

# EPISTAXIS

**Rory Attwood**  
**MBChB,FRCS**

Department of Otorhinolaryngology  
Faculty of Health Sciences  
Tygerberg Campus, University of Stellenbosch

# EPISTAXIS

Bleeding from the nose

# Age Incidence

- Children
- Elderly

# Clinical Features

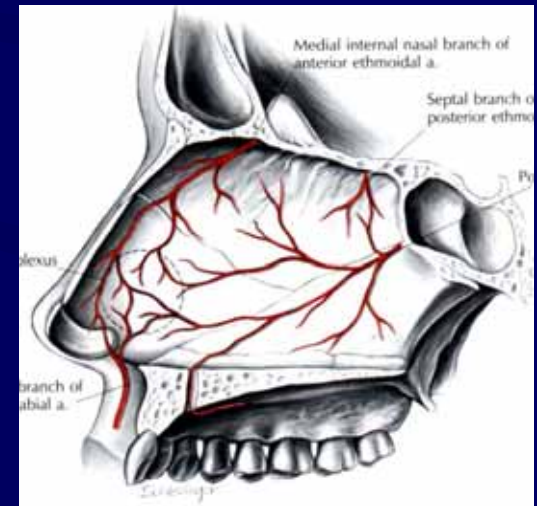
- Degree of bleeding varies greatly  
trivial → lethal
- Usually from anterior nares
  - Little's area
  - Unilateral
  - (occasionally bilateral)

# Clinical Features

- Occasionally
  - posterior into nasopharynx
  - inhaled      - haemoptysis
  - swallowed   - haematemesis
  - melaena

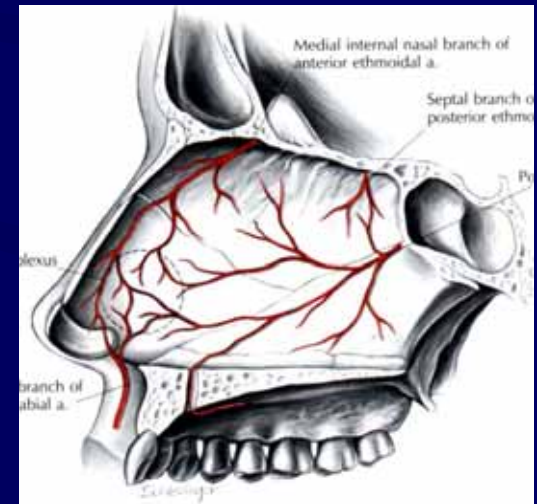
# Sites of bleeding

- Nasal Septum
  - Little's Area (Kiesselbach's plexus)
    - ~90% of epistaxis seen in hospitals
    - ~vessel often visible
  - Rest of septum
    - ~spurs, convexities (turbulent flow)



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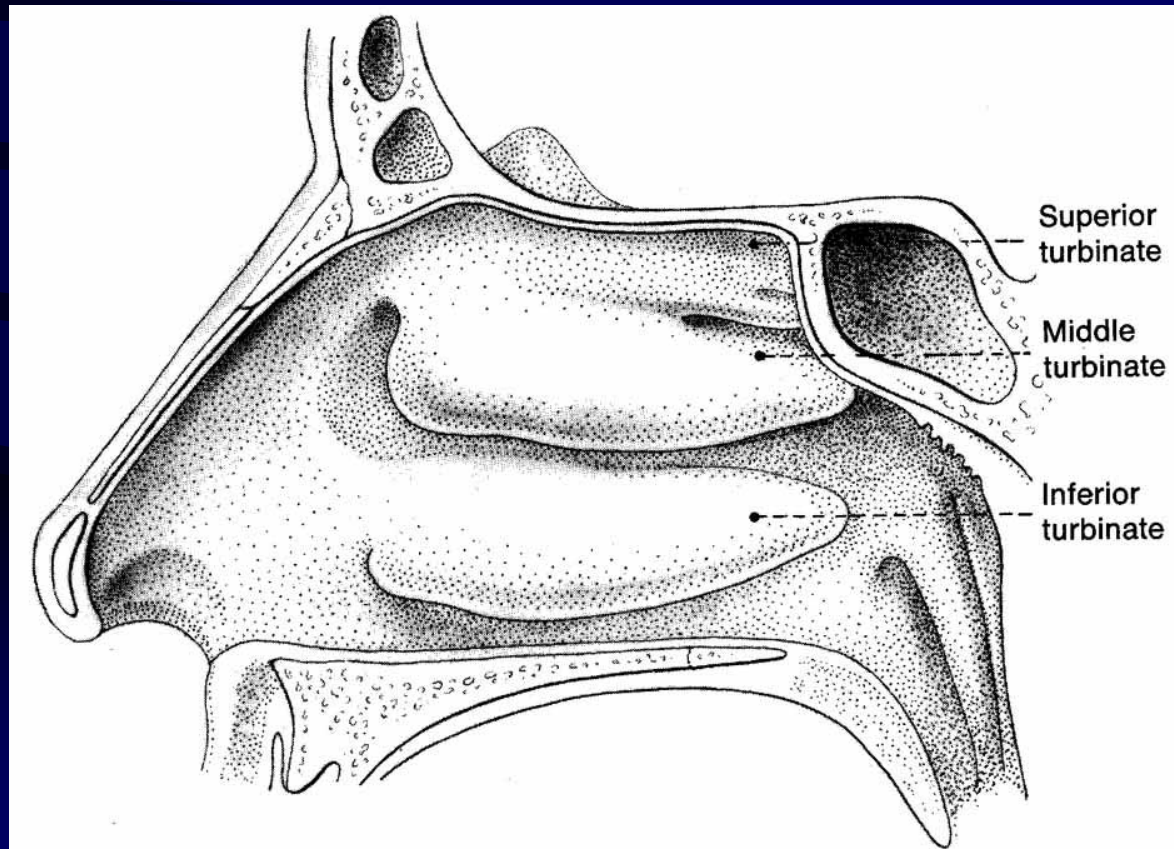


## Sites of bleeding (cont)

- Inferior turbinate & nasal floor
- Middle turbinate - anterior ethmoidal vessels
- Middle meatus - rare (suspect neoplasm)
- Sinuses - rarely from vessels in maxillary/  
ethmoid sinuses



# Sites of bleeding



# Vessels Involved

- Anterior ethmoid
- Posterior ethmoid



Internal carotid

- Sphenopalatine
- Superior labial

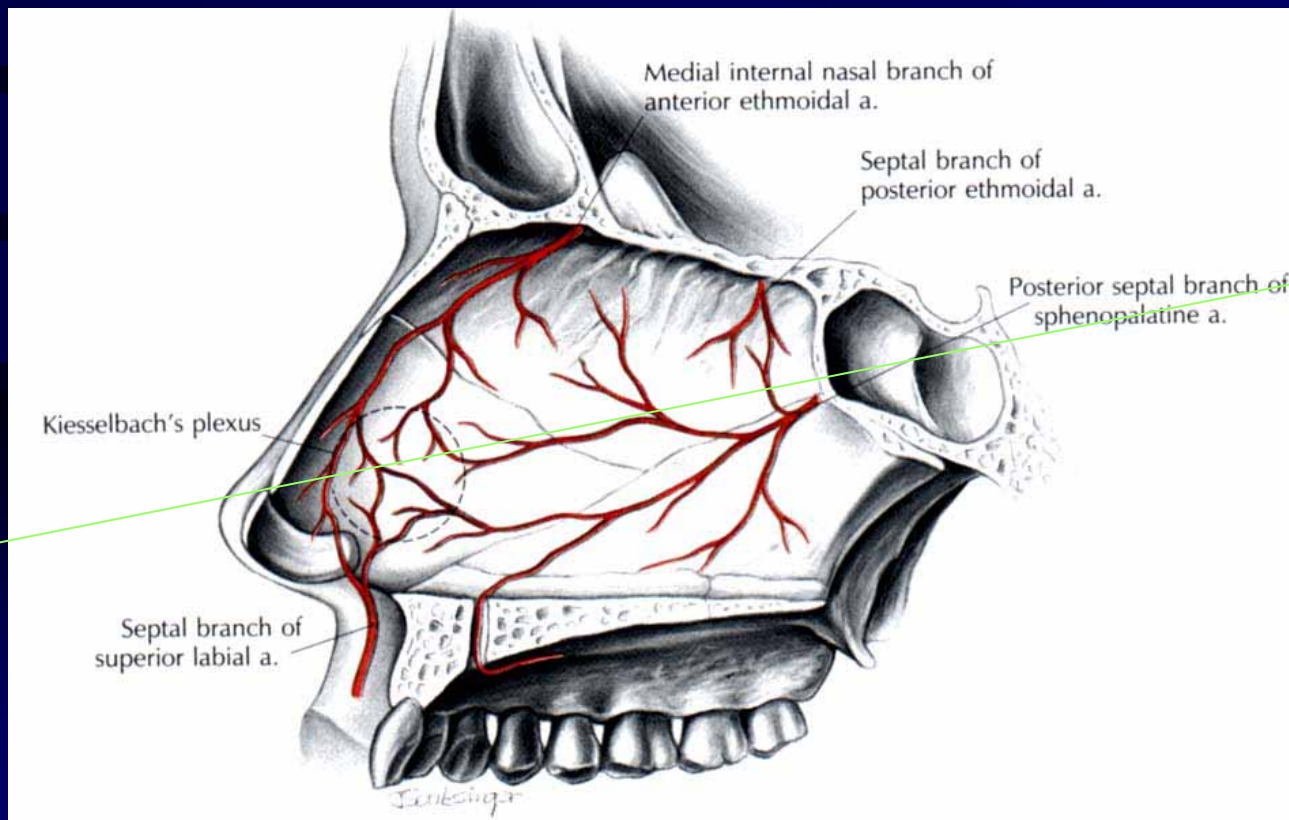


External carotid

# Nasal cavities - blood supply

Rich supply from 2 branches of Common Carotid:

- Ext. Carotid - maxillary a. - most
- Int. Carotid - ethmoidal aa.- roof



# Aetiology

- “Idiopathic” - Spontaneous
- Trauma
- Inflammatory
- Neoplastic
- Blood
  - vessel
  - clotting
- Environmental
- Drugs
  - prescribed
  - recreational

# “Idiopathic”

- “Spontaneous” is a better description
- Usually initiated by minor ‘digital’ trauma
- Often associated with atmospheric drying

# Trauma

- Abrasion of the nasal mucosa - often trivial
- Fracture of the bones or cartilage
  - deformities & spurs
- Fracture through sinuses and/or skull base

# Trauma (cont)

- Nasal surgery
- Nasal intubation
- Introduction of foreign objects
- Digital trauma -

**NOSE PICKING**

NOSE PICKING

NOSE PICKING

NOSE PICKING

NOSE PICKING

*NOSE PICKING*

NOSE PICKING

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NOSE PICKING

NOSE PICKING



# Inflammatory

- Rhinitis - allergic - irritation  
- (polyps)  
- viral  
- bacterial - vestibulitis  
- other
- (Sinusitis)

# Inflammatory

- Wegener's granulomatosis
- Sarcoidosis

# Neoplastic - benign

- Antrochoanal polyp
- “Inverting” papilloma (Ringert’s tumour)  
(Scneiderian papilloma)
- Juvenile angiofibroma

# Neoplastic - malignant

- Basal Cell Ca
- Squamous Ca
- Malignant Melanoma (NB amelanotic variety)
- (Nasopharyngeal ca)
- (Adeno Ca /Adenoid cystic Ca)
- Leukaemia

# Blood - vessel

- Atherosclerosis
- Collagen vascular diseases
- Familial Haemorrhagic Telangiectasia  
(Osler-Weber-Rendu disease)

# Osler-Weber-Rendu



# Blood - clotting

- Haemophilia
- Factor deficiencies (Christmas disease, etc)
- Idiopathic Thrombocytopaenic Purpura
- Vitamin C & K deficiencies
- Severe liver disease

# HYPERTENSION

- Is **NOT** a cause but contributes
- Once epistaxis has occurred, it is more difficult to control in the presence of:
  - hypertension
  - tachycardia
  - raised venous pressure



# Environmental

- High altitudes (drier and lower atm. pressure)
- Air-conditioning
- Extreme changes in temperature

# Drugs - prescribed

- Anticoagulants - Warfarin / Heparin
- Aspirin - platelet function inhibitor
- (other NSAIDS)

# Drugs - recreational

- Cocaine - vasoconstrictor / local anaesthetic
  - impurities
  - frequent use
    - ischaemia
    - rebound hyperaemia
    - mucosal necrosis

# Management – immediate (forget granny)

- Position
- Pressure
- Pulse / BP
- Caution
- Packing

# Management - immediate

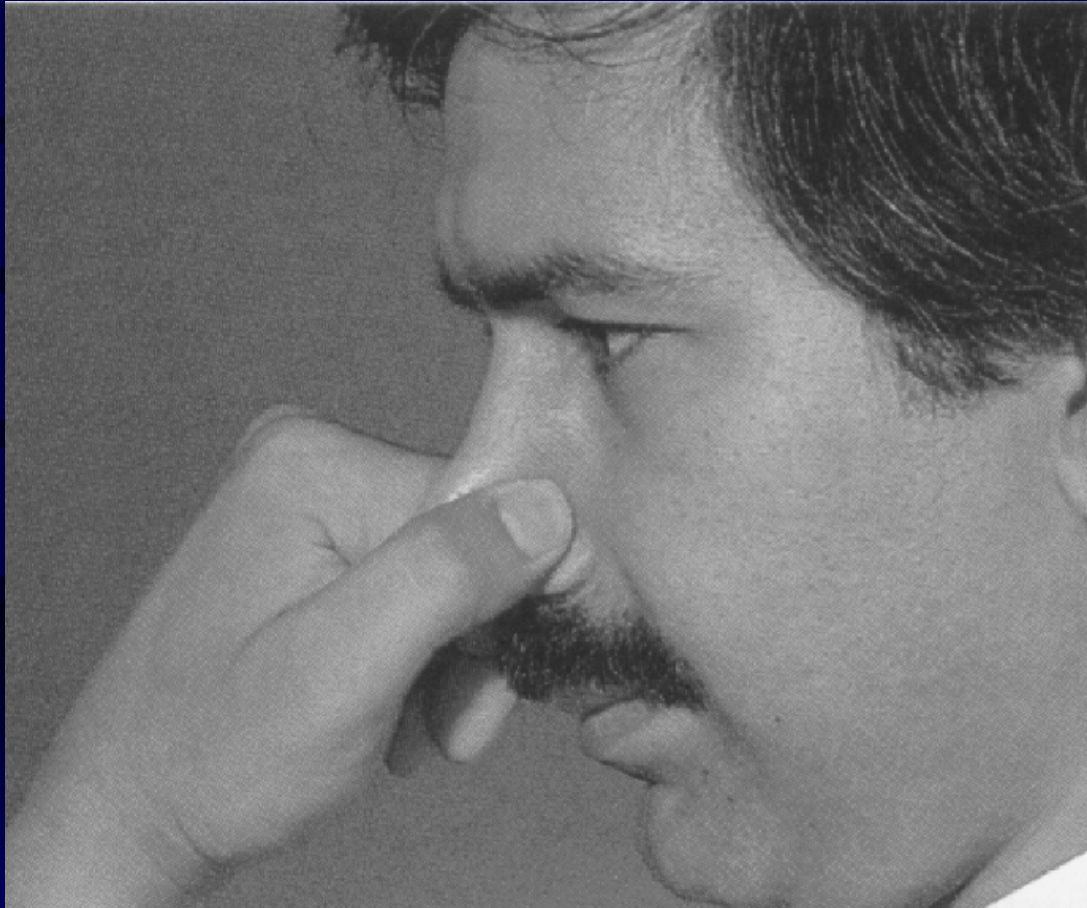
- Position
  - sitting upright
  - inclined slightly forward
  - mouth open
  - spit out any blood
  - vasoconstrictors (simple)

# Management - immediate

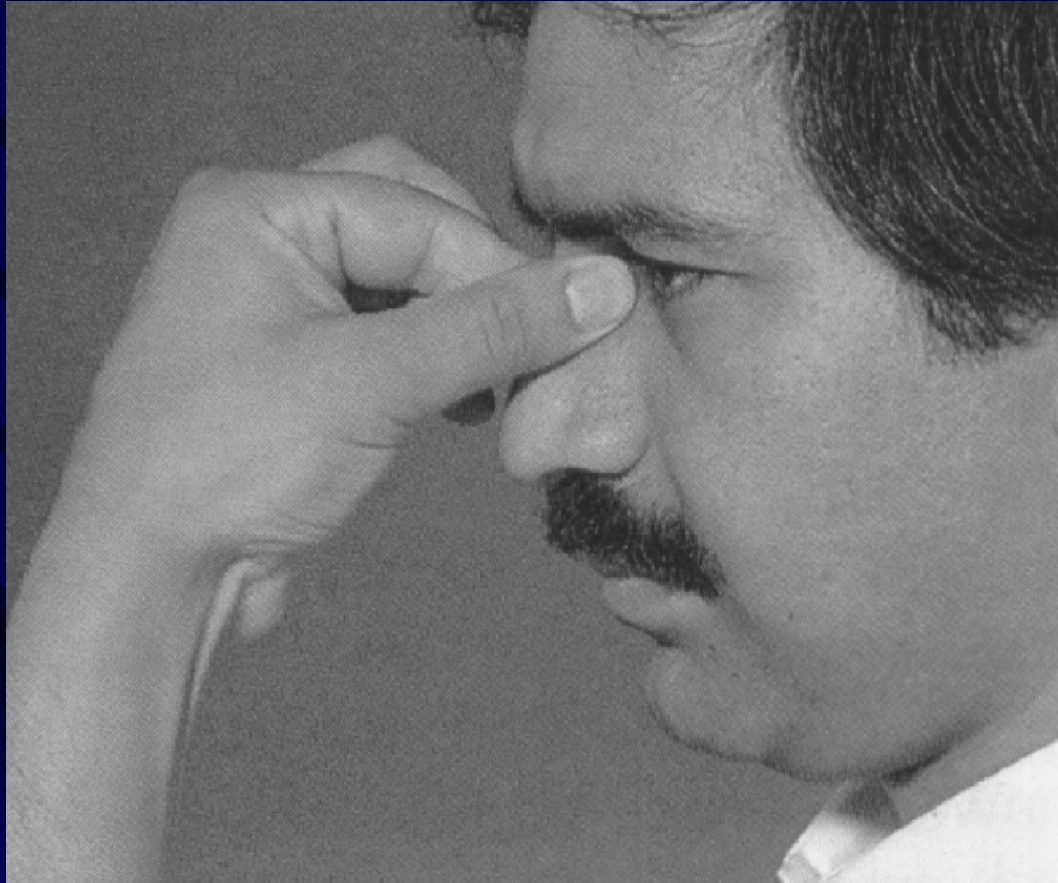
- Pressure
  - cartilage of nose
  - over Little's area
  - **constant**

**ICE PACKS**

# 5 minute pressure - correct



Incorrect





# Management – immediate (while applying pressure)

- Pulse / BP
  - assess status
  - assess blood loss
  - replace fluid as needed



Patience

# Management - immediate

- Cautery - clear nose
  - suction
  - “hawk”
  - inspect
    - bleeding vessel
  - local / vasoconstrictor (cocaine)
  - cauterise
    - AgNO<sub>3</sub>
    - electro-

# Management - immediate

- Packing - anterior - local anaes/vasoconstrictor

(12 hrs)

- BI PP gauze

**B**ismuth

**I**odoform

**P**araffin

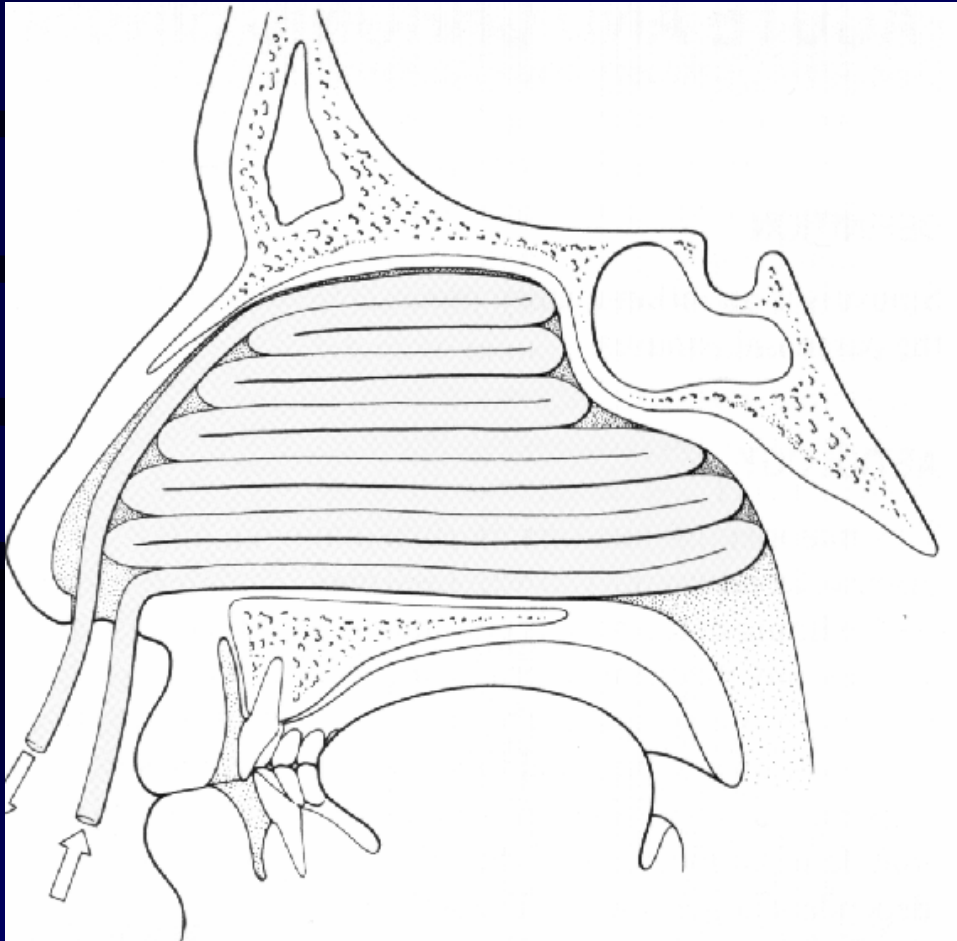
**P**aste

(48 hrs +)

## SEDATION

**Antibiotics** (eg amoxycillin) if for more than 24 hrs

# Packing - anterior



- local anaesthetic
- BIPP impregnated gauze in layers

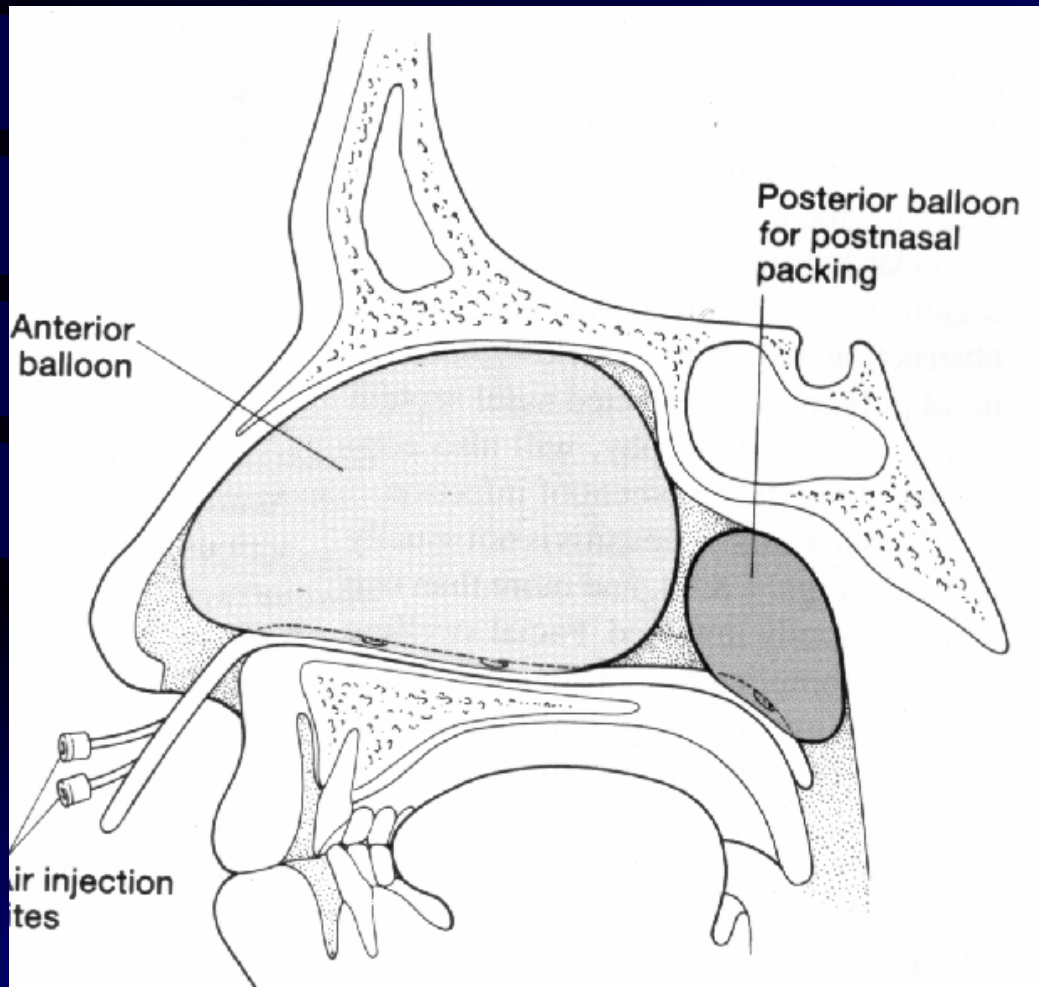
# Management - immediate

- posterior - balloon
  - “double” balloon
  - Foley catheter
- } p. n. space
- (12 –24 hrs)

## SEDATION

Antibiotics if for more than 24 hrs

# Packing - posterior



- Inflatable balloons
- Saline better than air

# Management – persistent epistaxis

- Repeat - “idiot” concept

# Management – persistent epistaxis

- **Endoscopic directed cautery**

**probably the way forward**



# Management – persistent epistaxis

- **Repeat** in theatre “EUA”
  - pack, cauterise
  - access
  - septoplasty

# Management – persistent epistaxis

- Embolisation
  - Radiologist
  - arteriogram
  - embolus
  - may be painful

(NOT sclerotherapy)

# Management – persistent epistaxis

- Arterial ligation
  - local
    - maxillary
    - ethmoidal
    - sphenopalatine
  - “open” or endoscopic

# Management – persistent epistaxis

- Arterial ligation
  - ECA
  - distal to lingual
  - “open” procedure

# Conclusion

- Blood transfusion - consider the necessity
  - blood
  - deficient factor(s)
  - platelets
- Prescribed drugs - correct abnormality
- Exclude underlying disease / disorder