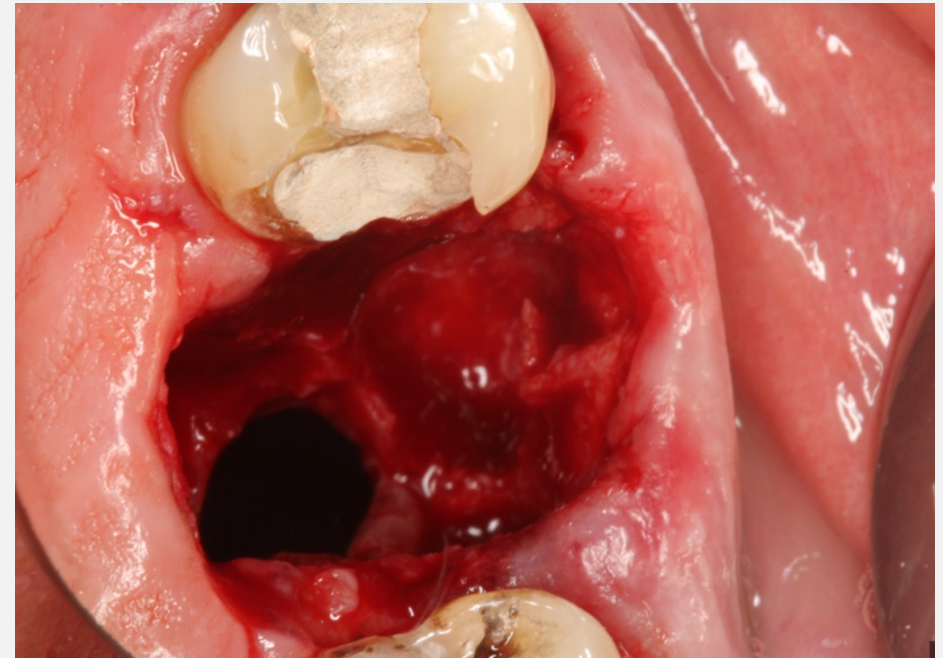
- DO NOT DO.
 - Correct site surgery checklist
 - Confirm with nurse
- Most likely to occur with orthodontic extractions e.g. healthy teeth with no obvious caries
 - Explain to patient/parents/guardian
 - If orthodontic extractions, speak to orthodontist – DO NOT remove correct tooth.
 - *May* be able to modify plan.

ORO ANTRAL COMMUNICATION + FISTULA

- Oro-antral communication is defined as an unnatural communication between the maxillary sinus and the oral cavity.
 - Think about the layers at the base of the high risk socket:
 - Bone
 - Sinus lining (Schneiderian membrane)
 - Both have to be breached for it to be a communication
 - It is possible to remove the bony base but not perforate the sinus membrane
 - Must be over 2mm in size to require formal closure
- Oro-antral fistula is a more chronic form where the epithelium infiltrates and lines the communication.

ORO ANTRAL COMMUNICATION + FISTULA

- Diagnosing:
 - Pre-operative assessment
 - Post extraction assessment of the tooth
 - Post extraction assessment of the socket
 - Valsalva?
 - Bubbling of blood in the socket
 - If large will be very obvious



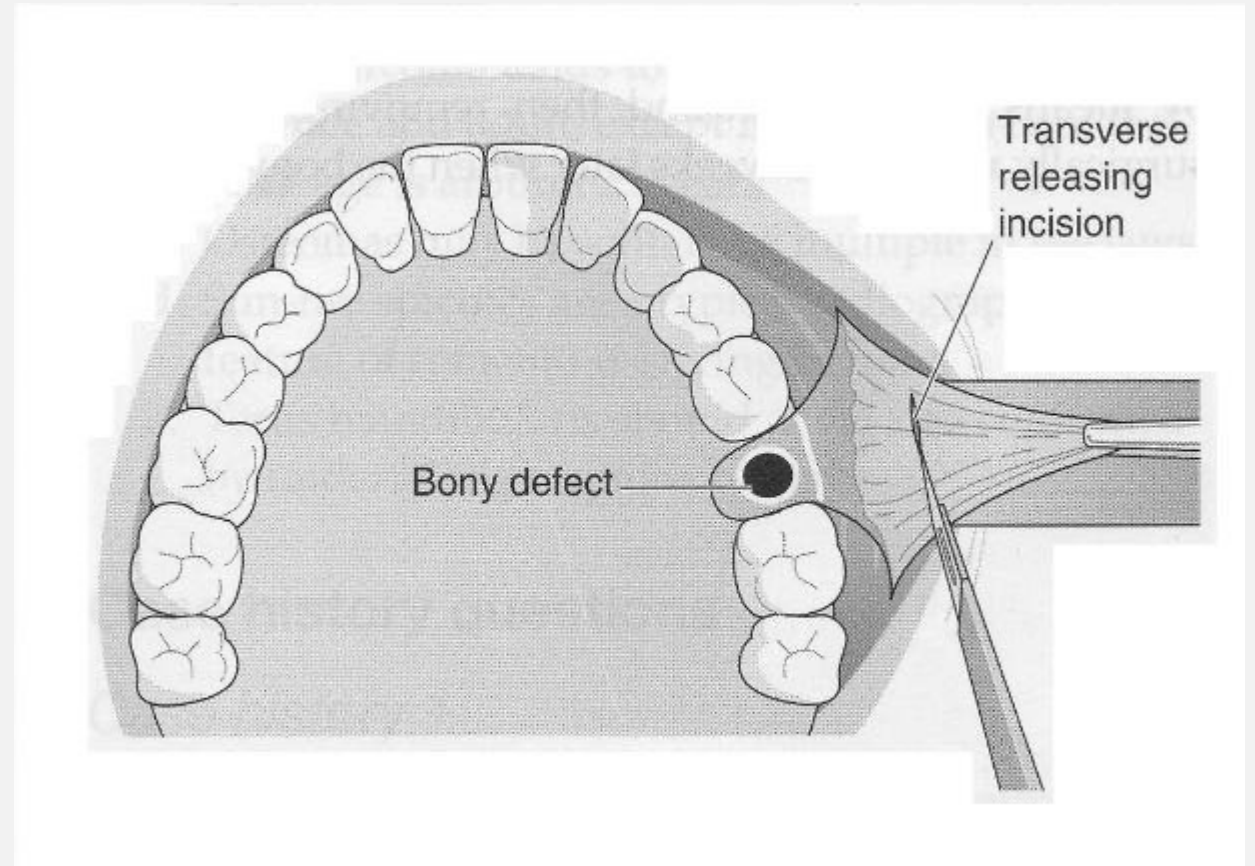
Parvini, P., Obreja, K., Begic, A. et al. Decision-making in closure of oroantral communication and fistula. *Int J Implant Dent* 5, 13 (2019)

ORO ANTRAL COMMUNICATION + FISTULA

- Management:
 - If small (<2mm)
 - Haemostatic agent
 - Suture over the socket
 - Sinus precautions (no nose-blowing, no drinking through a straw and no closed-mouth sneezing) for 2 weeks
 - Rx nasal spray – oxymetazoline (500mcg/mL) intranasally 1 or 2 sprays TDS 5/7
 - Review after 2 weeks to ensure closure
 - If large (>3mm)
 - Depending on size, maybe haemostatic agent and suture. If very large consider nothing (assuming haemostasis achieved)
 - Refer to experienced colleague or OMF Surgeon – consider calling rooms and asking what they want you to do. E.g. send immediately, send next day and how to manage the wound

ORO ANTRAL COMMUNICATION + FISTULA

- Options to close:
 - Buccal advancement



ORO ANTRAL COMMUNICATION + FISTULA

- Options to close:
 - Buccal advancement
 - Palatal rotational

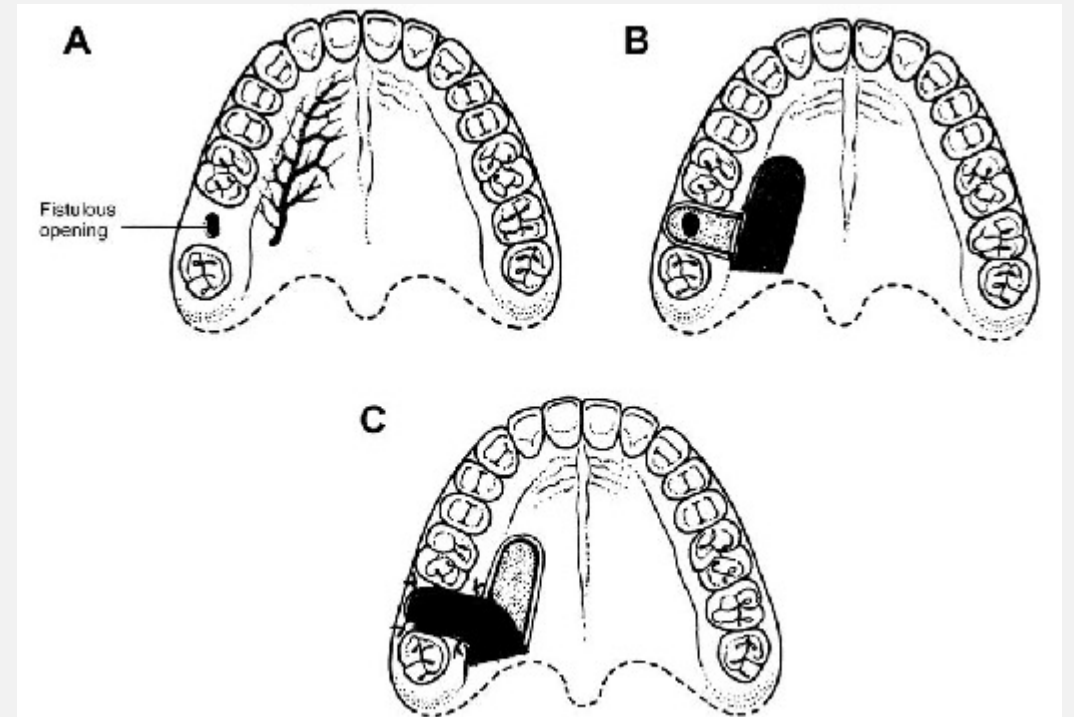
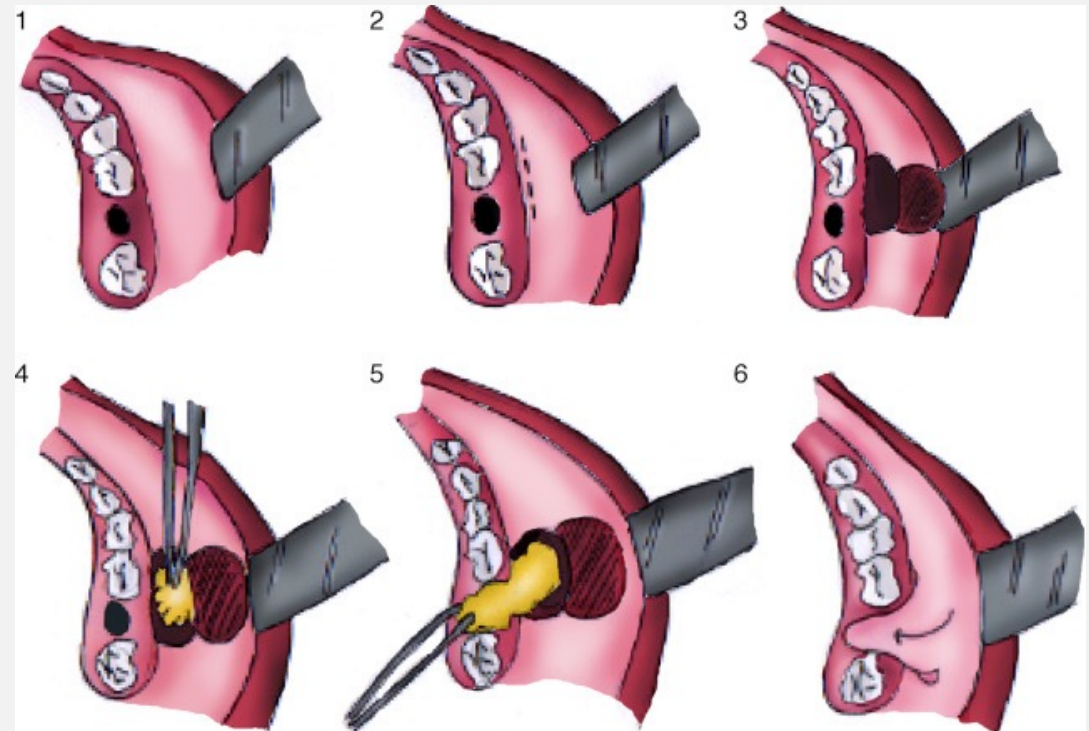


Figure 7. Palatal rotation flap. A. Fistula with

ORO ANTRAL COMMUNICATION + FISTULA

- Options to close:
 - Buccal advancement
 - Palatal rotational
 - Buccal fat pad



FRACTURED TUBEROSITY

- High risk teeth:
 - Divergent roots, bulbous roots, ankylosed roots
 - Lone standing molar
 - Maxillary 3rd molars
 - Older patients (but not always)
 - Excessive forces
 - Unsupported extraction technique



FRACTURED TUBEROSITY

- Signs you have fractured the tuberosity:
 - Loud cracking noise
 - Palatal mucosal tear
 - Mobile alveolar segment
 - Excessive bleeding

FRACTURED TUBEROSITY

- Management of the fractured tuberosity:
 - If small – may just be considered an incidental finding
 - Dissection of the segment from the mucosa to prevent further soft tissue trauma
 - Tooth is still removed and then the mobile segment stabilised or removed
 - Splinting
 - Extraction is abandoned and fracture stabilised **WITH** the tooth
 - Composite wire splint
 - Essix retainer



MRONJ/ORN

- To come next week

ALVEOLAR OSTEITIS / DRY SOCKET

- Failure or premature loss of the blood clot
- Thought to involve increased fibrinolysis and impaired scaffold formation
- Increased likelihood of dry socket:
 - Smoking
 - Oral contraceptive use
 - Traumatic extraction (heavy forces)



ALVEOLAR OSTEITIS / DRY SOCKET

<u>Feature</u>	<u>Normal Healing</u>	<u>Dry Socket (Alveolar Osteitis)</u>
Clot formation	Stable and maintained	Lost or disintegrated
Pain	Mild early discomfort	Severe throbbing pain
Tissue appearance	Gradual granulation then bone fill	Exposed bone, no clot
Healing outcome	Progressive bone maturation	Delayed healing

ALVEOLAR OSTEITIS / DRY SOCKET

- Irrigation with saline (caution with CHX)
- Placement of an obtundent dressing – Alveogyl
 - Should remain in place for 24-72 hours and then come away.
 - It is not resorbable – if suturing in place it must be removed prior to soft tissue closure.
- Wound care / smoking cessation
- Antibiotics not indicated unless underlying spreading infection

ALVOGYL OR ALVEOGYL?

Table 1 Alvogyl and Alveogyl Ingredients

Alvogyl	Alveogyl
Butamben*	Eugenol*
Iodoform*	Penghawar Djambi
Eugenol*	Sodium lauryl sulphate
Penghawar Djambi	Calcium carbonate
Sodium lauryl sulphate	Mint flavour
Calcium carbonate	Excipients
Spearmint oil	
Olive oil	
Purified Water	

*active ingredients

ACTIVITY I

Raising a full thickness mucoperiosteal flap

ACTIVITY I

- In each group:
 - Student 1 is to raise a **full thickness envelope** flap across 12-22
 - Students 2 and 3 are going to place a sulcular incision around the 7 and then move the blade along the crest, distally.
- Using the periosteal elevator, retract the tissue back



ACTIVITY 2

Continuous suturing

ACTIVITY 2

- Remove all anterior teeth 5-5
 - The 3, 4, 5 were extracted last time so should be easily removed
- This will create a situation very similar to an anterior clearance
- Close the wound using continuous suturing
 - Each person will place a continuous suture
 - Simple interrupted
 - 3 passes with the suture
 - Lock it off

