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EPISTAXIS

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EPISTAXIS APPLIED BASIC SCIENCE



- ONE OF THE FUNCTIONS OF THE NOSE IS TO WARM AND HUMIDIFY INSPIRED AIR.
- THE NASAL MUCOSA HAS A VERY RICH BLOOD SUPPLY
- **THE INTERNAL AND EXTERNAL CAROTID ARTERY** CONTRIBUTE, I.E. THE ETHMOIDAL ARTERIES FROM THE INTERNAL CAROTID AND THE GREATER PALATINE, SUPERIOR LABIAL AND SPHENO PALATINE ARTERIES FROM THE EXTERNAL CAROTID.
- THESE VESSELS FORM A RICH PLEXUS ON THE ANTERIOR PART OF THE SEPTUM – **LITTLE'S AREA** OR '**KEISSELBACHS PLEXUS**'.
- NOSEBLEEDS IN YOUNG PATIENTS USUALLY SETTLE QUICKLY AS THE BLOOD CLOTS AND THE VESSELS GO INTO SPASM
- IN ELDERLY PATIENTS THE VESSELS ARE RIGID AND ATHEROMATOUS.



ETIOLOGY

- **MOST NOSE BLEEDS ARE IDIOPATHIC .SPONTANEOUS EPISTAXIS IS COMMON IN CHILDREN AND YOUNG ADULTS;**
- **IT USUALLY ARISES FROM LITTLE'S AREA OR FROM A PROMINENT VEIN JUST BELOW. IT MAY BE PRECIPITATED BY INFECTION OR MINOR TRAUMA,**
- **IS EASY TO STOP, BUT TENDS TO RECUR.**
- **NOSEBLEEDS IN THE ELDERLY ARE FAR MORE DIFFICULT TO TREAT.**
- **THE BLEEDING SITE IS OFTEN HIGH UP IN THE POSTERIOR PART OF THE NOSE AND ON THE LATERAL NASAL WALL.**



CAUSES OF EPISTAXIS

Local causes

- Spontaneous
- Trauma
- Tumours
- Hereditary telangiectasia
- Nasal allergy

General causes

- Cardiovascular conditions
- Hypertension, raised venous pressure
- Coagulation or vessel defects
- Haemophilia
- Leukaemia
- Anticoagulant therapy
- Thrombocytopenia
- Fevers (rare)
- Influenza



EPISTAXIS FIRST-AID TREATMENT

- DIRECT DIGITAL PRESSURE ON THE LOWER NOSE COMPRESSES THE VESSEL ON THE SEPTUM AND WILL ARREST BLEEDING FROM LITTLE'S AREA.
- PRESSURE OVER THE NASAL BONES IS USELESS. •
- TREATING ACTIVE EPISTAXIS IS A VERY MESSY BUSINESS – COVER UP YOUR OWN CLOTHES FIRST
- NOW ASSESS THE PATIENT AND CONSIDER RESUSCITATION.
- EXAMINE THE NOSE WITH A GOOD LIGHT SOURCE.



EPISTAXIS FIRST-AID TREATMENT

- GENTLY REMOVE CLOTS AND STALE BLOOD WITH SUCTION
- NOW APPLY DIRECT DIGITAL PRESSURE TO THE NOSE FOR 10 MIN.
- THE PATIENT SHOULD SIT LEANING FORWARD AND BREATHE THROUGH THE MOUTH
- DISCOURAGE SWALLOWING, WHICH MAY DISLODGE A CLOT.



EPISTAXIS FIRST-AID TREATMENT

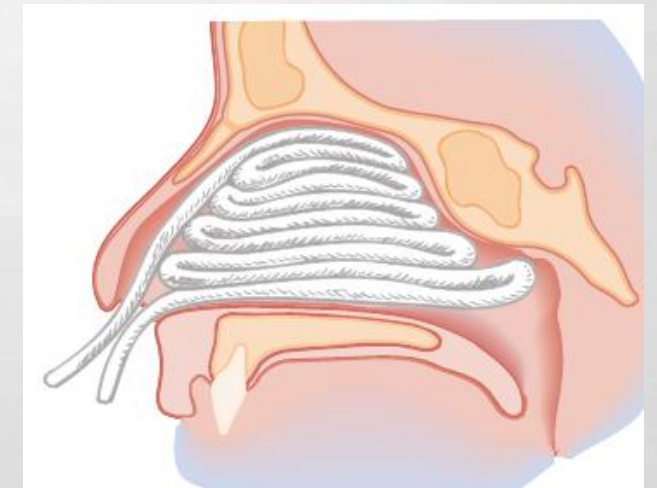
- IF BLEEDING PERSISTS AND THE SITE IS CLEARLY VISIBLE, E.G. LITTLE'S AREA, YOU MAY BE ABLE TO STOP IT BY CAUTERY WITH A SILVER NITRATE IMPREGNATED STICK
- THIS IS EASIER IF YOU FIRST PUT IN A PLUG OF COTTON WOOL OR RIBBON GAUZE SOAKED IN LIDOCAINE AND PHENYLEPHRINE AND LEAVE IT FOR 5 MINUTES.
- THIS ALSO FACILITATES NASAL PACKING BUT MAY NOT BE PRACTICAL IF THERE IS TORRENTIAL BLEEDING.



EPISTAXIS NASAL PACKING



- IF SIMPLE MEASURES FAIL TO CONTROL THE BLEEDING, YOU WILL NEED TO PACK THE NOSE.
- ONE INCH RIBBON GAUZE IS TRADITIONAL .
- THE PACK IS INTRODUCED ALONG THE FLOOR OF THE NOSE AND BUILT UP IN LOOPS, APPLYING EVEN PRESSURE TO THE NASAL MUCOSA.
- ALTERNATIVELY, ONE OF A VARIETY OF INFLATABLE EPISTAXIS 'BALLOONS' SUCH AS THE 'BRIGHTON BALLOON' CAN BE USED
- IT IS EASIER TO PUT IN BUT MAY NOT BE AS EFFECTIVE AS A WELL-PLACED PACK

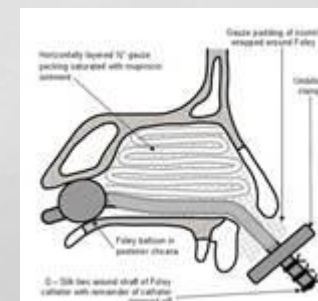
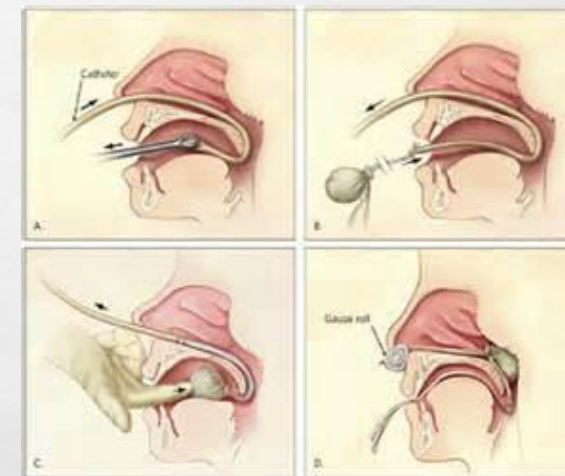


EPISTAXIS

NASAL PACKING



- SELF-EXPANDING PACKS (NASAL TAMPONS) SUCH AS MEROCEL WHICH ENLARGE IN THE PRESENCE OF MOISTURE CAN BE USED.
- IF BLEEDING CONTINUES DESPITE ADEQUATE PACKING, CALL AN ENT SURGEON WHO MAY NEED TO INSERT A 'POSTNASAL' PACK
- THIS IS USUALLY INTRODUCED UNDER A GENERAL ANESTHETIC AND FILLS THE NASOPHARYNX.
- A POST-NASAL PACK IS UNCOMFORTABLE AND CAUSES MARKED AIRWAY OBSTRUCTION.
- PATIENTS NEED TO BE ESPECIALLY CAREFULLY MONITORED.



EPISTAXIS NASAL PACKING



- PATIENTS WITH EPISTAXIS SEVERE ENOUGH TO NEED PACKING SHOULD BE ADMITTED TO HOSPITAL.
- WITH BED REST AND SEDATION, MOST CASES WILL SETTLE
- THE BLOOD PRESSURE SHOULD BE MONITORED AND THE HAEMOGLOBIN LEVEL CHECKED
- COEXISTENT HYPERTENSION MAY NEED TO BE CONTROLLED.

EPISTAXIS MEASURES FOR PERSISTENT BLEEDING



- PATIENTS CAN CONTINUE TO BLEED DESPITE ADEQUATE PACKING AND RESUSCITATION.
- SURGERY MAY BE NEEDED IF THE BLEEDING IS PROFUSE AND CONTINUOUS OR A NASAL SEPTAL DEVIATION PREVENTS PACKING.
- RECALCITRANT BLEEDS MAY REQUIRE LIGATION OF THE SPHENOPALATINE ARTERY BY NASAL ENDOSCOPIC SURGERY.
- IN EXTREME CASES THE ETHMOIDAL ARTERIES MAY NEED TO BE APPROACHED VIA THE MEDIAL ORBIT, OR THE EXTERNAL CAROTID ARTERY LIGATED IN THE NECK.
- ANGIOGRAPHY AND VESSEL EMBOLIZATION MAY RARELY BE CONSIDERED.