***Complications of perio surgery***

First problem :
Syncope " faintness " : sudden, transient loss of consciousness due to cerebral ischemia, followed within seconds to minutes by a gain of consciousness.

- The most reported dental emergency .

- There are sings tell u that pt will undergo faintness.

-Why would pt faint ?

stress > adrenaline ( fight or flight response ) > increase release of catecholamine > increase blood flow to skeletal muscle .

-But in our case pt can't fight " hopefully :P " niether flight so another mech. will occur instead.

-Causes of syncope :
1- inadequate vasoconstictor mechanisms " vasodepressor syncope " which is the main cause.

2- hypovolumia ; pt lost alot of blood

3- hypoxia

4- hypoglycemia

all these causes related to anxiety and stress.

- Predisposing factors to faintness :

1- young adult " 16-35 y " , males

2- erect sitting or standing

3- previous syncopal episods

-Pathophysiology :
release of adrenaline > increase blood flow to skeletal m. > vasodilation > decrease BP > tachycardia > compensation with sympathatic nervus system activation lead to increase heart rate , contractility and peripheral vasoconstriction in attempt to preserve tissue perfusion.

since our pt is sitting on a chair and his body does not work " fight or flight " so this compensation mech. get fatigue and decompensation mech. works mediated by bradycardia/hypotension leading to decrease cerebral flow and syncope.
note that bradycardia and hypotension are mediated by vegus nerve.

-Clinical signs of syncope :

1- presyncope-early sign : flushing , warm , nausea , sweating , tachycardia , ur pt tells u he feels bad ( in this case do not ignore ur pt )

2- presyncope-late signs : they start yawning coz they want to get more oxygen to the brain , they may fall in asleep " be careful esp. in sedated pt " tachypnea , hypotension

* 3- signs of syncope : unconsciousness and unresponsiveness ,cold sweat , confusion , Pupillary dilation ,Convulsive movements ,Bradycardia and weak pulse ,Hypotension (as low as 30/15mmHg) ,Muscular relaxation , All of them take a Short duration

- S.times if u try to awake ur pt he won't response so u should stimulate his nervus system by ammonia "msh mwjodea 3enna " so we use alcohol !

- How to prevent it ?

1- first of all u should know if the pt had history of syncopal episods ; so u have to take it easy , give him breaks and keep checking on him .

2- try to avoid causes of stress like needle

3- proper pt position

4- minimize possibility of hypoglycemia " make sure he got his breakfast or eating anything before the procedure"

- How to manage ?

1- trendeleuburg position " supine with elevated legs "

2- remember A-B-C 's

3- give oxygen

4- monitor vital signs

- Activate EMS if recovery is not immediate as this is most likely not vasodepressor syncope.

\*\* Second problem : intraoperative bleeding

- profuse bleeding occur esp. during the intial incision and flap reflection . since the flap is reflected the bleeding should stop .

So excessive haemorrhaging after incision and reflection may be caused by laceration or injury of vessels .

- Prevention is the best management then u have to know the anatomical considerations :

1- greater palatine artery : beware when u take graft from palate " usually u take CT from between epithelium and periosteium "

likely this artery is close to bone and away 7-12 mm from the margin of molars

So the problem rises when the pt has shallow palate or thin biotype

this injury is rare

2- nasal palatine artery : usually not a problem ; s.times practitionors remove it " 3n 8a9d " in case of opening a flap to expose impacted canine or putting an implant in incisors area .

3- ptterygoid plexus of veins : problem rises when u give maxillary block ( so if u want to give max. block u should use aspirating needle )

4- mental vessels : problem doesnot rise with LA but rises with surgery , incisions and taking bone graft

this injury is rare

5- IA and lingual artery : rare but fatal coz it may lead to haematoma > suffocation

- How to manage ?

1- pressure with guaze

2- try to identify the cause

3- put suture distal to bleeding area

\* In case of excessive bleeding from surgical wound ; s.times u did not injure an artery but still there is a minor area with persistent bleeding ; the cause is capillary plexus .

bleeding can be stopped by appling cold pressure for several minutes

\*In case of slow constant blood flow ( oozing ) from bone or soft tissue , u might think of haemosatic agents as :

- oxidized cellulose " oxycell " : look like sticky guaze , u put it in selected area and it'll form a clot

- collagen blocks " square shape or shape of socket " put it inside the socket and it'll do the job " clot formation " ; they are resorbable but expensive .

- thrombin : ask for allergy first , do not apply it on vessels coz it may lead to thrombus formation >>> death !!

\* Note : ansthesia : if u want to see what u can't see intraoperatively , it's okay to use it BUT it's wrong to use to stop the bleeding at the end of surgery or when u ask the pt to leave coz of risk of rebound !

-Note : el.table slide 22 msh 7ef6' ba9em bs enta/ente lazem tfkro be 6ree2a practical 3ashan lw ft7to clinic t3rafo sho test5demo o ma t5afw te3malo 2y procedure .. o EnshALLAH ma be9er m3kom she =)

- Predisposing factors for bleedind :

Medically

1- hypertension : blood is more profound , usually not problem in perio surgery

2- blood disorders : hemophilia , thrombocytopenia , clot formation problem

3- most common ; von willebrands disease , occurs 1:10000

* increased PTT and BT

Medication :

5 A's

1- Aspirin : antiplatlet

2- Antineoplastic

3- Antibiotic : it’s like the antifungal drug it have an interaction with the warfarin and can increase bleeding !

4- Anticoagulant : Warfarin - (Coumarin drugs, Platelet Inhibitors, Heparin-like drugs)

5- Alcohol : especially after surgery you tell your pt not to drink because it results in vasodilation and increase bleeding

\* Management of pt taking warfarin :

take good history and consult the physician if neccessary

u have to check INR a day after or on the same day depending on the type on the procedure

in general INR should be less than 3 to do surgery

u have to take read of INR a max of one day before the surgery if it is a minor minor procedure .

do the surgery in the morning 8bl la yrwo7o el.kateb o el.sister o heek -.- and avoid do it on thursdays l2nno lw 9ar she m3 el.pt ma fe 7ada be2dar yshofo and call him at night to ask him if everyting is good .

\* Local measures :

1- pressure

2- LA only intraoperative

3- electrosurgery : cauterization for bleeding area

4- oxidized cellulose

5- collagen blocks

6- bone wax : very usefull as an alternative to crushing bone

7- bone crush/punch: when u crush u apply pressure by the bone itself ( let's hope it is not an imp area :D )

8- ligation

9- acrylic stent : in area u can't properly suture " palate after taking a graft " , if u use oxidized cellulose or blocks it delays healing and painful

take an immpresion before and by the day of surgery the stent is ready put a guaze inside it and let the pt wear it o ho kteer moree7 o el.pt be2dar yakol fe since enno fe injury be palate 2y spicy or hot food r7 ysabeb pain . so it is good for comfort .

10- perio pack : zinc oxide eugenol and there is zinc oxide non eugenol for pt who has allergy .. it is rubbery when u put inside the pt mouth and u can use interproximal area for retention , it will stay there until u remove it !