

# Allergic rhinitis and sino-nasal polyps

by

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# Definition

*is* an IgE-Mediated hypersensitivity disease of the mucous membranes of the nasal airways characterized by

- itching
- sneezing
- watery rhinorrhea
- nasal obstruction



## Types :

seasonal

Perennial

# Aetiology

## Predisposing factors

- race
- age; mainly in young adulthood.
- sex; more common in males.
- hereditary; a family history is common

## Exciting factors

- inhalants; seasonal; pollens and fungi. Perennial; house dust mite.
- ingestants; fish, eggs etc.....
- infectants; germ proteins.
- drugs; aspirin and iodides are the commonest.
- physical; changes in the humidity and content of inspired air render the nasal mucosa more susceptible.
- Contactants; powders of plasters.

# Symptoms

- nasal obstruction it's sudden, bilateral, intermittent
- nasal discharge; profuse, thin, watery and sterile.
- sneezing; occurs in bouts.
- itching of the nose, eyes and palate.
- lacrimation; may be present.
- other manifestations of allergy may also be present.



# Signs

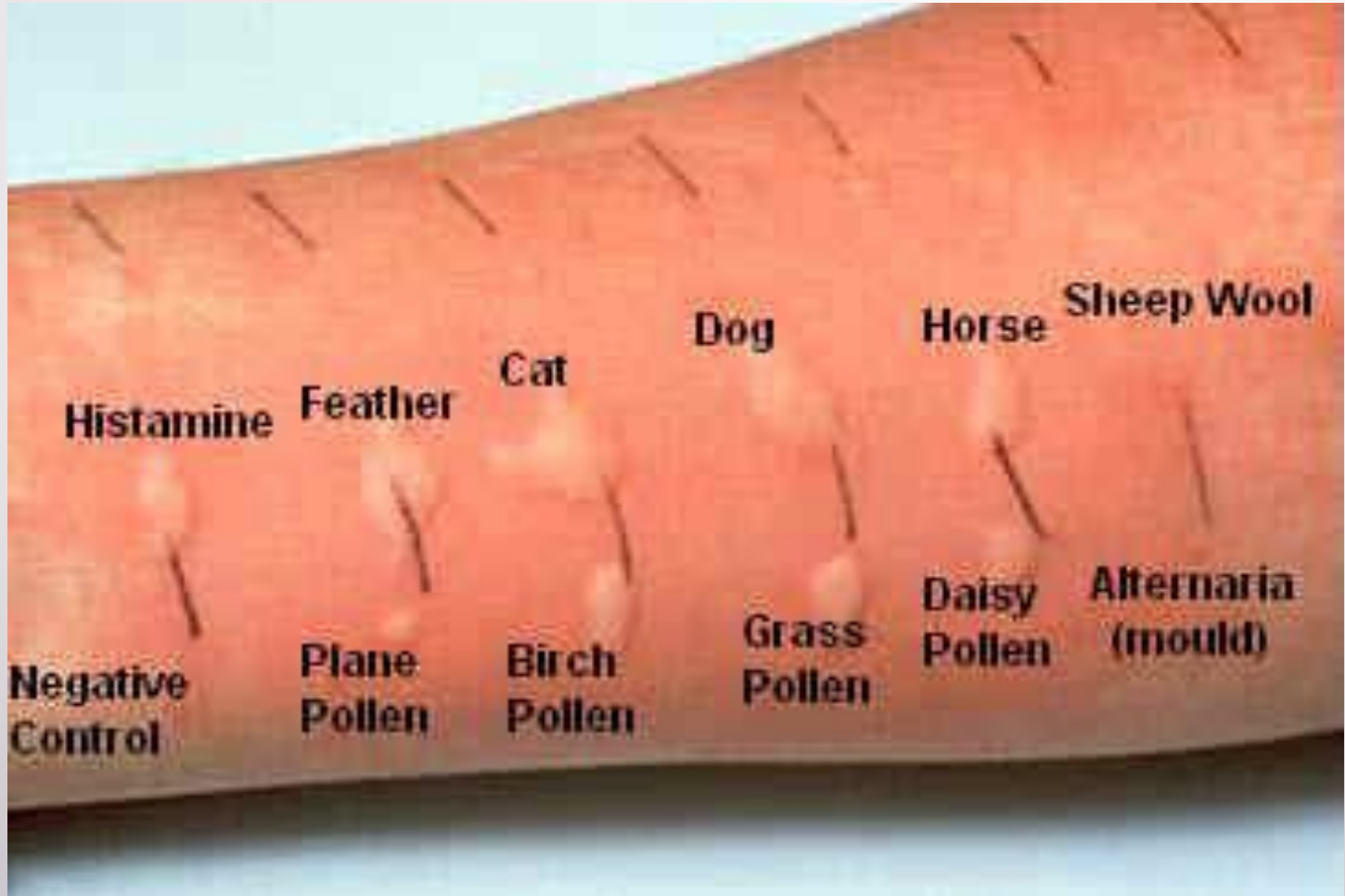
- nasal mucosa is pale and swollen.
- nasal polypi may be present





# Investigations

- skin prick test
- eosinophils may be found in great numbers in the nasal secretions or on microscopical examination of the nasal mucosa or polyp.
- Radioallergosorbent test (RAST).
- Enzyme-linked immunosorbent assays (ELISA).
- Nasal provocation test



# Treatment

1. avoidance of allergens

2. medical treatment

- Antihistamines topical +/- systemic
- steroids topical +/- systemic
- sodium cromoglycate
- Leukotriene Receptor Antagonists and inhibitors
- anticholinergics like ipratropium bromide

### 3. immunotherapy

### 4. surgery --- indicated in

- removal of polypi if obstructive.
- Reduction of inferior turbinates; by cauterization or submucosal diathermy or surgical excision
- Vidian neurectomy; advocated for intractable cases, but not widely performed

# Intrinsic rhinitis

It's a non-infective and non-allergic hypersensitivity of nasal mucosa to certain stimuli which may be

- physical
- chemical
- environmental
- endocrine
- stress

autonomic system imbalance play an important role in the pathophysiology particularly parasympathetic system overactivation

# Classification

1. eosinophilic 30 % NARES ( non-allergic rhinitis with eosinophilia )
2. non-eosinophilic 70 %

# Clinical features

- Watery nasal discharge
- Sneezing
- Itching
- Nasal obstruction
- mucosal edema
- turbinate hypertrophy
- polyps



# Investigations

- 1-radiology; plain x-ray, CT; no gross evidence of sinus disease or mucosal thickening.
- 2-bacteriology-no bacterial rhinitis.
- 3-Allergy testing
  - a) IgE total below 350 iu/L
  - b) Skin prick test; negative or very weakly positive.
  - c) RAST; negative or very weakly positive.
- 4-estimation of eosinophile in nasal secretion; more than 25% of inflammatory cells favor diagnosis of I.R.

# Differential diagnosis

- allergic rhinitis
- infectious rhinitis
- adenoid

# Treatment

- **medical**

Similar to allergic rhinitis

- **Surgical**

- if the obstruction is the main complain then turbinate reduction by ( SMD , SMR ,LASER, Microdebrider and cryotherapy ) .
- if the rhinorrhea is the main complain then vidian neurectomy .



nasal polyps

## Definition :

A pedunculated portion of edematous mucosa of the nose and paranasal sinuses.

## Types

1-simple

2-neoplastic

# Aetiology

- allergy
  - intrinsic rhinitis
  - inflammatory
- a) Acute; due to influenza. The polypus is usually single, very soft and slightly haemorrhagic.
- b) Chronic non-specific i.e. of long standing. These polypi are often multiple.
- c) Chronic specific; Rhinosporidiosis causes a friable bleeding polypus resembling a Strawberry.
- mixed infective-allergic; represents secondary infection in allergic or vasomotor type



ethmoidal air-cells is the main sites

# Clinical features

- middle aged patients
- male more than female
- insidious onset



# Symptoms

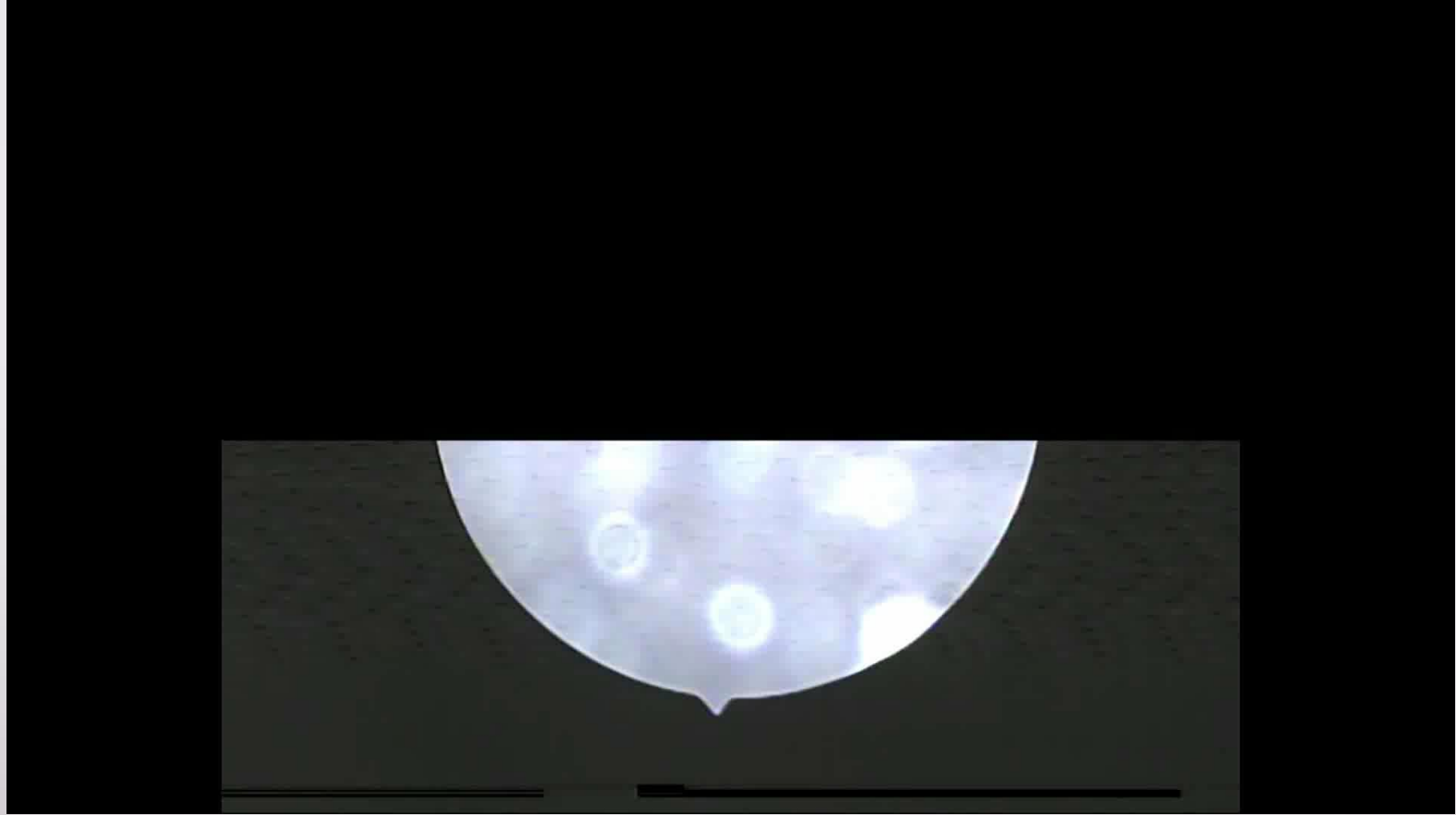
- Nasal obstruction usually bilateral.
- Running and sneezing if associated with allergy.
- Partial loss of the sense of smell and alteration in taste.
- Pain; usually over the bridge of the nose, forehead and cheeks. Occur if associated With secondary infection.

# Signs

- Nasal polyps are round, smooth, soft, translucent, pale glistening structures. They are Non-tender and move backwards when probed.
- Hypo nasal voice.
- Mouth breathing.
- Expansion of the nasal bones occurs in long standing cases (frog face).

## Investigations

- skin tests and RAST to identify an allergic cause.
- sinus radiograph; demonstrate maxillary sinus involvement.
- CT scans; in recurrent cases and those treated by FESS.
- biopsy; especially unilateral polyps or unusual-looking polyps



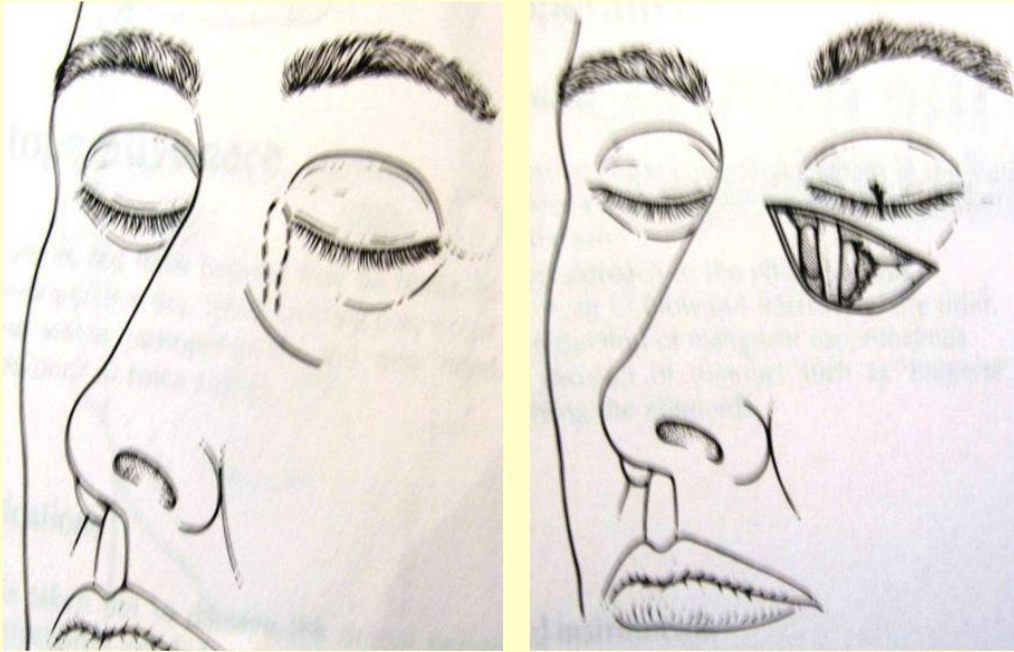
# Treatment

- medical
  1. steroids ( topical +/- systemic )
  2. antihistamines ( topical +/- systemic )
  3. saline nasal douche
  4. antibiotics ( Augmentin )

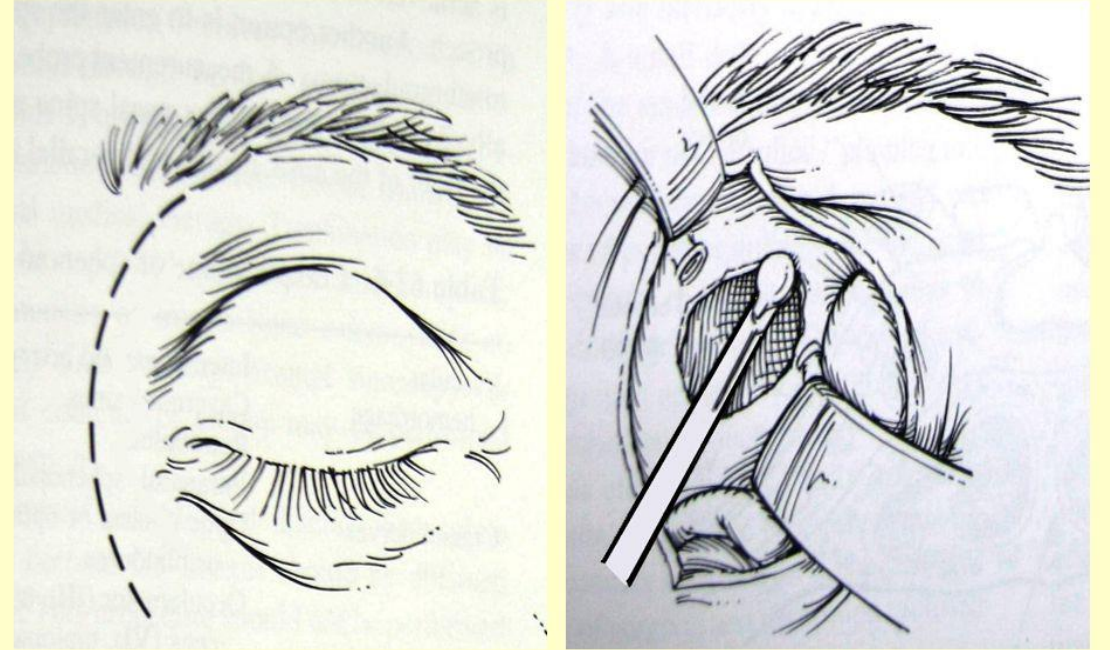
# Surgery

- endoscopic ( FESS)
- open ( external fronto-ethmoido-sphenoidotomy )

## Patterson ethmoidectomy



## Lynch Howarth ethmoidectomy



# Recurrence

Recurrence of polyps after surgery is a feature of the disease not a complication of

surgery and the factors which increase recurrence are;-

- 1-younger age group.
- 2-long standing history of nasal complaints.
- 3-if associated with asthma.
- 4-if associated with aspirin hyper sensitivity.

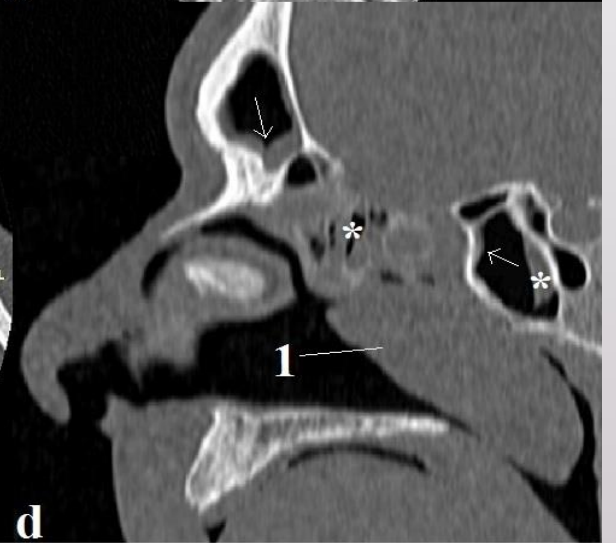
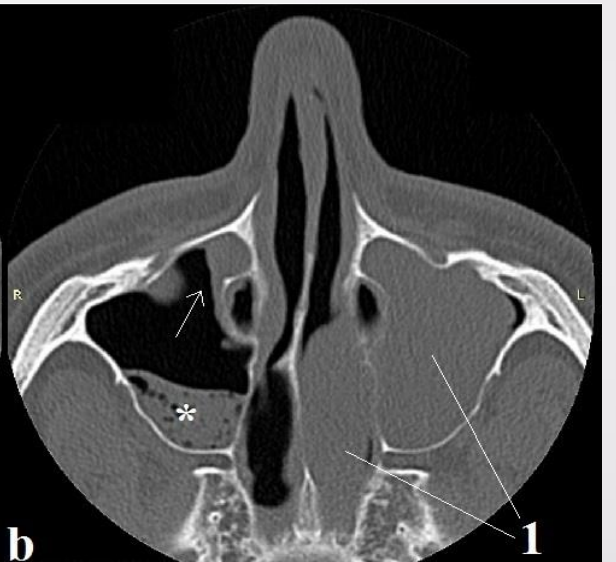
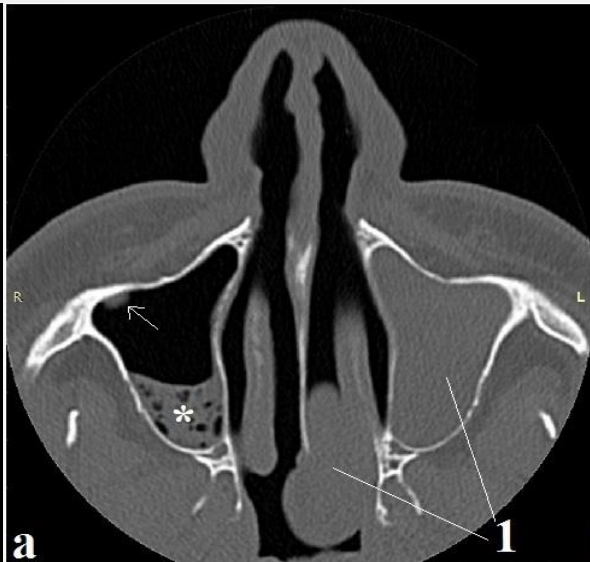


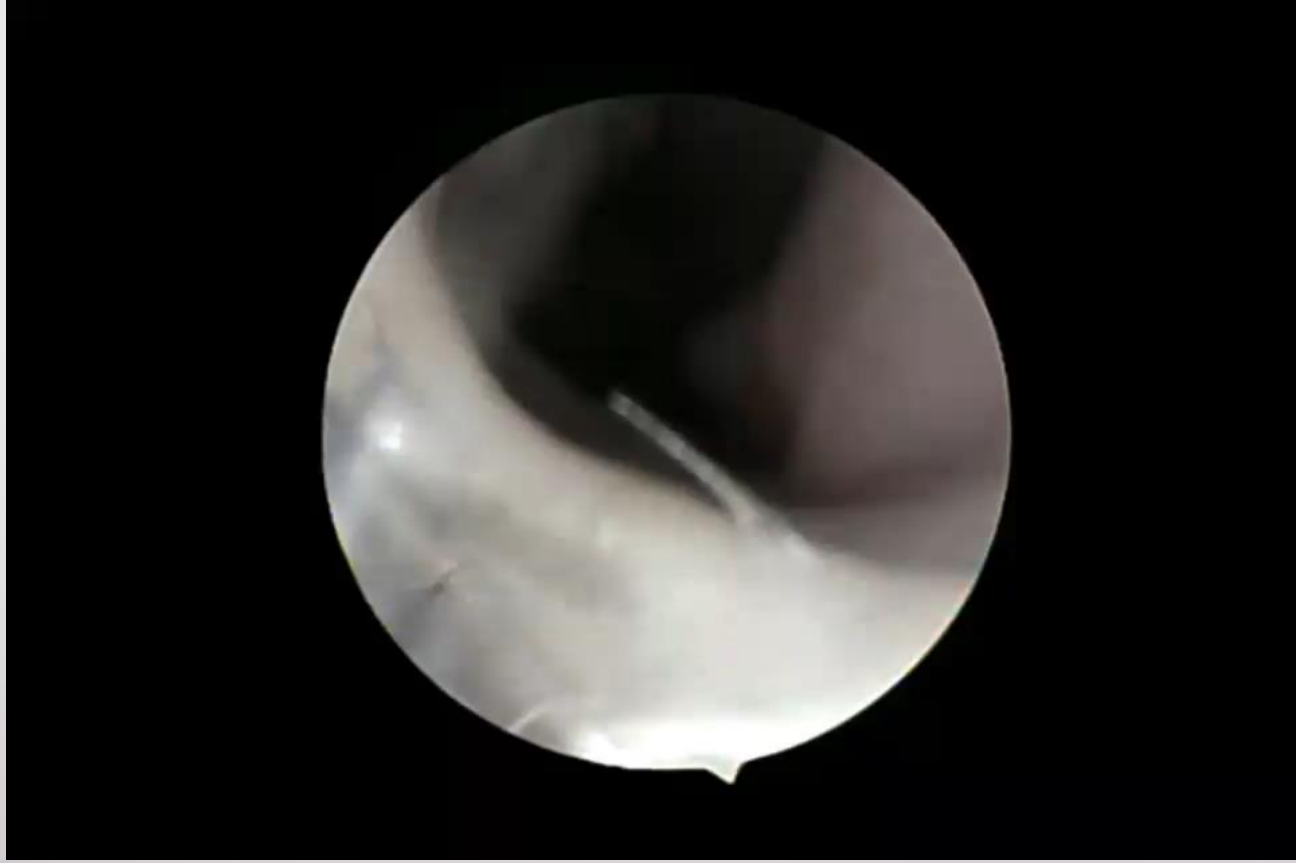
# Antrochoanal polyps

- Single and unilateral polyp
- adolescent and young adult is mainly affected
- starts in maxillary sinus then extend to nasal cavity , nasopharynx and even oropharynx
- nasal obstruction is the main symptom which is worse in expiration due to ball- valve effect , otological symptoms may be related to ETD

# Investigation

- nasoscope
- CT scan of nose and paranasal sinus





# Treatment

surgery is the mainstay of treatment

- Endoscopic
- Open surgery ( Caldwell - luc operation )





# Home message

Try to simplify what you read



Thank you