Case Presentation

E Post

17/3/06

Patient details

- 52 yo male
- Stellenbosch

History

- 2/12 R epistaxis, nasal obstruction, headaches, proptosis, headaches
- PMHX: TB Rx
- Previously worked in mines
- Nil allergies

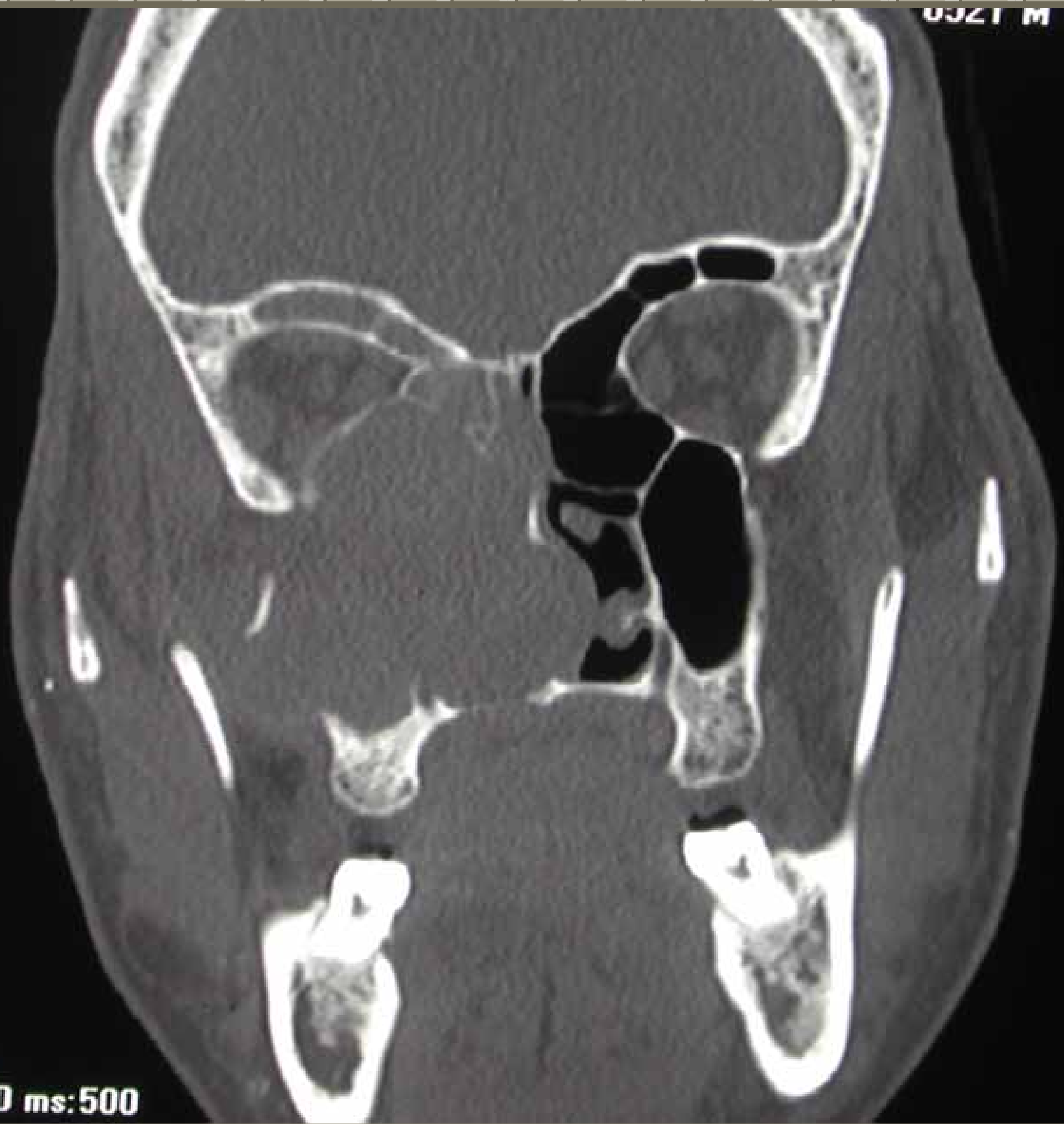
Clinical

- - nodes
- Proptosis R, N eye signs but decr vision R
- Complete obstruction of R nasal passage
  - Smooth, nonulcerating, not granular
- Septum to L, decr AE L
- Parasthesia V (I-III)

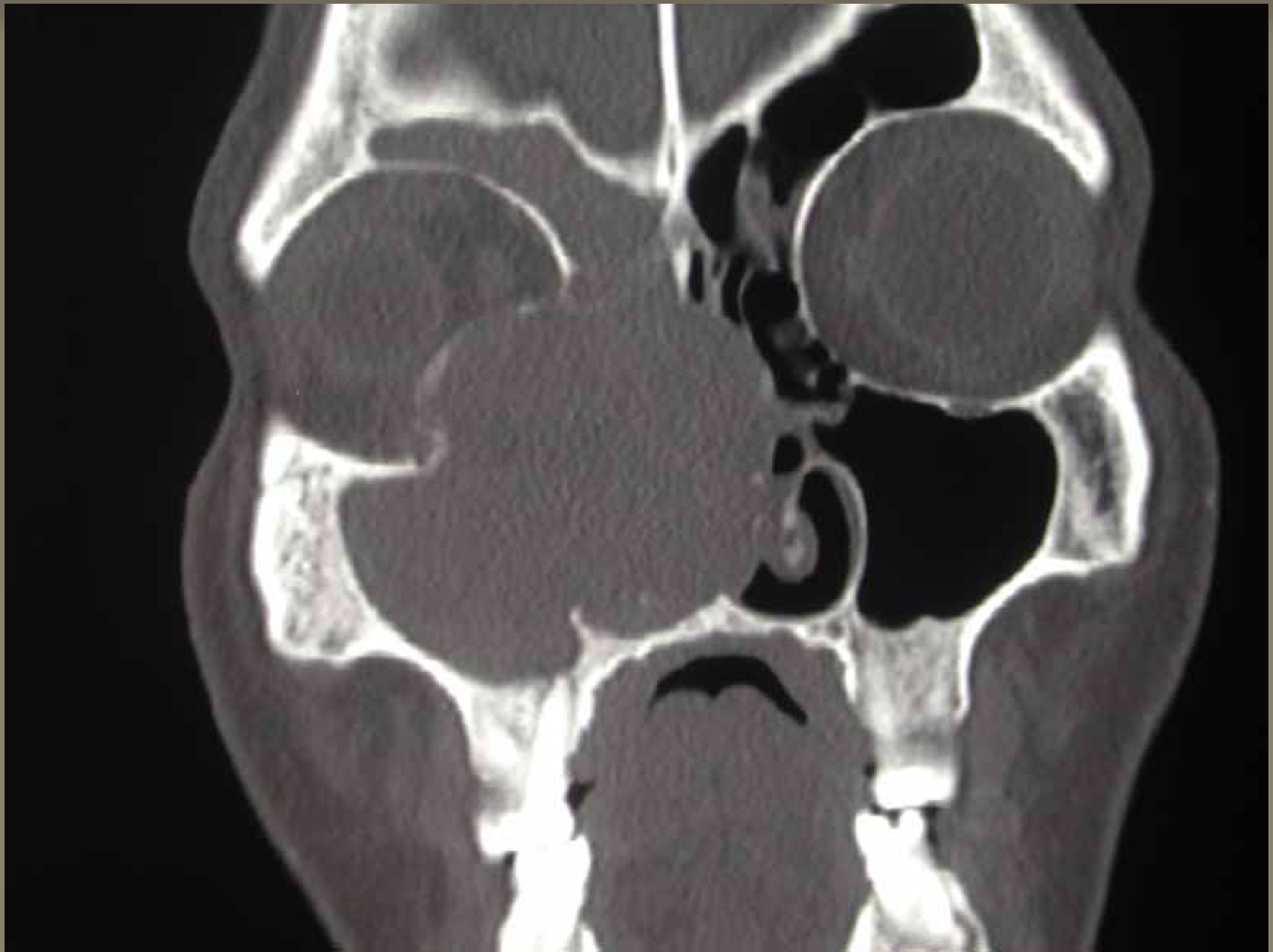
Management

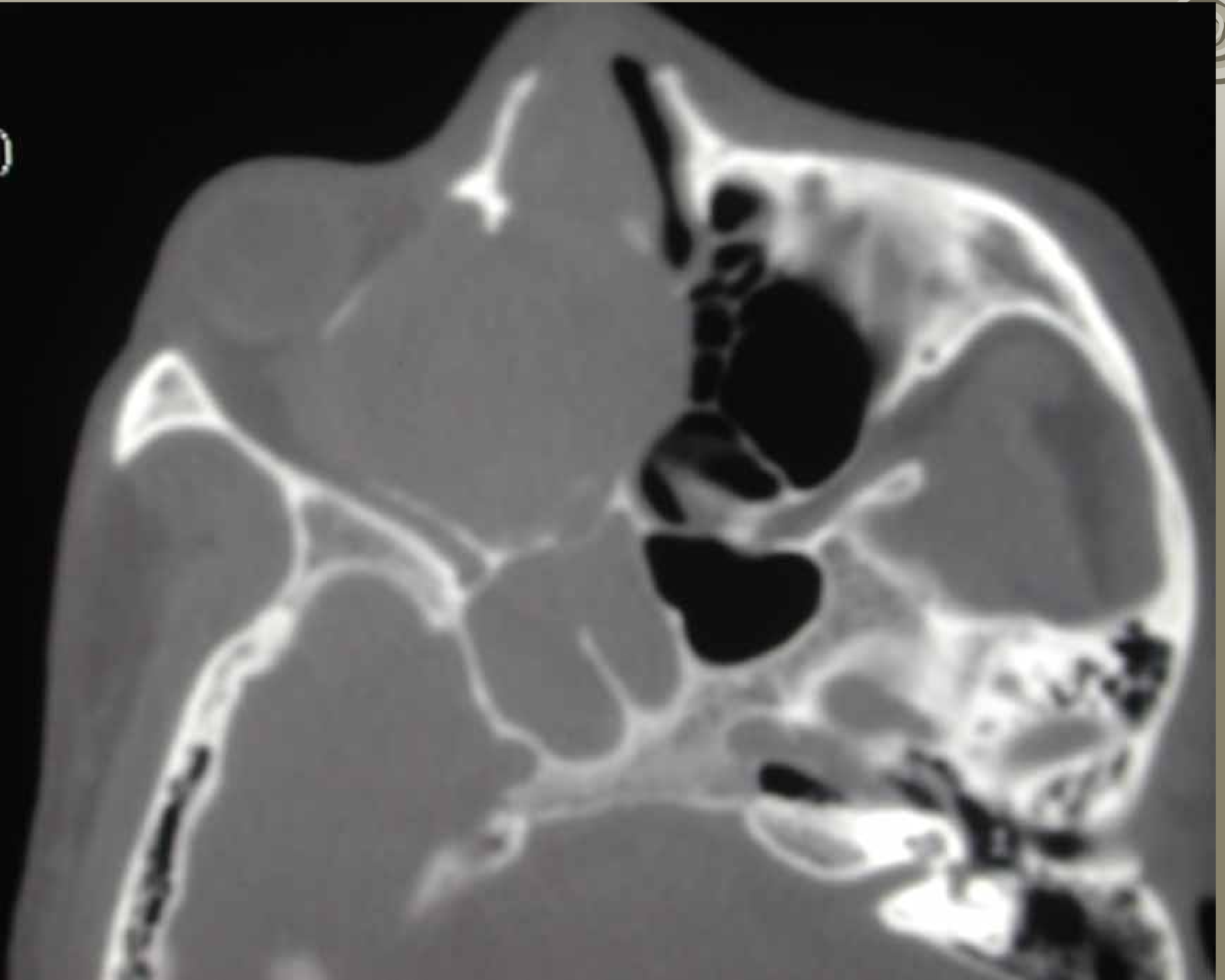
- Biopsy under local:
  - Bloody - BIPP
  - Subacute inflamamtion:

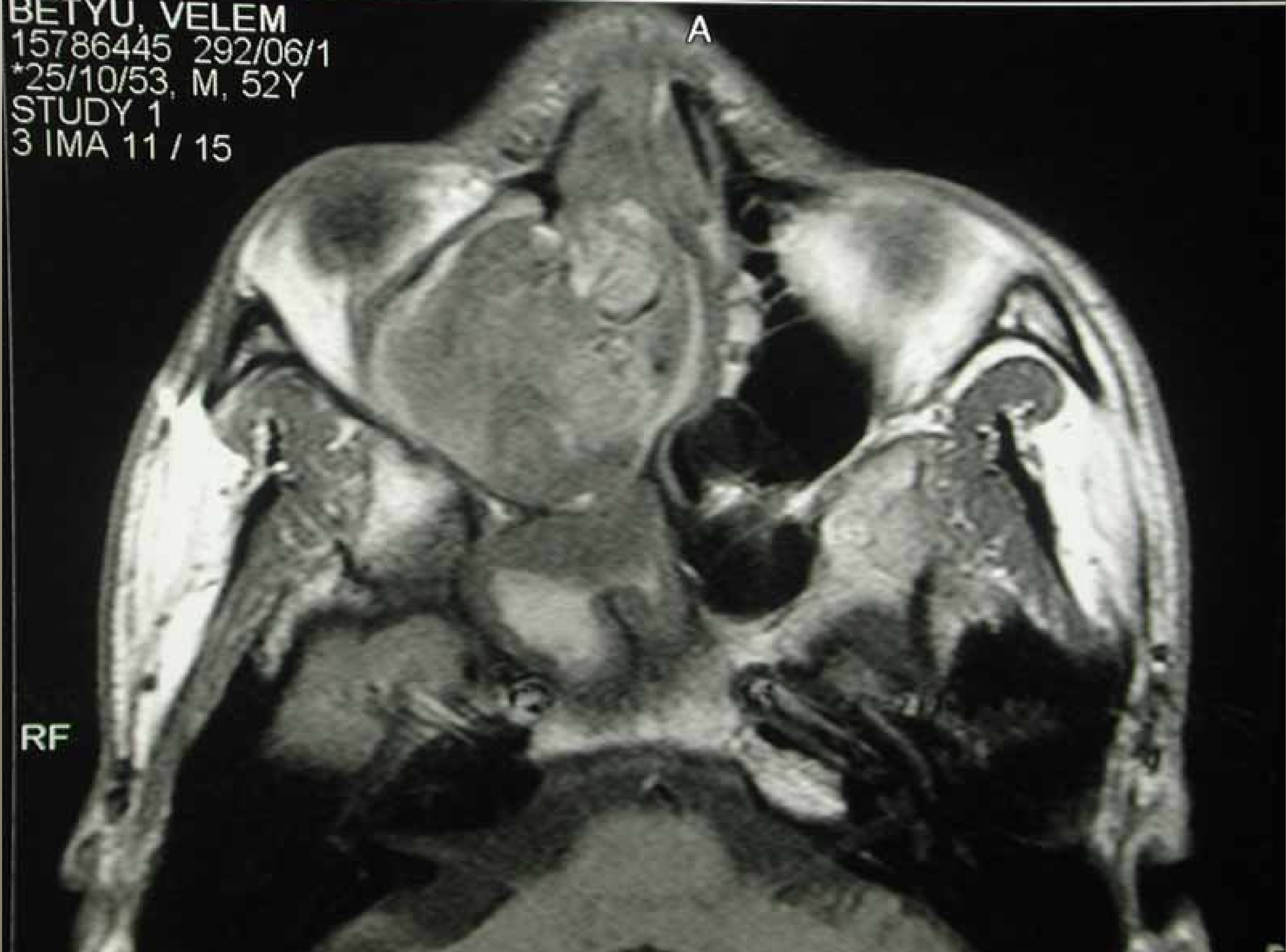
    Acute and chronic inflammation, respiratory epithelium, some granulation and oedema,(-) ZN, PAS,
- CT scan
  - Epicenter ethmoids,
  - Erosion: sphenoid, max, LP.
  - ?mucocele ?malignancy



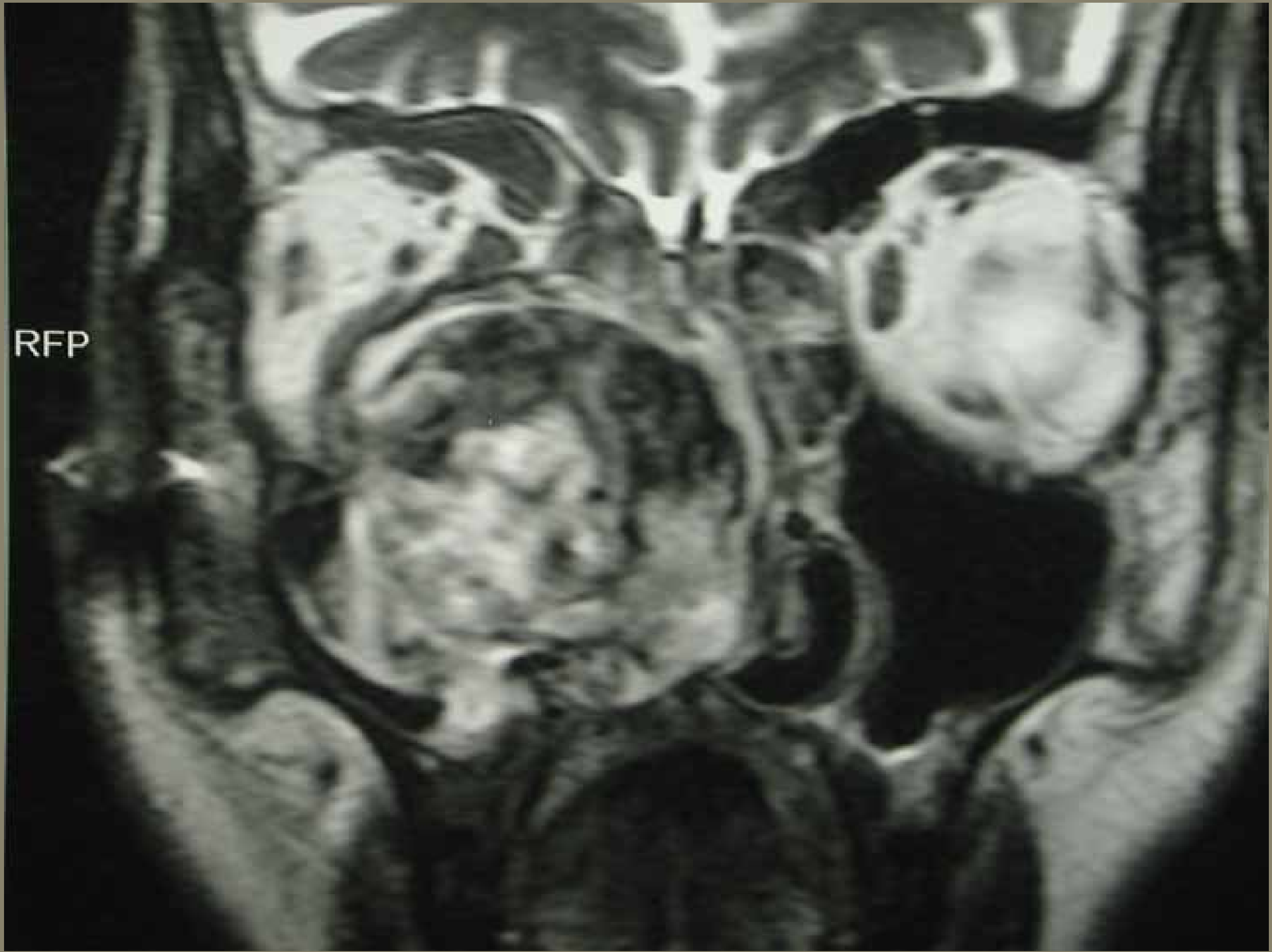
0521 M 15786445
Ex:63
2006/02/
15:
R
L
W:2500 L:500
Vp:120 mA:180 ms:500

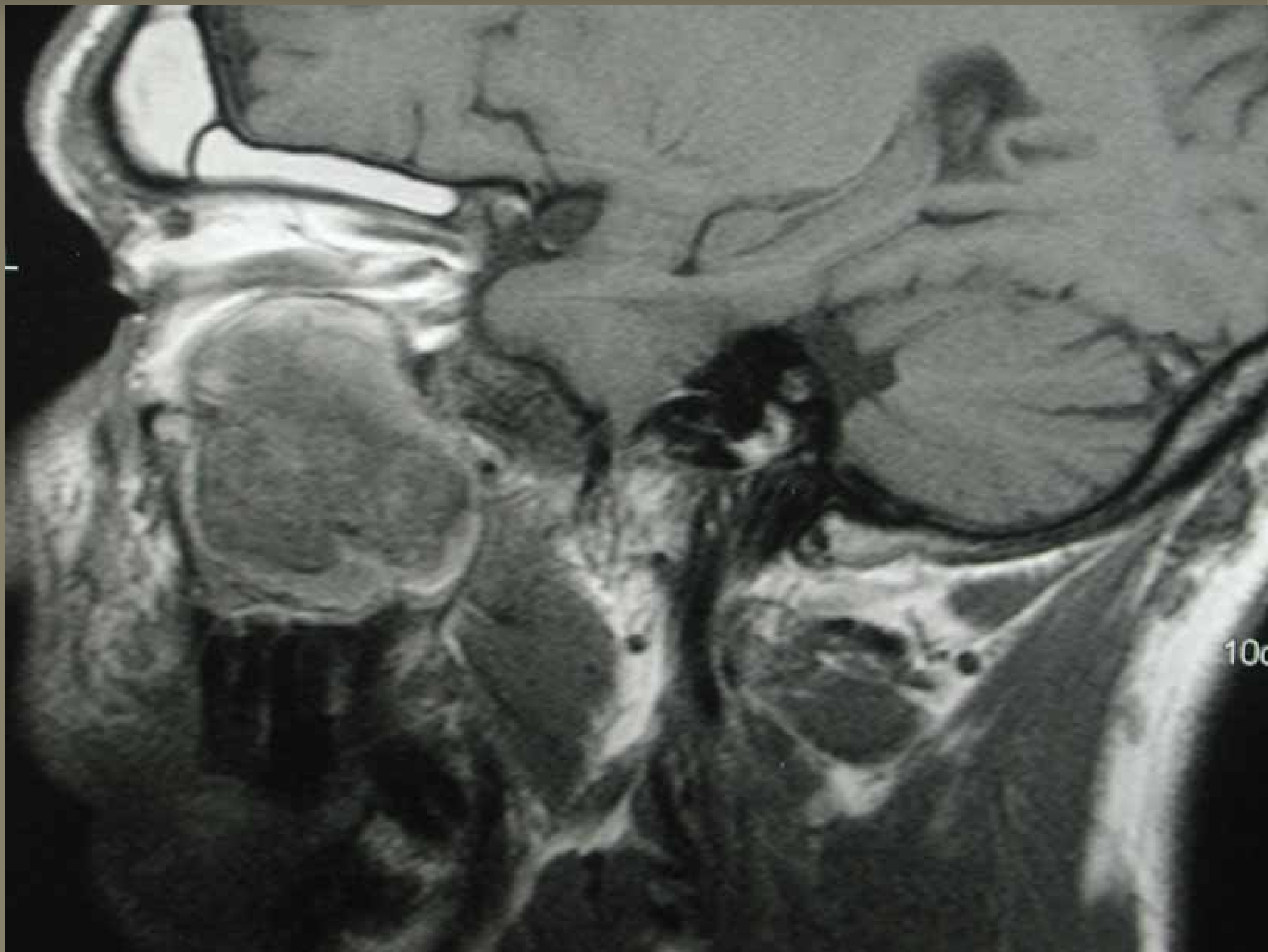



,226)



BETYU, VELEM
15786445 292/06/1
*25/10/53, M, 52Y
STUDY 1
3 IMA 11 / 15
A
RF


RFP

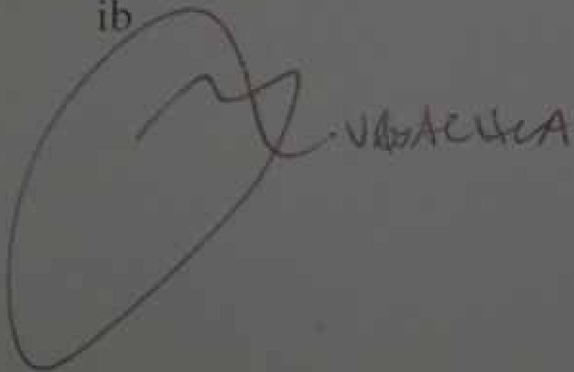

10c

peripheral low intensity areas on T2. There is extension of the mass into the right sphenoid sinus as well as the right maxillary antrum. There are central areas of strong contrast enhancement with peripheral areas showing little to no contrast enhancement. There appears to be obstruction of the right frontal sinus with dense proteinacious fluid within the right frontal sinus. There is pressure on the right orbit with proptosis of the right globe and superior displacement of the orbital contents. There is no invasion of the anterior cranial fossa. There are no focal lesions within the cerebrum or cerebellum.

COMMENT

A large, expanding heterogeneous mass is seen centred on the right nasal space. The mass invades the right sphenoid, right maxillary antrum and right anterior ethmoidal sinuses. There is obstruction of the right frontal sinus. The pattern and growth of the lesion suggests an inverted papilloma. However, malignant transformation to squamous cell CA cannot be excluded.

DR VADACHIA/PROF HEWLETT
ib



Management

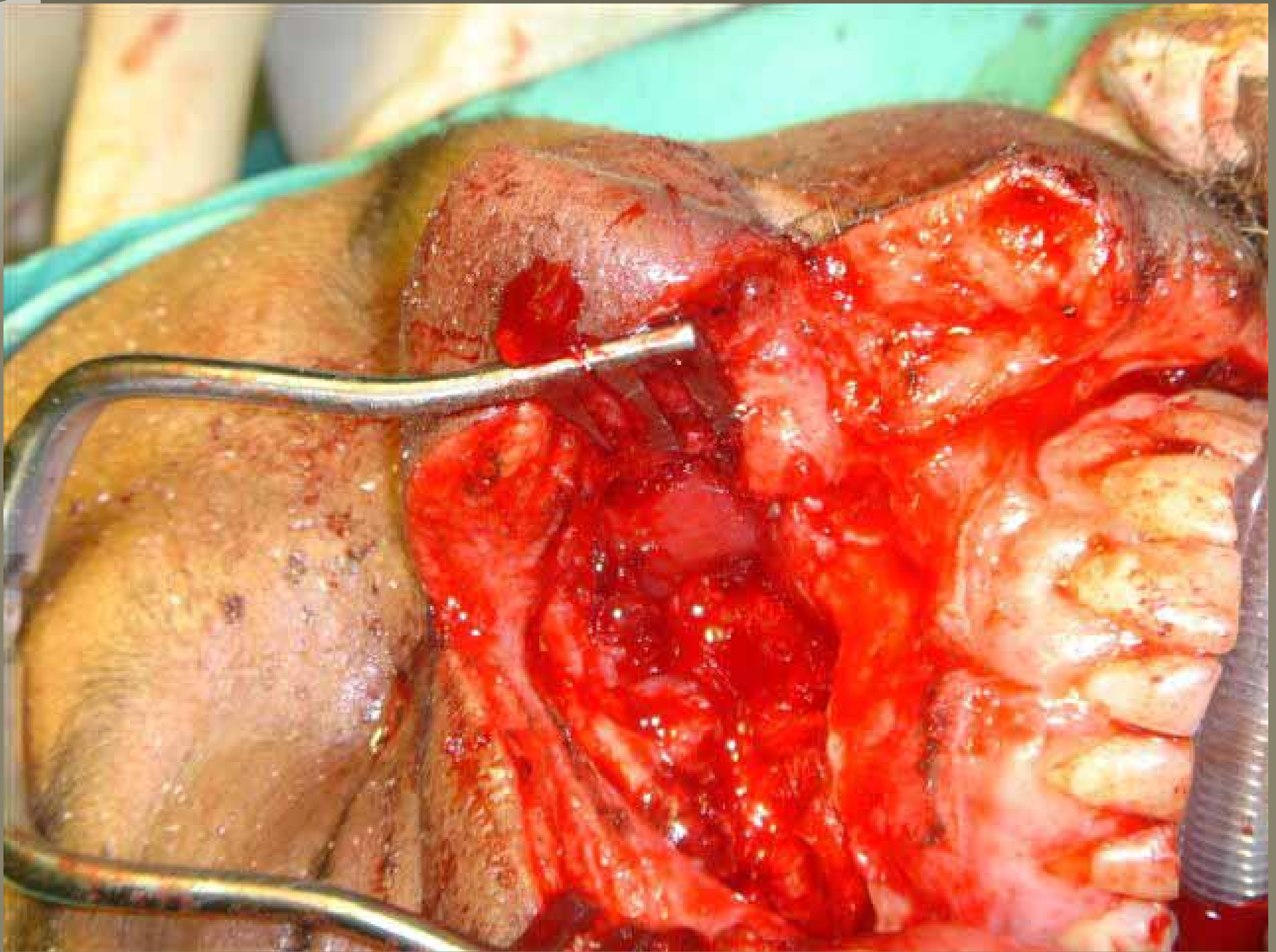
- MRI
- 2nd biopsy under GA
  - Friable, bled, ? Inverted papilloma
  - Histology = subacute inflamamtion with repair. Inflammatory infiltrate, respiratory epithelium, some granulation and fibrosis, necrosis, no organism, no malignancy, ectatic blood vessels

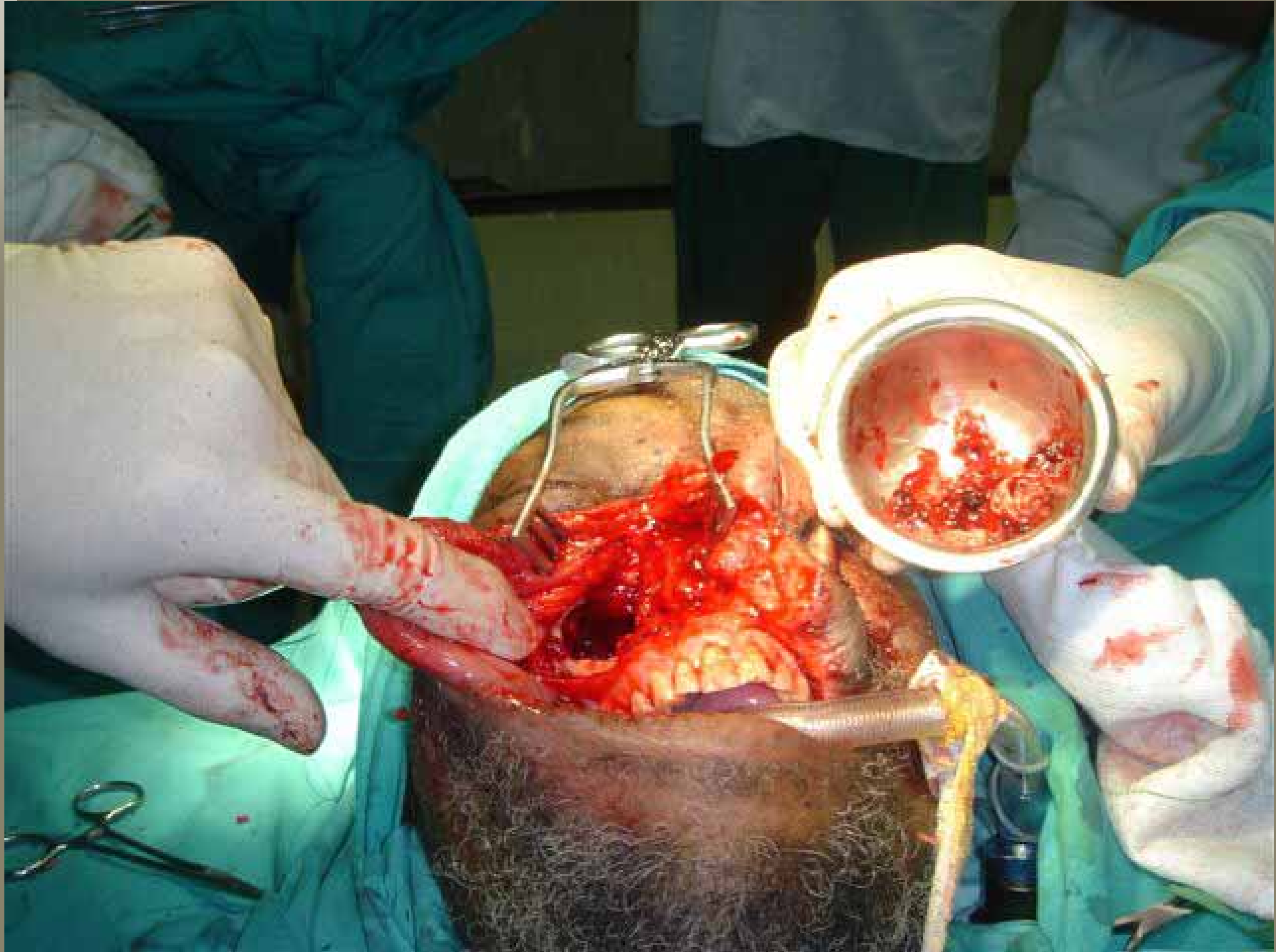
Planned management

- Nasal douche
- Topical steroids
- Review few weeks in OPD - rescope

Management

- Lateral Rhinotomy/ Medial maxillectomy
  - Well delineated tumor removed
  - Mass sent to pathology
  - + 2 biopsies sent: frontal recess + post choana
- Histo: **INFLAMMATORY POLYPOSIS**
  - (-) fungus/ parasite, oedematous sinonasal polyps with hemorrhage. No IP/ malignancy





Nasal Polyps

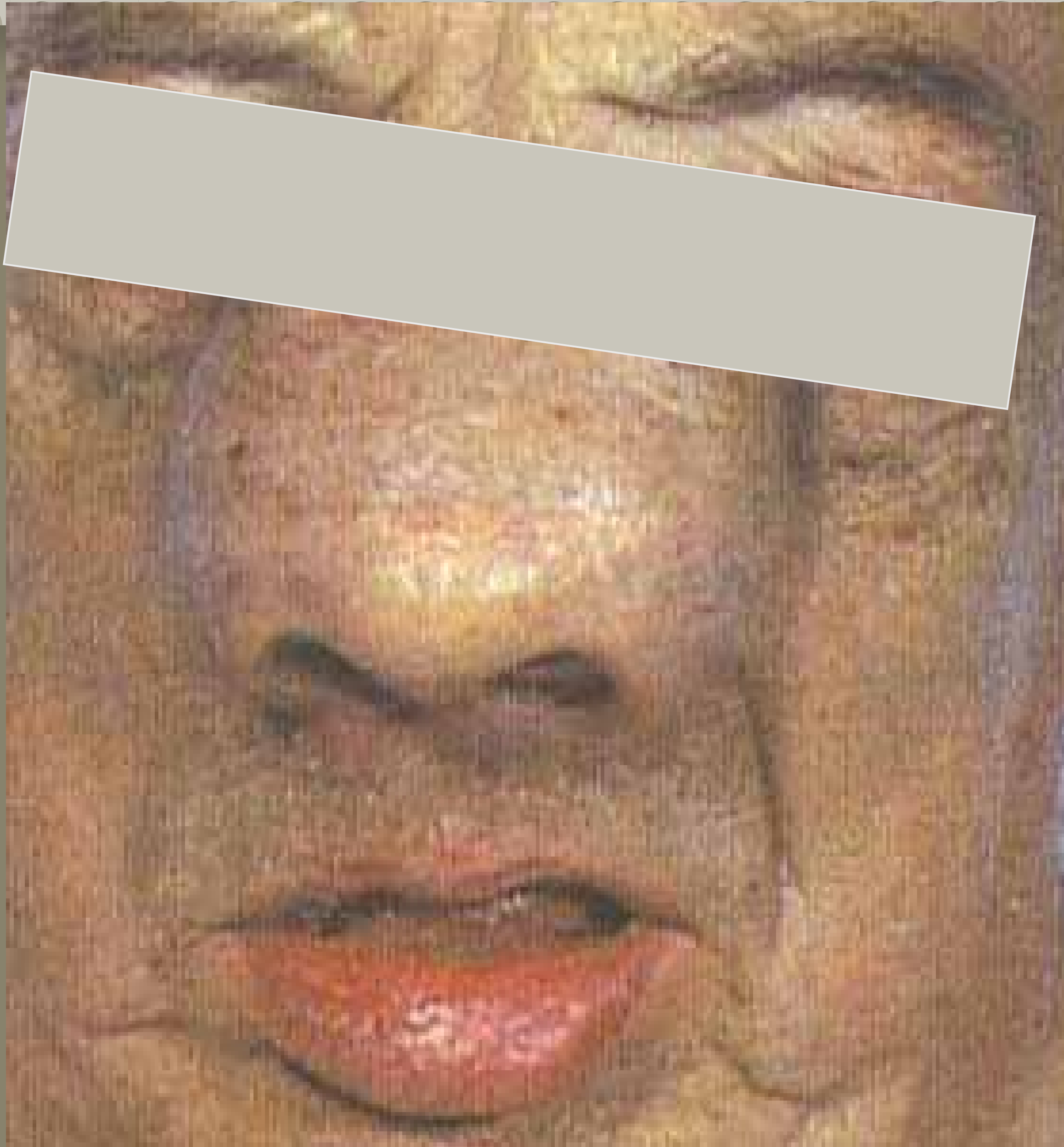
- 1 – 4% population - *Bateman*
  - ↑ asthma, cystic fibrosis
- Allergic rhinitis same incidence as N population
- Male 2-4:1
  - Asthma: male = female
- > 10 yr old; lower incidence after 60
  - Can be from 2 = unusual

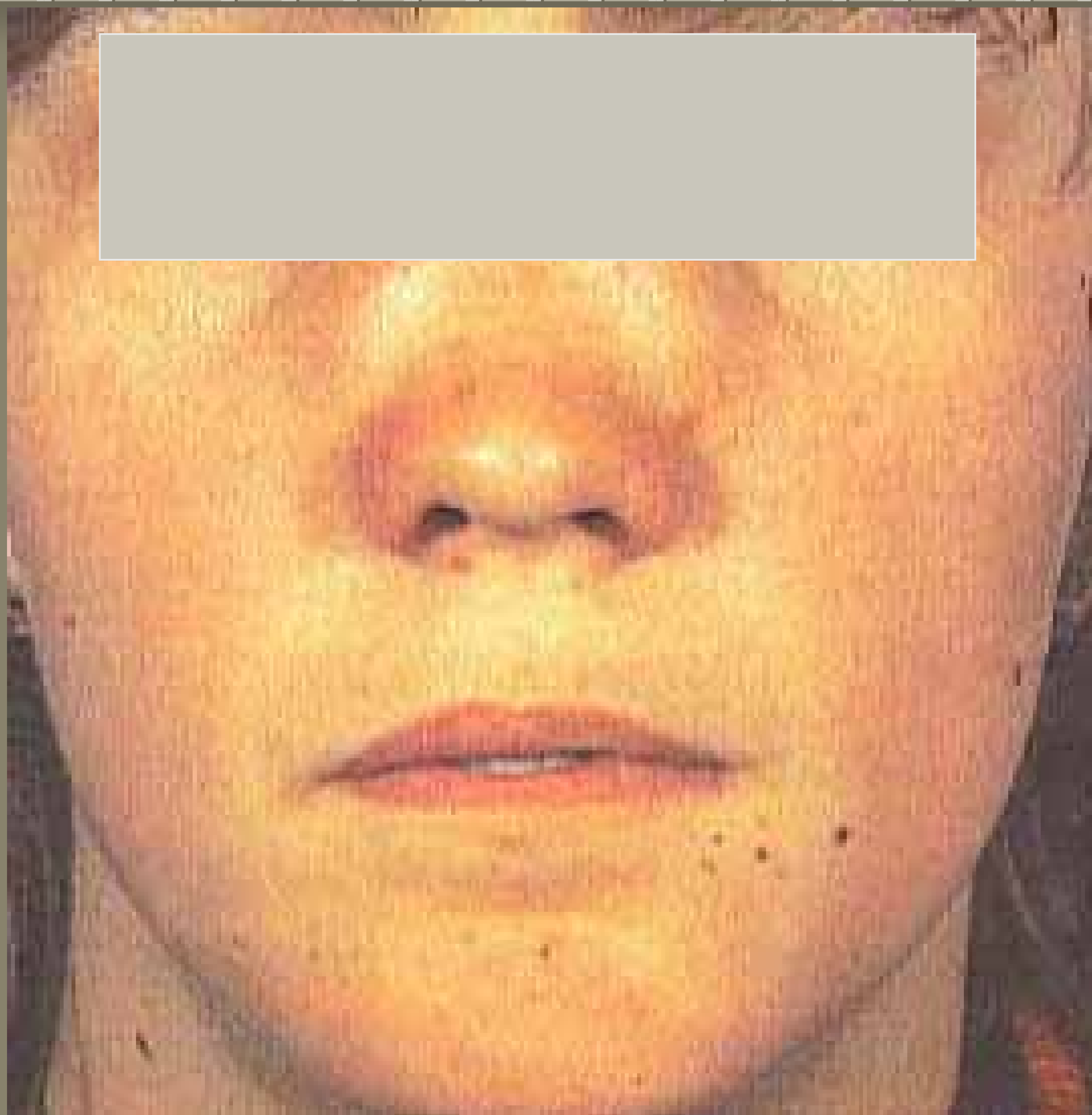
Clinical: Symptoms

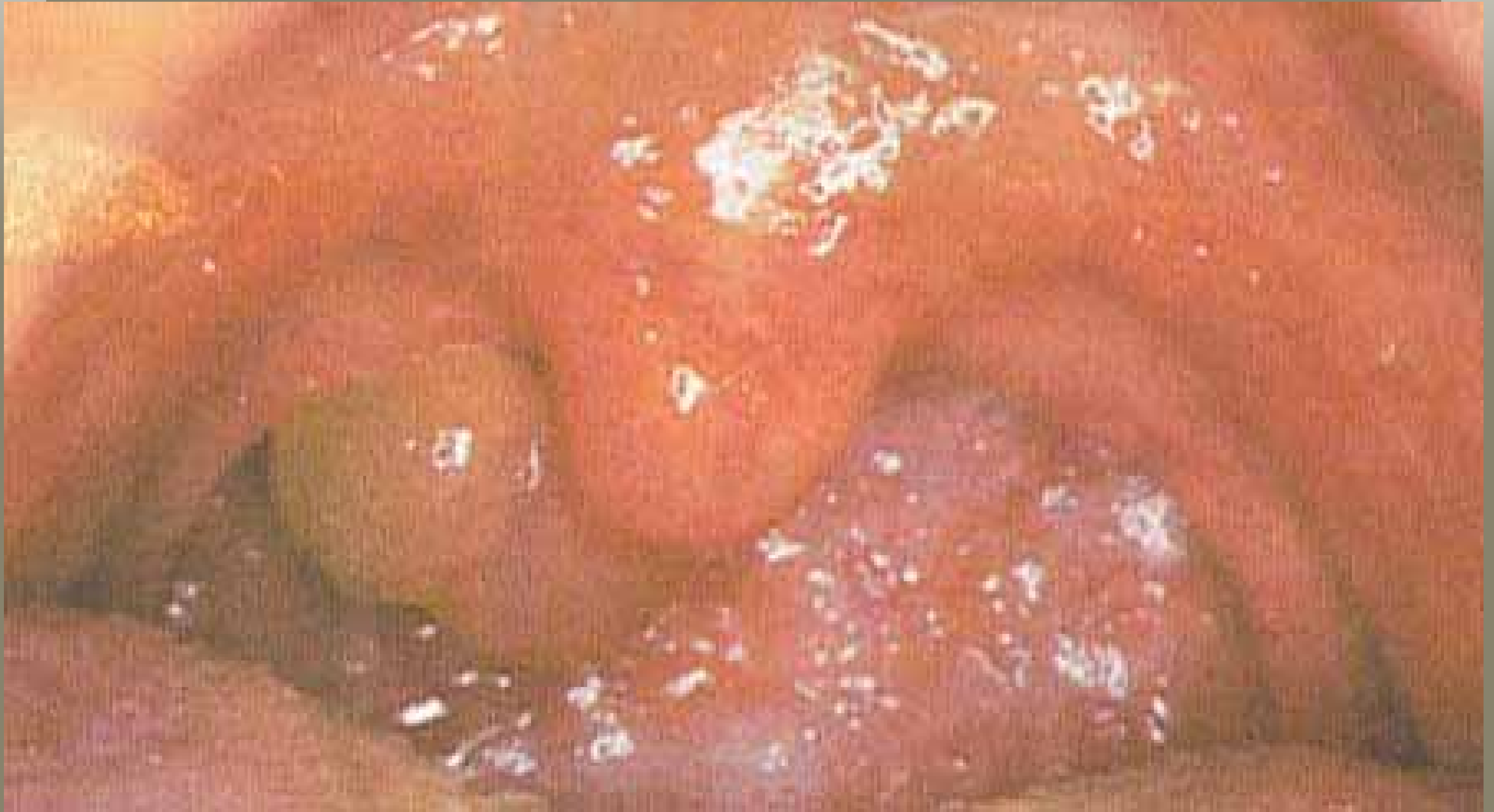
- Nasal obstruction
- Rhinorrhea + sneezing
  - 50% ; not perenial + no trigger
- Hyposmia
  - Suction polypoid fluid postop to improve
- PND
  - Mucous hypersecretion
- Pain

Clinical signs

- Bilateral (uni) pale, fleshy, rhinorrhea, insensitive
- Ethmoid sinuses: Around MTx
  - Anterior = below
  - Posterior = above
  - Narrow areas: MMx - *Stammberger*
- Hypertelorism (bones not fused)/ bone expand
- Hyponasal speech
- Mouth breathing







Antrochoanal polyp

- Killian polyp
- < 40 yr
- Male
- Unilat from maxillary antrum (bilat)
- Seen posterior mostly (mirror)
- Histo = nasal polyp BUT no eosinophilia
- Aetiology ? No assoc infection / allergy
  Wide ostium

Aetiology

- Multiple factors / 5 theories – unsatisfactory
  - 1. Infection
    - H. Influenza - no Δ with Abx; Rx steroid
  - 2. Vasomotor imbalance
    - Poor blood + nerve supply
  - 3. Allergy
    - Eosinophilia/ histamine/ mast cell degr. -
      (+) allergy test same as non-polyp-population - *Jamal*
  - 4. Bernouilli phenomenon
    - ↓ρ - not near nasal valve
  - 5. Polysaccharide changes
    - New but N collagen

Allergy

- Allergic rhinitis
  - 25% (+) skin test to housedustmite + mixed pollens in polyp pt – *Drake-Lee*
- Aspirin allergy
  - Samter's triad: polyp, asthma, aspirin hypersensitivity
  - 8% of polyposis
  - Altered PG sythesis; not allergy
- Fungal rhinosinusitis
  - Antifungal immunotherapy↓ oedema / recurrence

Recurrence

- 5% had 5 or more polypectomies – *Drake-Lee*
- ↑recurrence if:
  - Asthma
  - Aspirin allergy
- No increase in recurrence if:
  - (+) skin tests, penn allergy, hay fever, childhood asthma

Histology / Tests

- Respiratory ciliated columnar epithelium with goblet cells
- Stromal oedema + inflammatory cells
  - **Eosinophilia** – 90% of polyps
  - Plasma cells, lymphocytes, macrophages,
- ↑IgE
  - (no relation with skin test)
  - S. Aureus enterotoxin IgE - *Bachert*
- Degranulated mast cells
  - Not same as AR – *Drake-Lee*
- Free histamine (fluid) = 100 – 1000x serum

Pathogenesis

- Eosinophil dominated polyps:
  - Eg CRS, AFS
  - cytokines – Il5 – inflammatory cells
- Non-eosinophil dominated polyps:
  - Cystic fibrosis, 1° ciliary diskinesia
  - Chronic irritation – proinflammatory cytokines
- Aspirin/ asthma: - *Szczeklik*
  - ↓PGE2 - ↑5 lipoxygenase - leukotrines

Investigations

- Allergy test: skin
- Sweat test:
  - kids with recurrent LRTI
- CT
  - For operative intervention
  - Rarely bony erosion – often assoc with previous surgery
- (Histology)

Differential

- Antrochoanal polyp
- Middle turbinate polyp
- Inverted papilloma
- Malignancy
- < 2: Meningoceles

  : Encephaloceles

Medical management

- Corticosteroids
  - Topical =
    - Small polyps; reevaluate 6-8/52
    - ↓ size + recurrence – *Lildholdt/ Denmark*
  - Systemic
    - "medical polypectomy"
    - 1mg/kg (60mg)/day – taper 10mg/d every few days total 3/52 –*Sweden/ Holstrom*
    - Also preop

Aspirin desensitization

- Stevenson et al; J allergy Clin Immunol 1996;98(4):751-8
- Life long – stop aspirin 48-96 hrs: sensitivity re-establishes
- Few weeks after surgery
- Increasing doses PO in H till 450-600mg daily; then up to 650mg BD

Aspirin desensitization

- Indications:
  - Asthma unresponsive to systemic steroids
  - Severe polyps: multiple surgery
- SE during sensitization
  - Bronchospasm, nasal symptoms
- Outcome
  - Polyp recurrence delayed by 6 years
  - Marked ↓ in steroid use (spray/PO)
  - ↓ sinus infections
  - 80% improve nasal symptom score + asthma severity

“Medical management”

- Antibiotic
  - Macrolides =
    - antiinflammatory
    - Roxithromycin 150mg/d for 8/52
    - Reduce polyp size 52% - *Ichimura/ Japan*
    - (If steroid fails)
- Antifungal
  - Amphotericin B nasal irrigation
    - 4/52- 39%↓

“Medical management”

- Intranasal <u>capsaicin</u> -*Holstrom*
  - Block neurogenic inflammation
- Intranasal <u>furosemide</u>
  - ↓ postop relapse
- <u>Antihistamines</u>
  - Only if allergic symptoms – no effect on polyps

“Medical management”

- Leukotriene modifiers
  - Zileuton: 72% improve - *Parnes*
- Intranasal lysine-acetylsalicylic acid
  - Anti-inflammatory effect

Surgical principles

- Only if refractory to medical Rx
  - 1/12 topical + course systemic steroids
  - ↑ administration of topical spray
- CT should determine extent
- MTx NB
- Controversy: minimalistic vs aggressive
- Microdebriders spare more N anatomy
- Aspirin sensitive: more extensive