E.N.T. HEAD & NECK DEPT TOPICAL PRESENTATION

EPISTAXIS

PRESENTERS: DR. OSISI

DR. AKPALABA

DR. EDIALE

OUTLINE

- CASE PRESENTATION
- INTRODUCTION
- ANATOMY
- EPIDEMIOLOGY
- CLASSIFICATION
- CLINICAL FEATURES
- MANAGEMENT
- PROGNOSIS
- CONCLUSION

Case 1

-Mr. O. S.

-57yr old Business man

-Resides in Benin city

-Christian

- Bini

- P.C – Lt Nasal Recurrent bleeding x 1/12

- HPC

-Bleeding was spontaneous.

-Had about ten episodes, EBL - 50mls/Episode.

-No bleeding from other parts of the body

-No dizziness or fainting attacks.

-No hx of trauma, nasal discharge or blockage

-No otologic symptoms

-Takes Ibuprofen periodically every other week.

-No neck mass, or abdominal swelling

-Recently diagnosed hypertensive on Nifedipine and Moduretic

-No family hx of Epistaxis

-Does not take alcohol

- **O/E** – Middle age man, calm, afebrile, not pale, anicteric, not dehydrated, no pedal edema.

CVS

-PR 80bpm, regular, good volume

-BP 130/80 mmHg

NOSE

-Blood clot, Lt nasal cavity

-Active bleeding

ORAL CAVITY/OROPHARYNX

-Streaks of blood in posterior pharyngeal wall.

NECK

-No palpable mass

EAR

-Appeared normal

- DIAGNOSIS – Recurrent Lt Nasal Epistaxis? cause

-FBC, Blood film

-Clotting profile

-E/U/Cr

-Xray Paranasal sinuses

-Anterior nasal packing

-Tabs dicynone 250mg tds

-Tabs ciprofloxacin 500mg bd

-Presently on Follow-up

Case 2

- Mr E. O.
- 35yr old Bricklayer/Welder
- Resides in Benin city
- Christian
- Esan

- P.C. – Recurrent Lt nasal bleeding x 4/7

- HPC-

- Bleeding was spontaneous.
- Had about two episodes, EBL – 1.8litres.
- Similar episode 3yrs ago
- No bleeding from other parts of the body

-Assoc dizziness, but no fainting attacks.

-No hx of trauma, nasal discharge or blockage

-No ear or throat symptoms

-Hx of prolonged bleeding from minor injuries.

-Positive family hx of epistaxis

-

-Takes alcohol, 1 bottle/day for 15years

-No use of NSAIDs or Anticoagulant

-Not a known hypertensive

-Initially presented at Central Hosp B/city,

-Had nasal packing done

-Transfused with a unit of blood.

-PMH-
Not a known DM, PUDx

-FSH
Married with 3 children, monogamous setting
Does not smoke cigarette

-Drug Hx-
Nil hx of drug allergy.

- O/E-

Young man, anxious, febrile (38.3c), pale, anicteric, not dehydrated, no pedal edema.

CVS – P.R 120bpm, regular, good volume

B.P 140/90.

- NOSE

-Patent bilaterally

-No petechial hemorrhages

-Hyperaemic spot on the septum

-Engorged inferior turbinates

- ORAL CAVITY/OROPHARYNX

-Minimal streaks of blood in the posterior pharyngeal wall

NECK- No neck mass palpable

EAR – Appeared normal

OTHER SYSTEMS – Appeared normal

DIAGNOSIS – Epistaxis ? Cause

r/o Bleeding Diathesis

-Urgent PCV – 17%

-GXM 3 units of blood

-Crude Clotting time – 2minutes

-FBC – Platelets 158,000, WBC 6,500

-E/U/Cr - Ur 66mg/dl, others normal

-PT, PTTK - Normal

-LFT – Normal

-RVS - Negative

-Xray Paranasal sinuses

-Hematologist reviewed- Lassa fever screening (Negative)

-IVF 5% Dext. Saline

-IV Dicynone 250mg bd

-Tabs Ciprofloxacin 500mg bd

-Tabs Flagyl 400mg tds

- Haematinics

2nd DOA

- P.R 112bpm
- B.P -170/110mmHg

-Medical review

-commenced anti-Hypertensive.

-Had Silver nitrate cauterization on 4th Day

-Bilateral Anterior nasal packing done on 5th Day

-Posterior nasal packing on same day

-Emergency Left External carotid artery ligation done on 10th Day.

Emergency EUA Nose, Nasopharynx with Bellocq Posterior nasal packing on 11th DOA.

Findings at surgery:

-Multiple mucosal hemorrhages on the septum and lateral nasal walls.

-Diffuse oozing of blood from the posterior wall of the nasopharynx

- Bleeding subsided after surgery

- Blood transfusion

Had 13 units of blood transfused

-Discharged home on Anti-Hypertensives on 21st DOA

INTRODUCTION

- Bleeding from the Nasal cavity

- Commonest otolaryngological emergency.

- Affects up to 14% of the population in their lifetime.

- 6% of cases requiring medical attention.

- The management include-

-resuscitation,

-through direct visualization and cautery,

-nasal packing,

-and surgery (both endoscopic and external)

-to embolization.

RELEVANT ANATOMY

- Nasal cavity
- Vascular supply

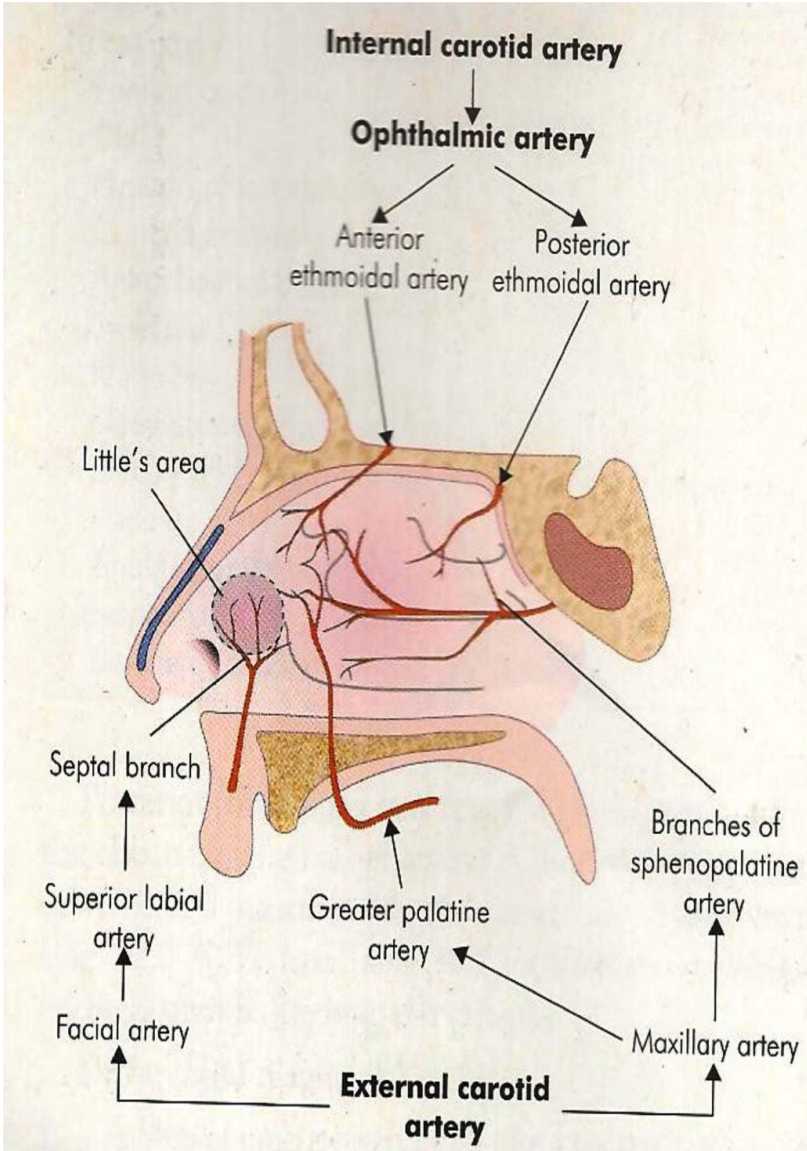


Fig. 33.1 Blood supply of nasal septum.

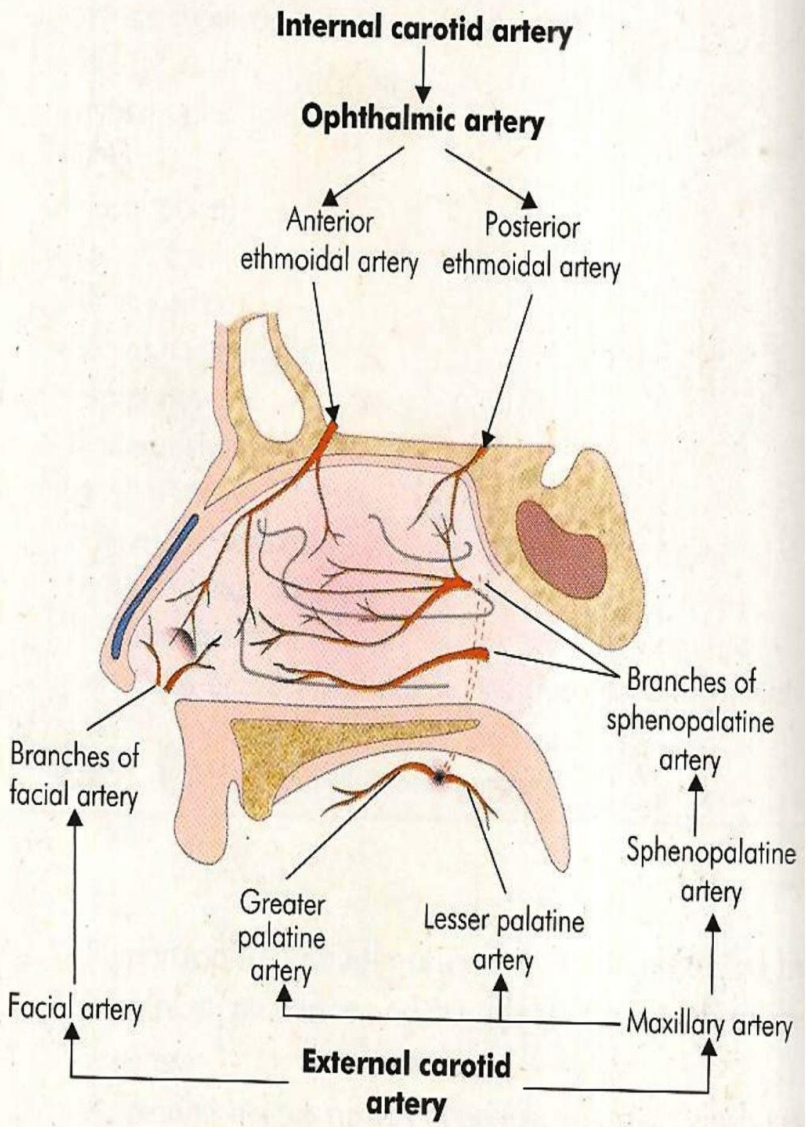


Fig. 33.2 Blood supply of lateral wall of nose.

BLOOD SUPPLY

- **External Carotid Artery**
- **-Sphenopalatine artery**
- **-Superior Labial artery**
- **-Greater palatine artery**
- **-Ascending palatine artery**
- **-Posterior nasal artery**

- **Internal Carotid Artery**
- **-Anterior Ethmoidal artery**
- **-Posterior Ethmoidal artery**

VENOUS DRAINAGE

- Pterygoid plexus
- Facial vein
- Ophthalmic veins
- Emissary vein → superior saggital sinus

SITES OF EPISTAXIS

- **Kiesselbach's Plexus/Little's Area:**
- **Above middle turbinate**
- **Below middle turbinate**
- **Posterior part of nasal cavity**
- **Diffuse**
- **Nasopharynx**

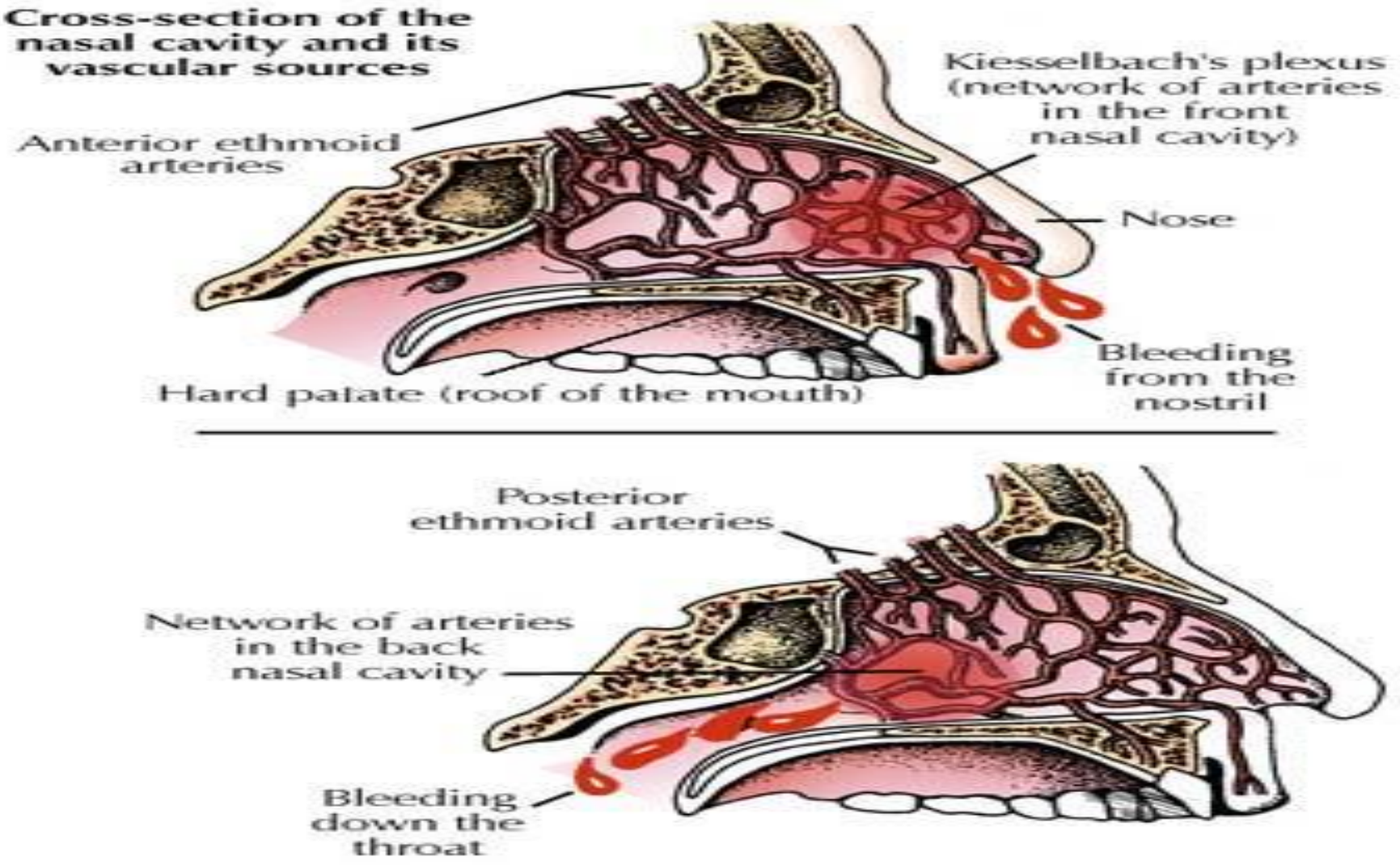
CLASSIFICATION OF EPISTAXIS

- PRIMARY OR SECONDARY
- CHILDHOOD OR ADULT
- ANTERIOR OR POSTERIOR

CLASSIFICATION OF EPISTAXIS

- PRIMARY—IDIOPATHIC
- SECONDARY-KNOWN CAUSAL FACTOR
- CHILDHOOD-- <16yrs
- ADULT-- >16yrs
- ANTERIOR- anterior to piriform aperture
- POSTERIOR– posterior to piriform aperture

CLASSIFICATION OF EPISTAXIS



EPIDEMIOLOGY

- 2nd common cause of mortality
- All age groups
- Bimodal – childhood (common)
  -- 6th decade (peak)
- 7- 14 % of population
- M:F = 1.25 : 1

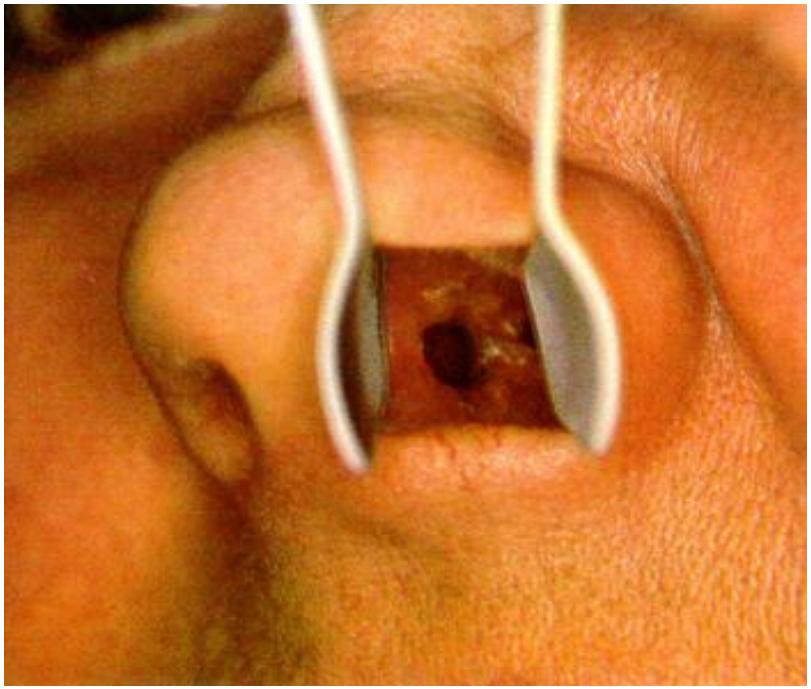
AETIOLOGY

- IDIOPATHIC (Most common)
- LOCAL
- GENERAL/SYSTEMIC

AETIOLOGY

- Local factors
  - Trauma
  - Infectious/Inflammatory
  - Iatrogenic
  - Neoplasm
  - Foreign Bodies
  - Vascular
  - Dessication
  - Deviated nasal septum

LOCAL FACTOR - TRAUMA



- Nose picking
- Nose blowing/sneezing
- Nasal fracture
- Nasogastric/nasotracheal intubation
- Trauma to sinuses, orbits, middle ear, base of skull
- Barotrauma

Local Factors - Infection/Inflammation

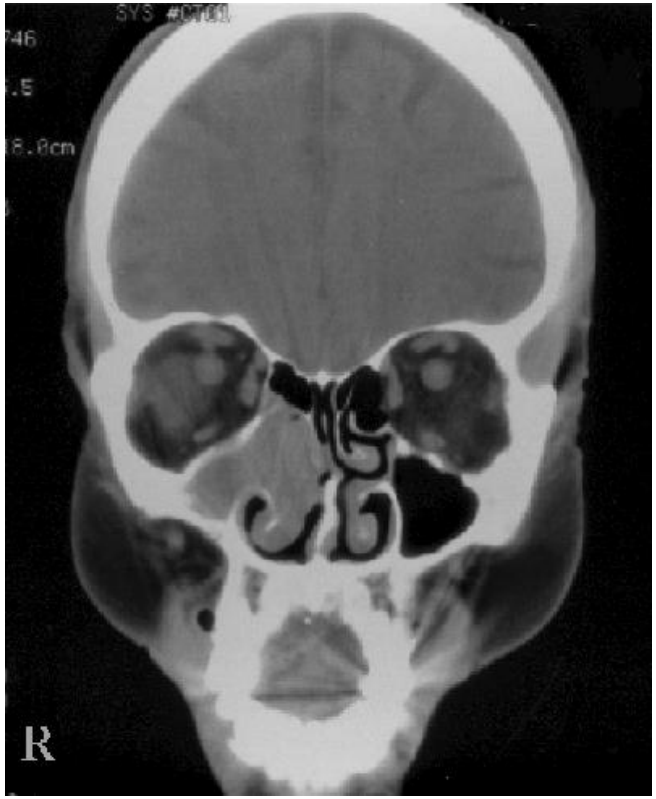
- Rhinitis/Sinusitis
  - Allergic
  - Bacterial
  - Fungal
  - Viral

Local Factors - Iatrogenic nasal injury

- Functional endoscopic sinus surgery
- Rhinoplasty
- Nasal reconstruction

Local Factors - Neoplasm

- Juvenile nasopharyngeal angiofibroma
- Nasopharyngeal carcinoma
- Inverted papilloma
- SCCA
- Adenocarcinoma
- Melanoma
- Esthesioneuroblastoma
- Lymphoma



Local Factors – Dessication

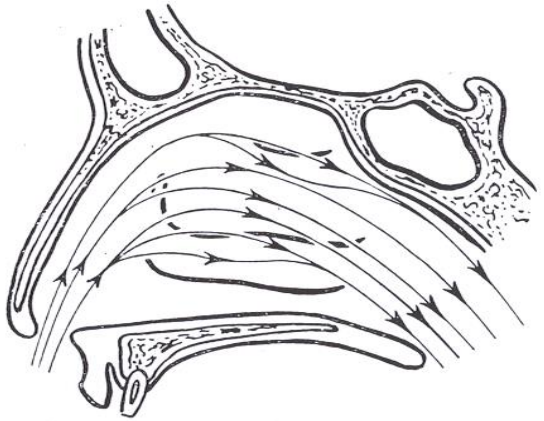
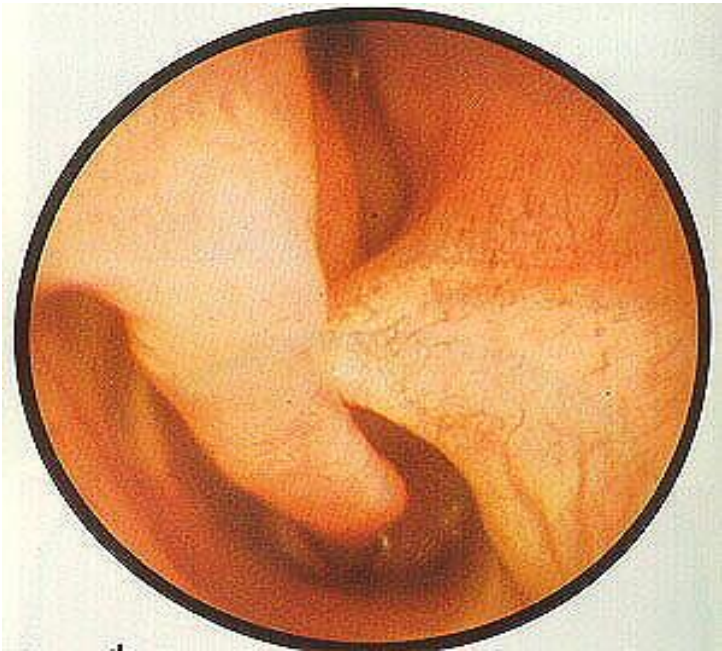
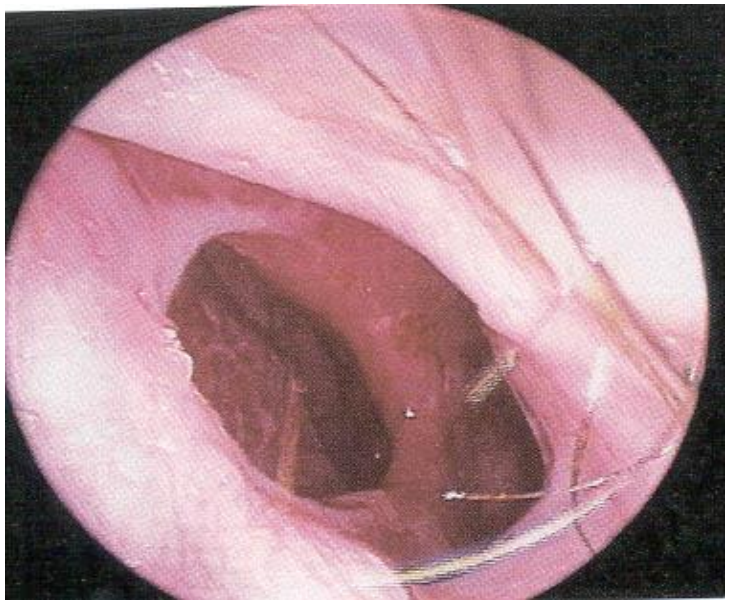


Figure 6.2 Diagram of inspiratory air currents

- Cold, dry air—more common in wintertime
- Dry heat
- Nasal oxygen
- Anatomic abnormalities
- Atrophic rhinitis



Local Factors - Others



- Self-inflicted (pedi) vs. traumatic foreign bodies
- Intranasal parasites
- Septal perforation
- Chemicals (cocaine, nasal sprays, ammonia, etc.)

AETIOLOGY- CONT'D

- Systemic factors
  - Vascular
  - Infection/Inflammation
  - Coagulopathy
  - Liver disease
  - Kidney disease
  - Drugs
  - Vicarious menstruation
  - IDIOPATHIC-80%

Systemic Factors -- Vascular

- Hypertension/Arteriosclerosis
- Hereditary Hemorrhagic Telangectasias (OWR)

Systemic Factors – Infection/Inflammation

- Tuberculosis
- Syphillis
- Wegener's Granulomatosis
- Periarteritis nodosa
- SLE

Systemic Factors – Coagulopathies

Thrombocytopenia

- **Platelet dysfunction**
  - **Systemic disease (Uremia)**
  - **drug-induced**
    NSAIDs/anticoagulants
    Alcohol
    Tobacco
    Cocaine

- **Clotting Factor Deficiencies**
  - **Haemophilia**
  - **Von Willebrand's disease**
  - **Hepatic failure**

- **Haematologic malignancies**

CLINICAL PRESENTATION

- Spontaneous
- Provoked
- Recurrent
- Scanty
- Profuse
- Post-nasal drip
- vicarious menstruation
- Haematemesis
- Fever / sore throat
- Headache
- Dizziness
- Syncope
- Pale
- Shock
- Features of liver disease, malignancy, Kidney disease

Management

- History

 - Onset, frequency, volume, Laterality

 - Possible risk factors

- Examination

 - P/E : Anxious

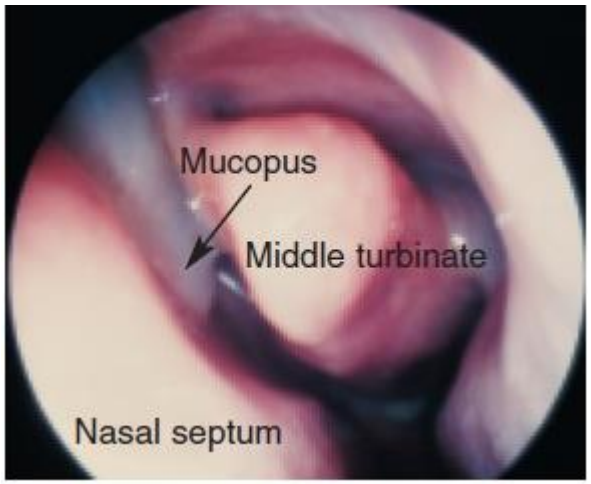
 Pallor +/- , dehydration

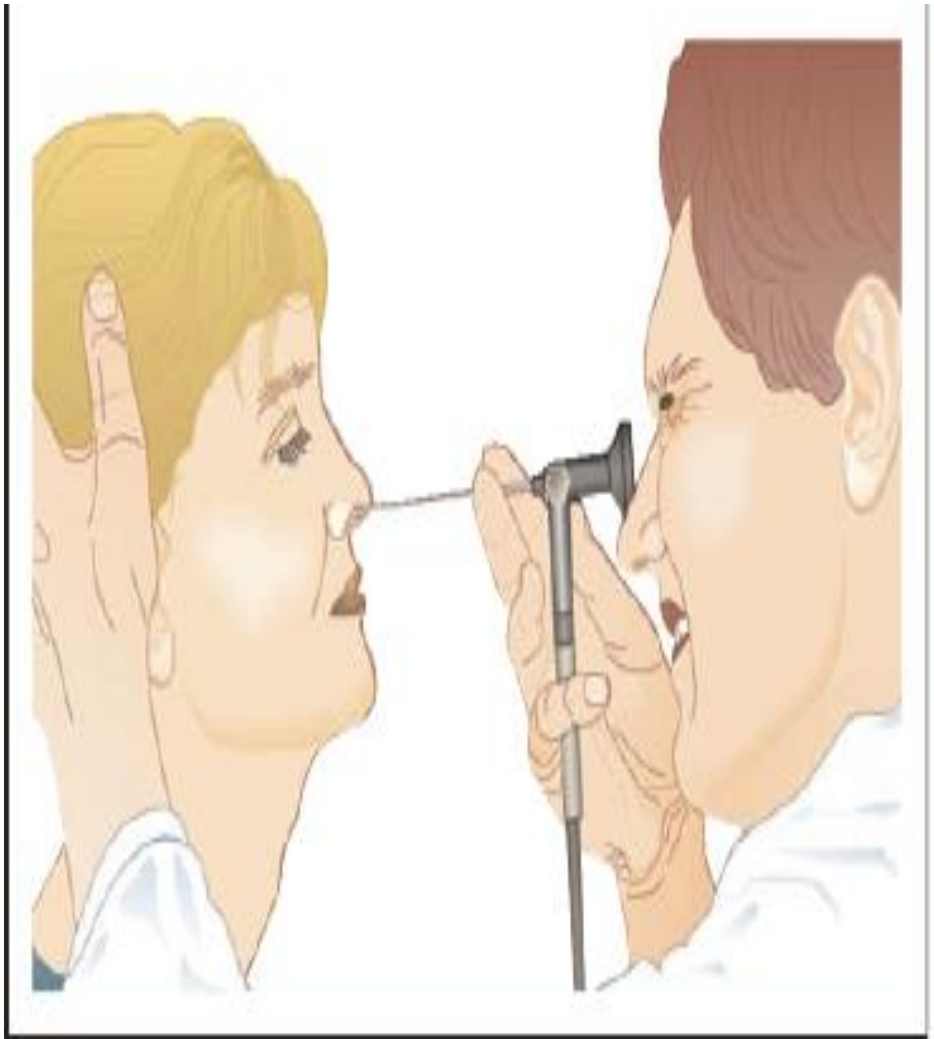
 Tachycardia

 Blood pressure

- Anterior rhinoscopy

- Nasal endoscopy





- Oropharynx:

- Neck:

- Ears:

- Other systems: Chest, Abdomen

Investigations

- Haematology: Hb, Fbc & platelets, Gxm
  - EUCr
  - CCT, PT/PTTK
  - VIII / IX assay
  - LFT
  - RVS , PCR (Lassa Fever)

- Radiology: - X-ray Paranasal sinuses
  - CT-scan
  - MRI
  - Angiography

X-ray paranasal sinuses

CT-Scan Paranasal sinuses

Investigation cont'd

- EUA nose & nasopharynx +/- biopsy

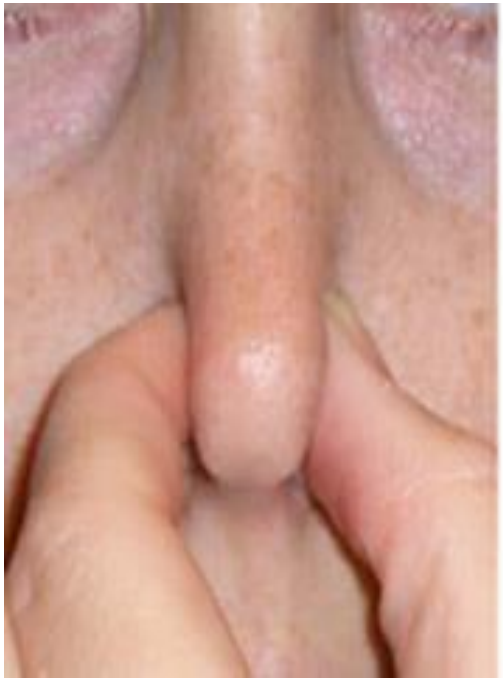
Treatment

- Principles

1. Establish site of bleeding
2. Stop bleeding
3. Treat cause

First Aid

A. Hippocrates Technique



- Trotters Method

- Modalities

A. Resuscitation(active/profuse bleed)
   - Venous access
   - Anterior rhinoscopy
   - Suction toileting
   - Topical decongestant/anaesthetic

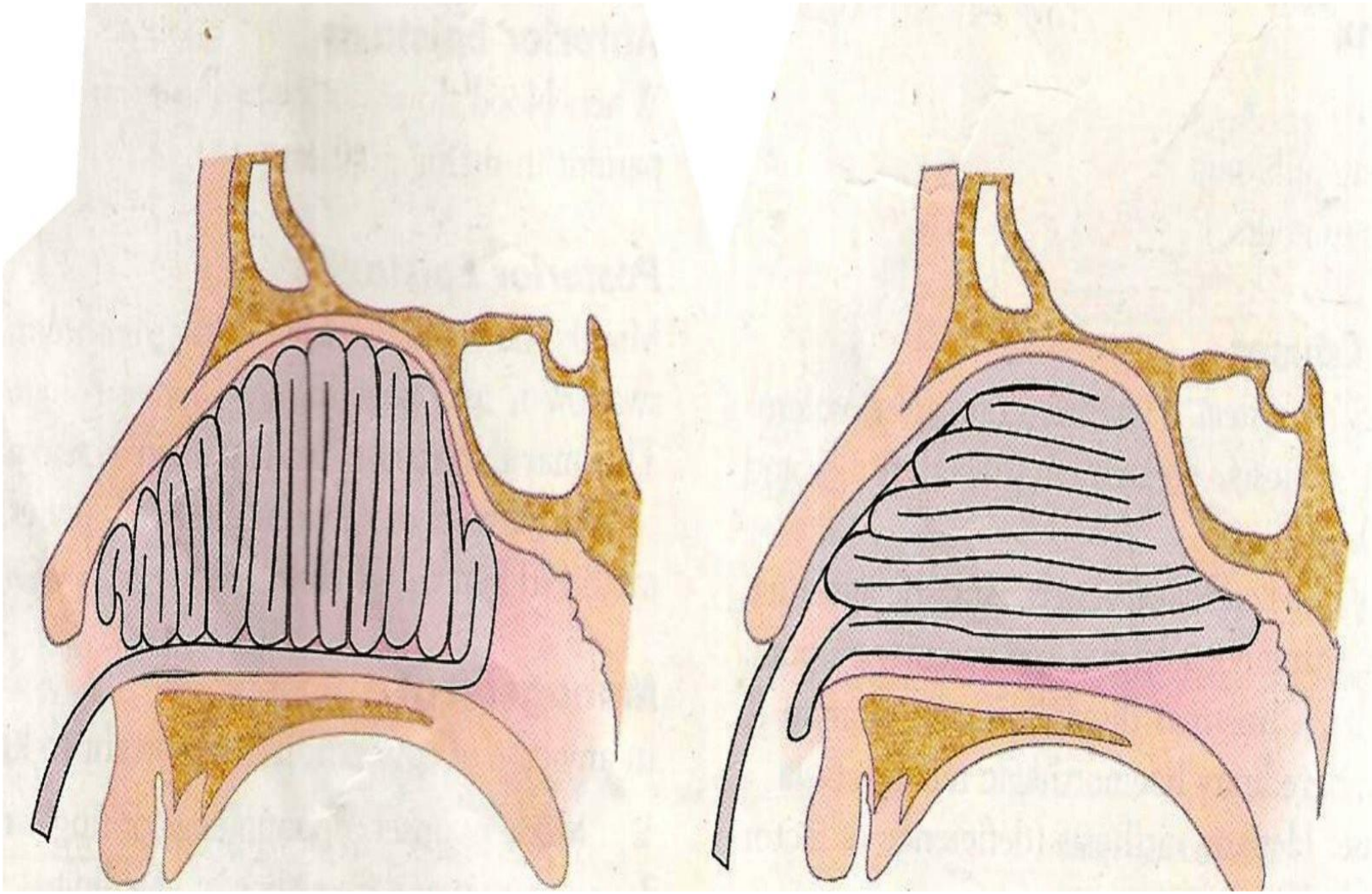
B. Cauterization
   - Chemical- silver nitrate
   - Electrical- bipolar diathermy

C. Nasal Packing

1. Anterior

- Ribbon gauze/BIPP, Gloved finger
- Bilateral

Vertical/Horiz. Antr. Nasal packing

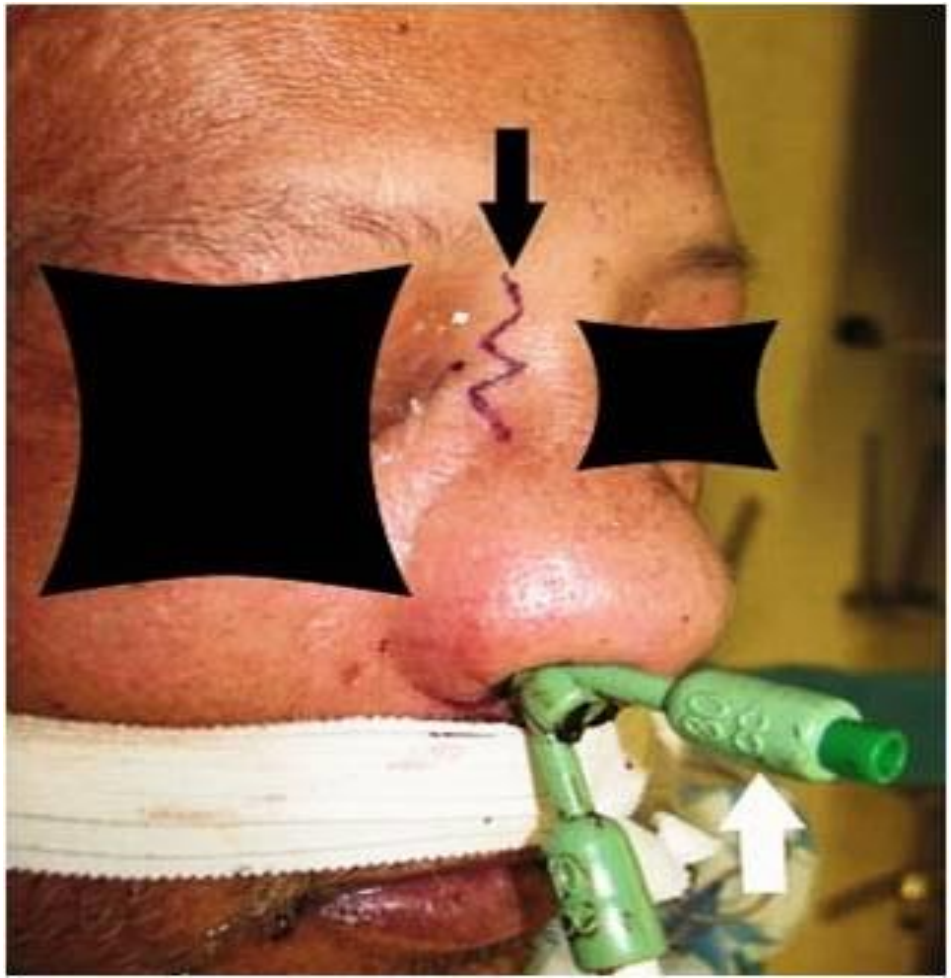


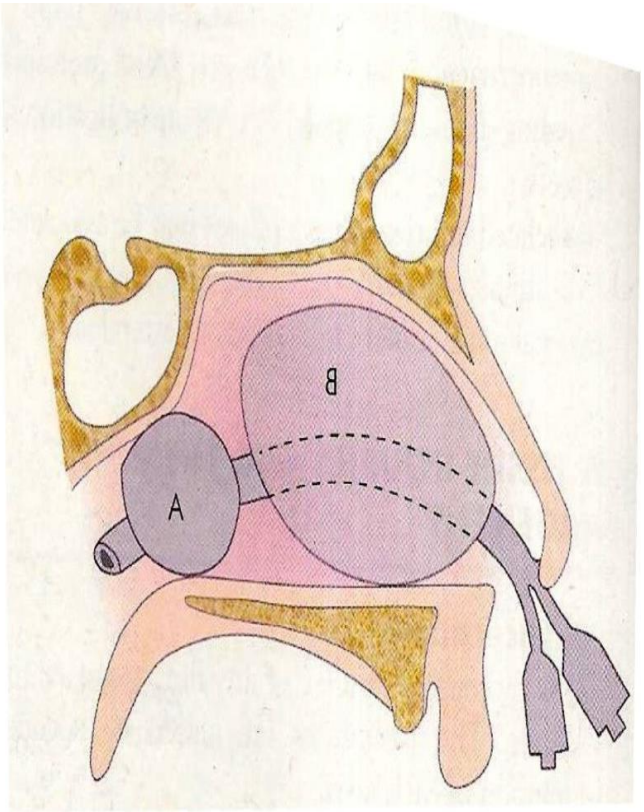
2. Posterior Nasal Packing

- Bellocq (rolled gauze pack)

- Inflatable balloons:

I. Brighton





II. Foley's catheter

D. Surgery

I. EUA +/- cautery or packing or septoplasty

II. Ethmoidal Artery Ligation

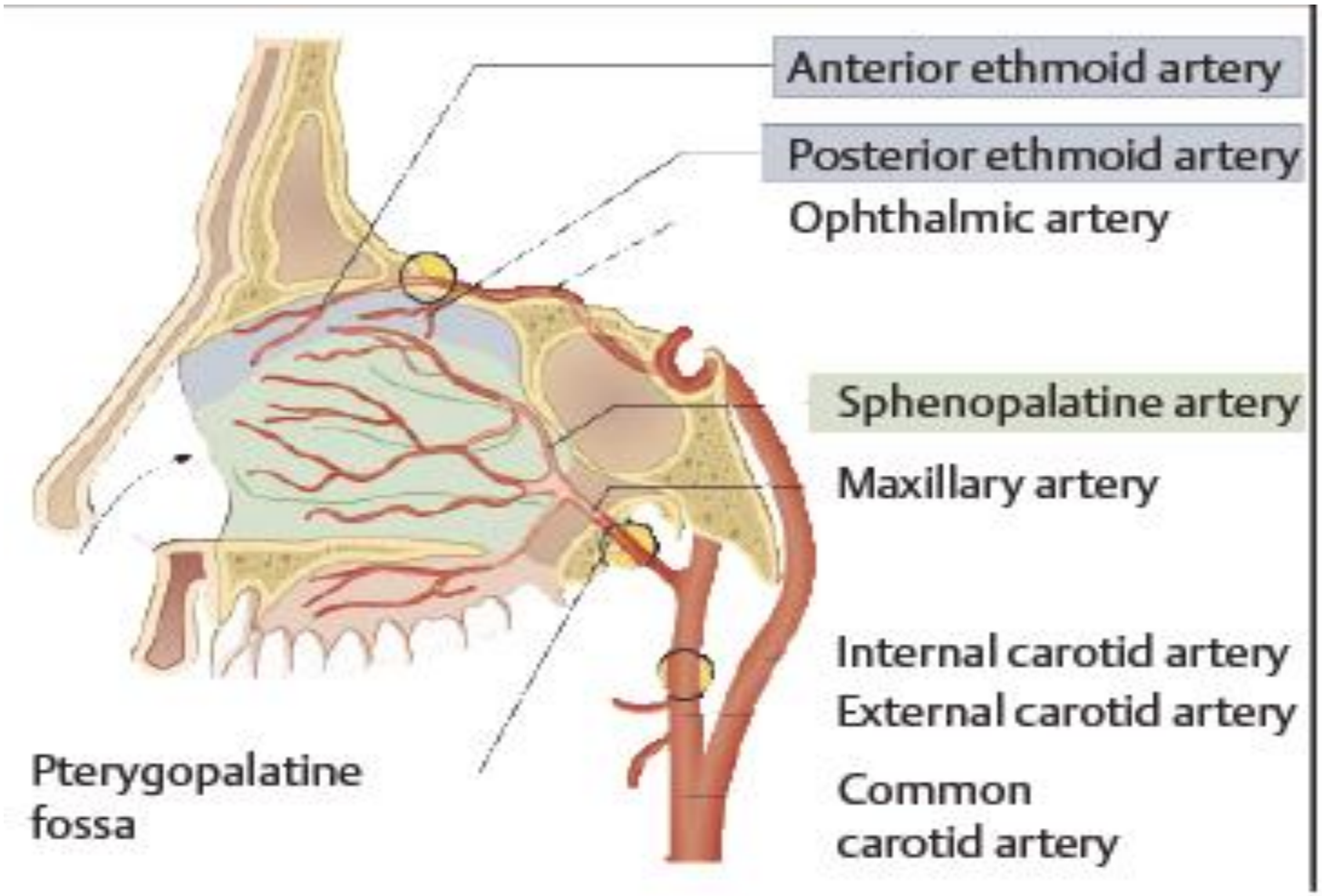
III. Endoscopic Sphenopalatine Artery Ligation

.

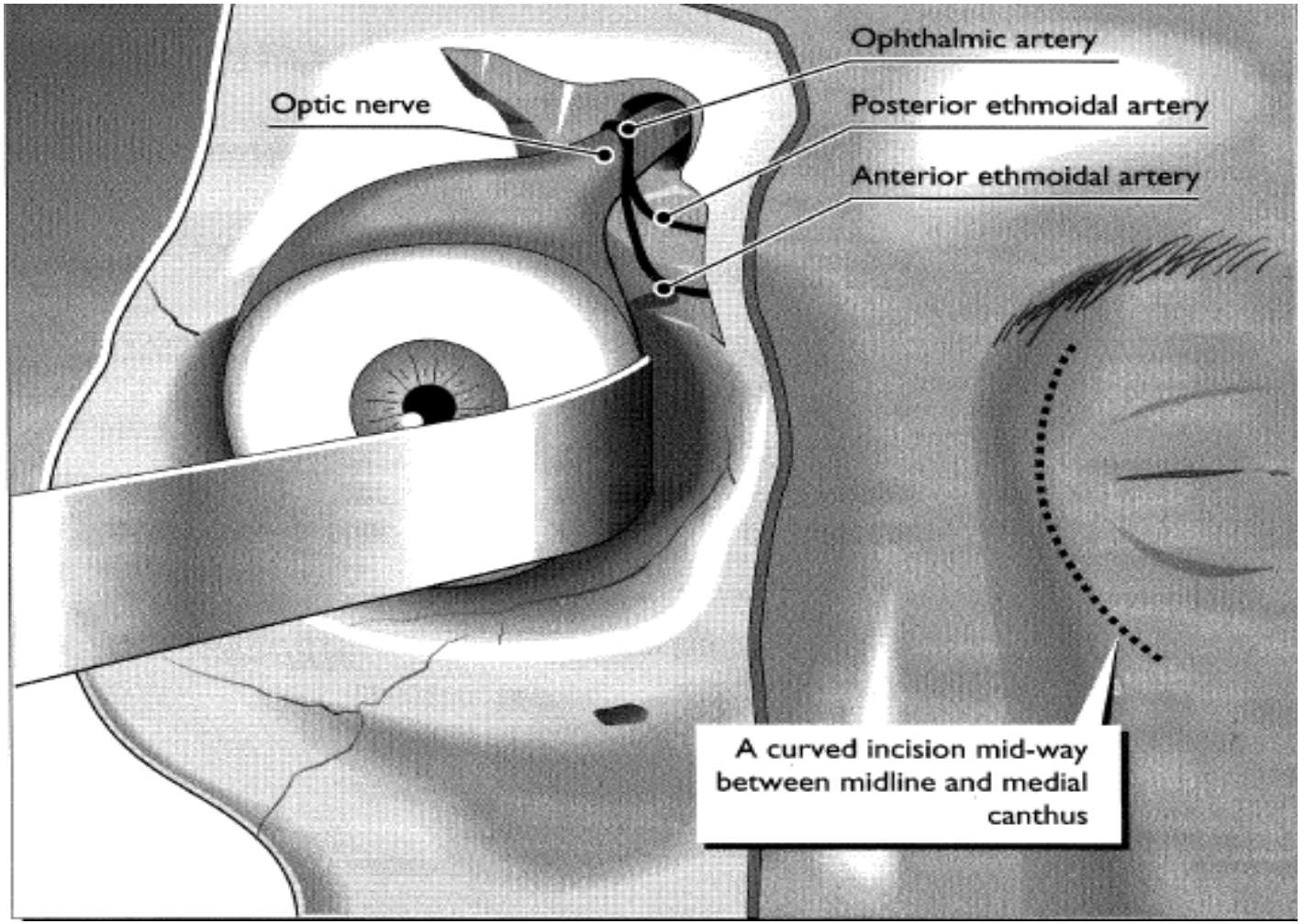
IV. Maxillary Artery Ligation

V. External Carotid Artery Ligation

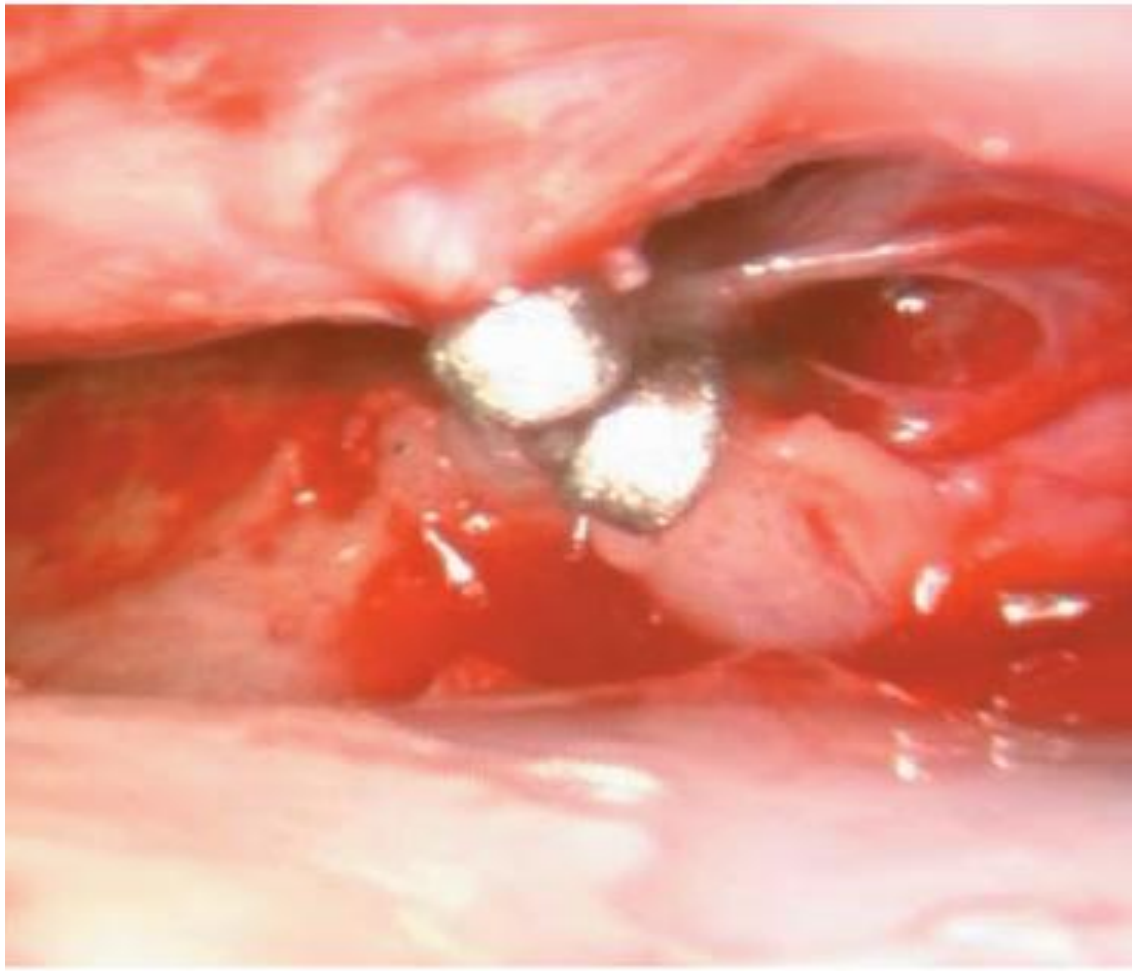
Arterial Ligation



Ethmoidal Artery Ligation

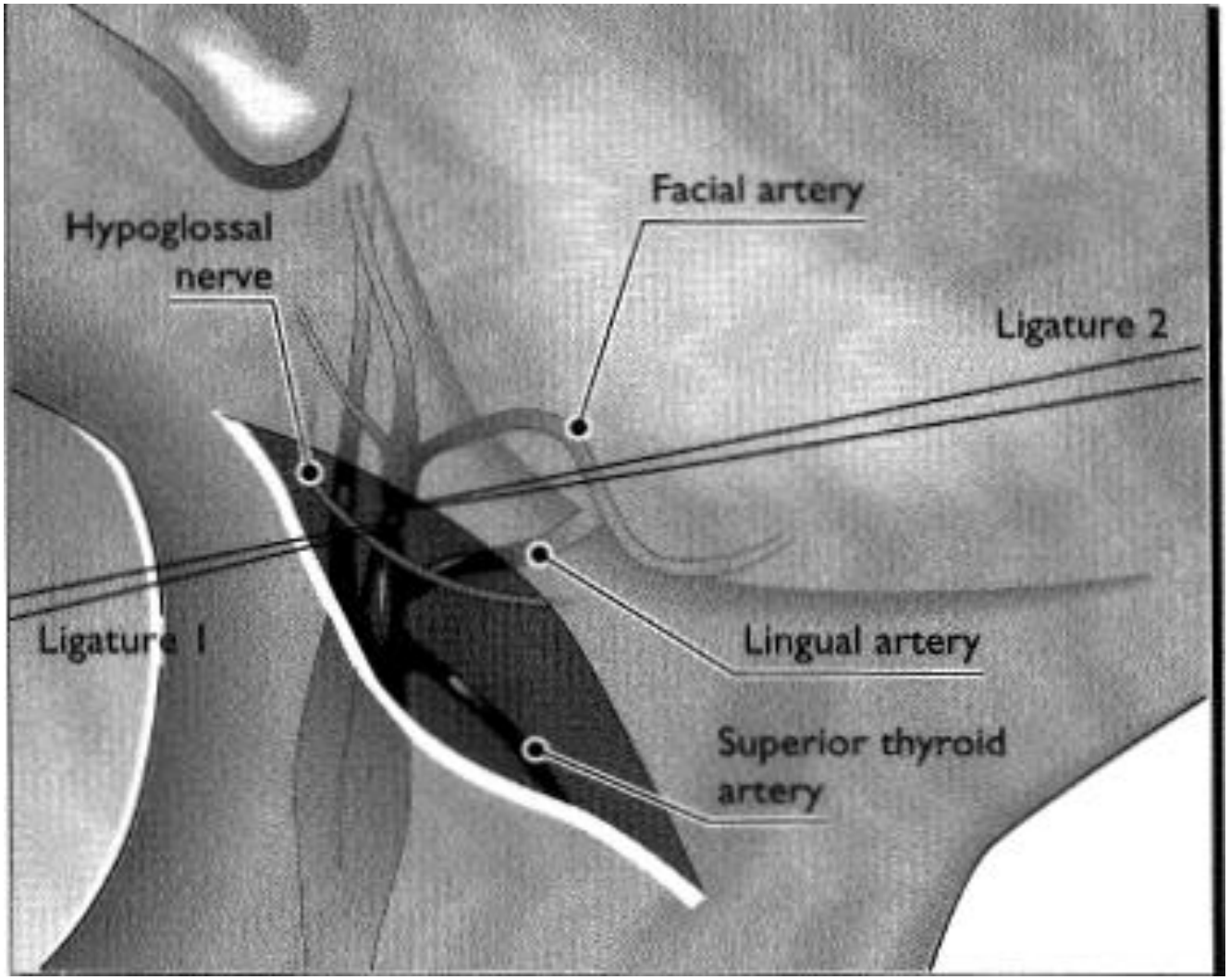


Sphenopalatine Artery Ligation



Transantral approach –Maxillary Artery Ligation

External Carotid Artery Ligation



E. Embolization

- Angiography
- Polyvinyl alcohol, tungsten or steel microcoil used to embolise vessels.

F. Laser Coagulation – Hereditary Haemorrhagic Telangiectasia

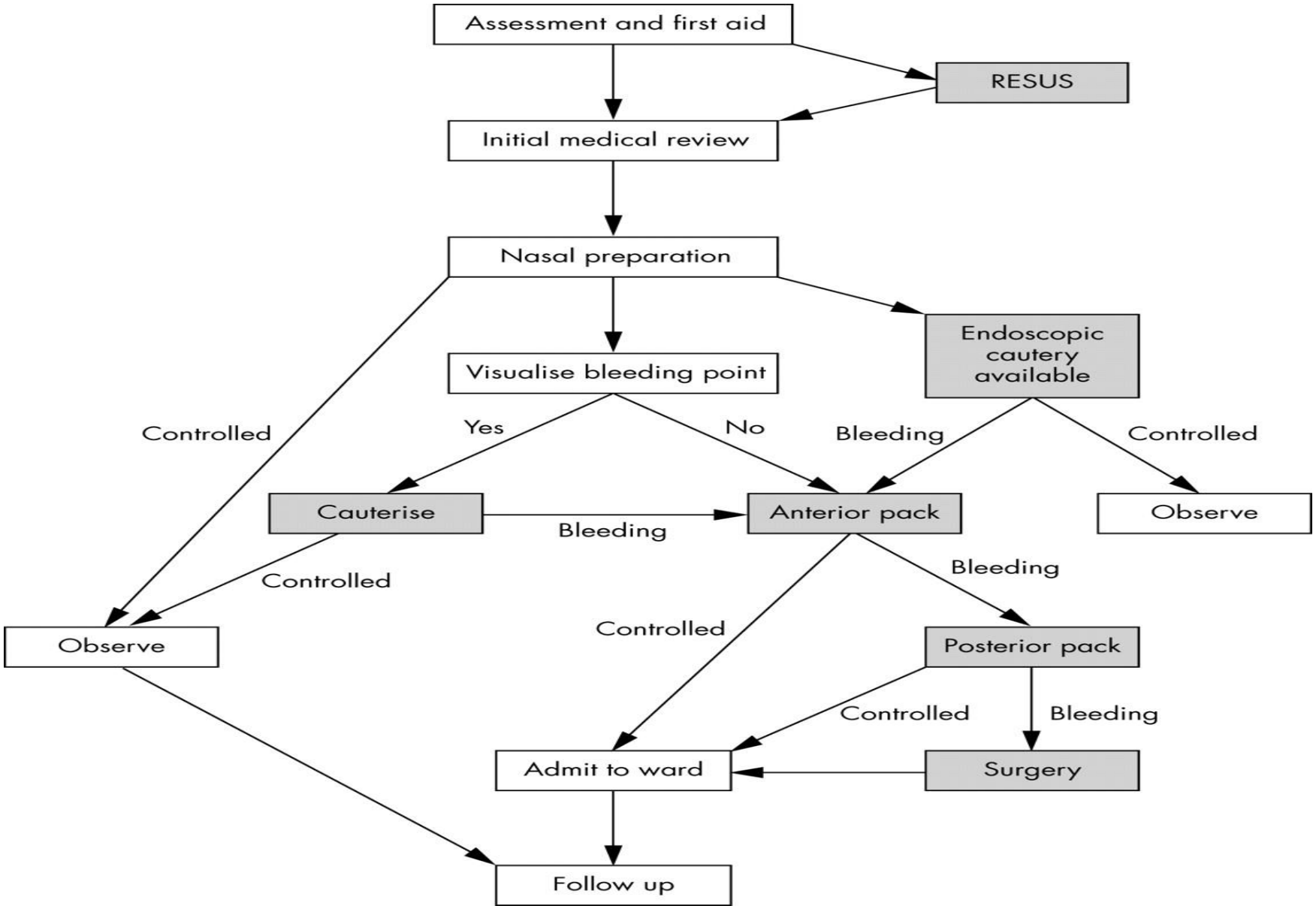
- Supportive measures

  - Pharmacological Agents

  - Blood Products : FFP/ Platelet concentrates

- ❑ Aetiological factors identified & Treated

Algorithm in the mgt of Epistaxis



- Prognosis- Good:

- Prevention & Follow- up:

❖ Local Experience: Jan 2010 - Dec 2011
(U.B.T.H)

- Total Cases= 57
  - Age: 23mths – 85years
  - Mean Age= 42years
  - M=29 , F=28: 1 : 1
  - 17- Admissions
  - 1 had ECAL

- Aetiology:

Idiopathic	- 24	(42%)
Infection	- 18	(32%)
Atherosclerosis	- 11	(19%)
Trauma	- 3	(5%)
Bleeding diathesis	- 1	(2%)

Total = 57 Patients

Conclusion

- Epistaxis is a symptom and sign

- A cause of morbidity

- Evaluation - control bleeding & treat cause

Thank You