To days topic-

Allergic rhinitis (Nasal allergy),

Vasomotor rhinitis (VMR),

Nasal polyposes

Date-29.07.2019

Allergic Rhinitis

- Nasal allergy occurs as a result of altered reactivity of the nasal mucosa to an antigen (allergen).
- It is IgE mediated type I hypersensitivity reaction in the mucous membrane of the nasal airways.
- It is very common about 8-I0% peoples of Bangladesh particularly in children & 10-30% of western people.
- About 30-40% bronchial asthma patients have allergic rhinitis.

Allergic rhinitis

Types:

a) Seasonal- due to inhalant allergens like pollens of flowers, trees, fungi, grasses and weeds. Common in summer.

b) Perenial- can occur any time during the year. It is due to inhalant substances like house dust, smoke, spores etc. can also due to certain drugs, bacteria and contractens like clothes and perfumes.

Allergic rhinitis

Clinical features:

- Running nose, Sneezing, nasal blockage, nasal irritation, anosmia/ hyposmia, itchy & watery eyes.
- Family history of allergy, asthma, eczema etc.
- Examinations shows- nasal mucosa is pale, moist and swollen, inferior turbinetes are hypertrophied, may be associated with bilateral nasal polyp.

Investigations: (Allergic Rhinitis)

- **Total and differential count-** peripheral eosinophilia may be seen.
- **Nasal smear-** shows large number of eosinophils in allergic rhinitis.
- **Skin test (prick test)-** to identify specific allergen.
- **Radioallergosorbent test (RAST)-** to measure specific IgE antibody concentration in the serum.

Complications of A. rhinitis

Nasal allergy may cause:

- Recurrent sinusitis.
- Nasal polyp.
- Serous otitis media.
- Orthodontic problems.
- Bronchial asthma.

Treatment

Treatment can be divided into

- Avoidance of allergens.
- Treatment with drugs.
- Immunotherapy.

Treatment (cont.)

A) Avoidance of allergen-

- ✓ This is most successful if the antigen involved is single.
- ✓ Removal of a pet from the house, encasing the pillow or mattress with plastic sheet, change of place of works or job may be required.
- ✓ A particular food to which the patient is found allergic can be eliminated from the diet.

Treatment (cont.)

B) Treatment with drugs:

a) Oral antihistaminics- single dose at night to control sneezing, rhinorrhoea and pruritis.

b) Topical steroids spray- (belcomethasone , budesomide- 2 puffs at each nostrils two times and fluticasone or momentasone – once daily for 4-6 months)

c) Sodium cromoglycate 2% drops-(to stabilize must cell) 3-4 drops 5-6 times daily.

Treatment (cont.)

C) Immunotherapy :

a) Immunotherapy or hyposensitization is used when drug treatment fails to control symptoms.

b) Allergen is given in gradually increasing dose till the maintenance dose is reached.

c) Immunotherapy suppresses the formation of IgE.

d) Has got side effects and not effective sometime.

Treatment (cont.)

- Surgical treatment- when medical treatment fails, & for HIT.

- For HIT surgical options are- ECT, SMD, PIT, Laser turbinectomy, coblation turbinectomy.

Vasomotor rhinitis(VMR)

- Non allergic condition which is due to vasomotor disturbances consequent to autonomic dysfunction.
- The condition usually persists throughout the years and all the tests of nasal allergy are negative.

V M R

Aetiology: various factors may play a part in its causation.

- Psychogenic instability.
- Hormonal changes as during pregnancy, menstruation and puberty.
- Climate conditions like extreme of temperature and humidity.
- Drugs like antihypertensive agents, local decongestant and antidepressants.

Clinical features:

- More common in females than males.
- Symptoms are- nasal obstruction, excessive nasal discharge.
- Associated with sneezing, headache, facial pains, generalized fatigue.
- Nose shows changes like marked hypertrophy of the turbinates, dusky red mucosa and watery discharge.
- Posterior rhinoscopy may show hypertrophy posterior ends of the inferior turbinates.
- The conjunctiva are not usually involved.

Treatment of VMR

- Avoidance of physical factors.
- Antihistaminics .
- Oral nasal decongestants.
- Topical steroids spray.
- Systemic steroids.
- Tranquillizers .
- Surgery –(HIT causing obstruction), SMD, cryosurgery, PIT, Vidian neurectomy.

Non-allergic rhinitis

Other forms of non-allergic rhinitis:

- Drug induced rhinitis-
- Rhinitis medicamentosa-
- Rhinitis of pregnancy-
- Honeymoon rhinitis-
- Emotional rhinitis-
- Gustatory rhinitis-

Nasal Polyps

Nasal polyps

Definition:

Nasal polyp may be defined as a pedunculated and hypertrophied edematous mucosa of the nose and paranasal sinuses.

Polyp formation in nose is quite common.

Aetiology of Nasal polyps

Five main theories of pathogenesis:

A) **Bernoulli phenomenon-** pressure drop next to a constriction.

B) **Polysaccharide changes-** an alteration of polysaccharides of ground substance and alteration of collagen. Collagen becomes less mature.

C) **Vasomotor imbalance-** vasomotor problem may cause polyp.

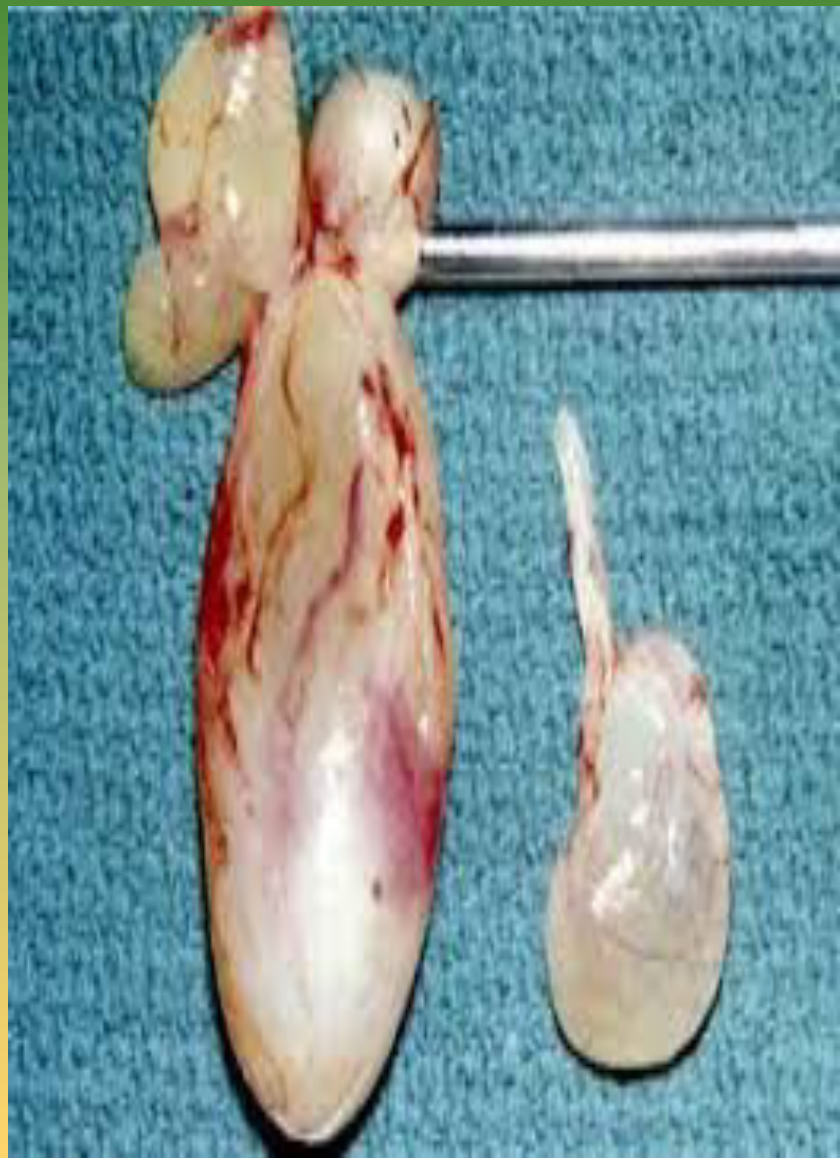
D) **Infections–** sinusitis.

E) **Allergy.**

F) **Mixed etiology.**

Macroscopic features of Polyp:

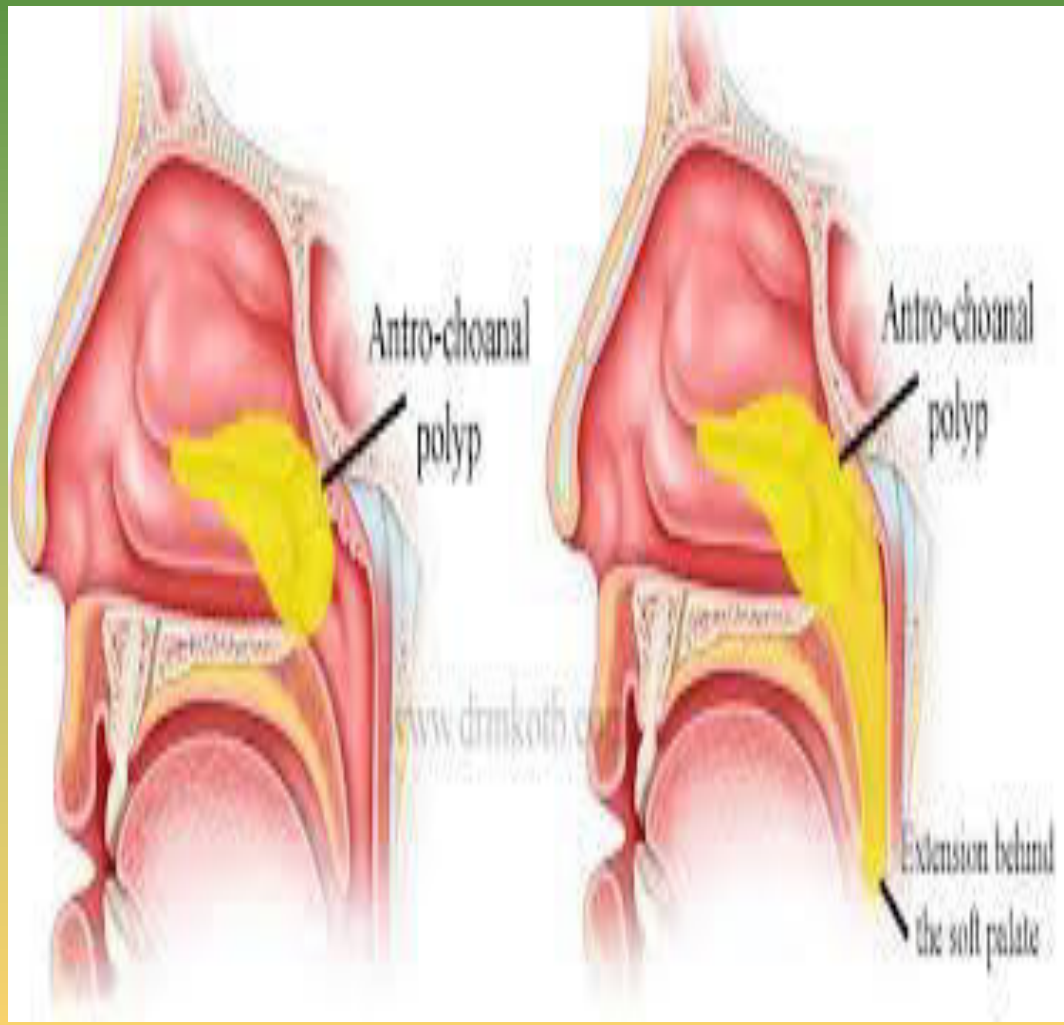
- Polypoidal lesion.
- Appears as pale, shiny, soft smooth masses.
- Greyish white in colour.
- Insensitive to touch.
- Not bleeds on probing
- Mobile and pedunculated.



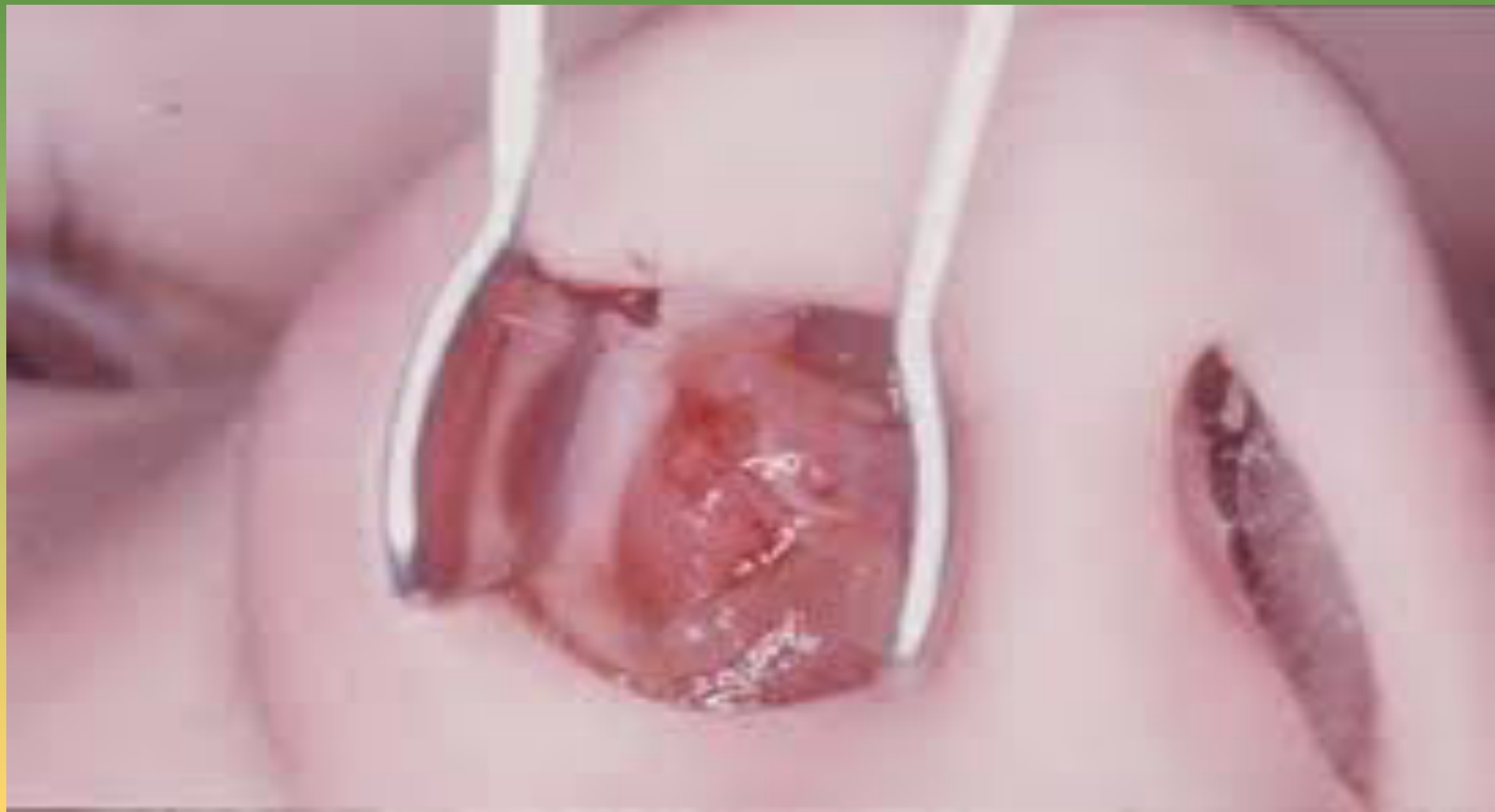
Types of nasal polyp

Clinical types:

- Ethmoidal polypes-
- Antrochonal polyp-



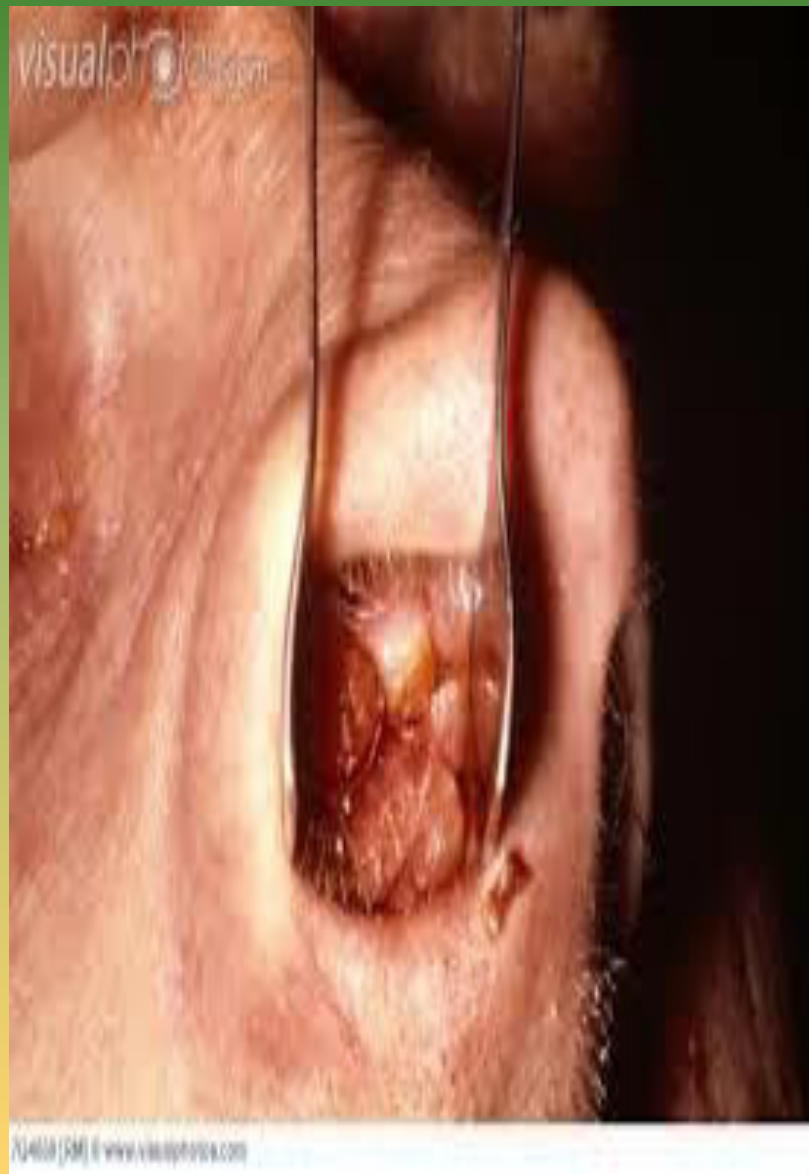
Ethmoidal polyps



Ethmoidal polyps

Features of ethmoidal polypes:

- ✓Origin- ethmoidal air cells or sinuses.
- ✓Site- mostly bilateral.
- ✓Number- multiple in numbers.
- ✓Shape- bunch of grapes or finger like.
- ✓Age- common in adult or middle age.
- ✓Cause- allergy or idiopathic.
- ✓Extension- towards nasal cavity.



Ethmoidal polyps- Clinical features

- Bilateral Nasal obstruction- most common.
- Anosmia- Partial to total loss of sense of smell.
- Headache/facial pain.
- Sneezing and watery nasal discharge.
- Snoring.
- Post nasal drip.
- Mouth breathing
- May be asymptomatic in small polyps.

Ethmoidal poly Signs:

Anterior rhinoscopy shows:

- Bilateral multiple smooth, shiny, pale white, grapes like masses which are sessile or pedunculated , insensitive to probing and does not bleeds to touch.

- Polyp may protrude through the nostrils.

- **Long standing causes**:- broadening of nose and increased intercanthal distance, looks like frog face.
- Posterior rhinoscopy: shows no polyps in the posterior choana.

Investigations:

- Plane x-ray nose and para-nasal sinuses – opacity in both nasal cavity and may be in maxillary sinus due to sinusitis ,fluid collection or mucosal thickening.

- CT scan – to see the exact extend or bony erosion
- Biopsy - done when polyps are suspecious of malignancy.

- **Base line investigations for surgical treatment.**

Treatment

In early stage with mild symptoms:

Medical treatment:

1.anti-histamine to control allergy.

2.nasal decongestant.

3.antibiotic when infected.

4.Tropical steroid therapy:

beclomethasone, budesonide, fluticasone

(Two puffs one each side twice daily for one month.)

- **50% patient of mild cases responds to medical treatment when medical treatment fails and in long standing cases polyp is treated surgically**.

Surgical treatment:

1. Simple Polypectomy– when polyps are small in numbers & pedunculated.
2. Ethmoidectomy – The routes are:

   a) Intra nasal ethmoidectomy.
   b) Extra nasal ethmoidectomy .
      – by Howarth's incision
      - by Patterson's incision

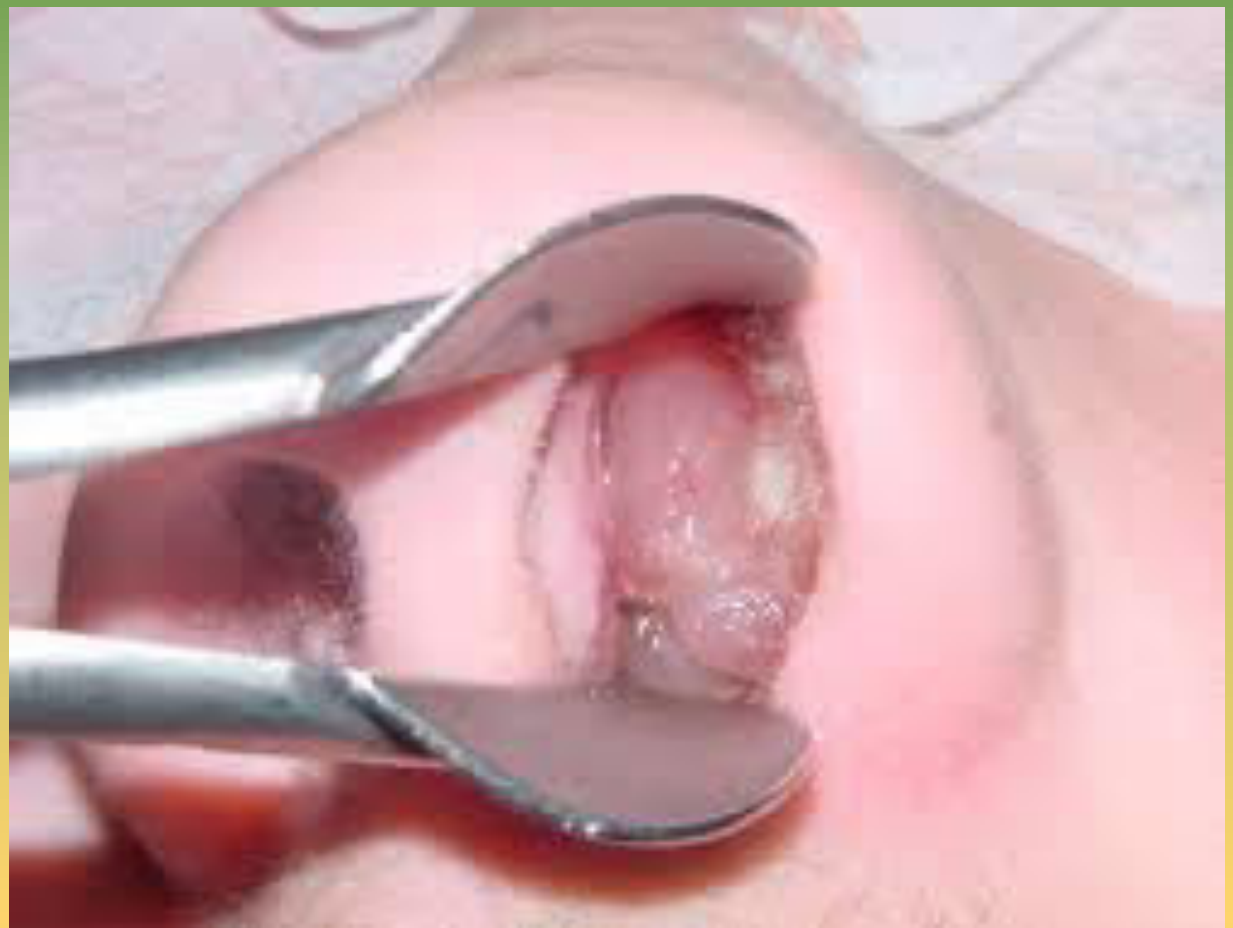
   c)Transantral ethmoidectomy- Horgans' procedure.

3. FESS - Functional Endoscopic sinus surgery.

Complications of surgery:

- Excessive hemorrhage.
- Synaechia of nasal cavity.
- Anosmia.
- Damage to optic nerve and orbital contains.
- CSF Leakage.
- Meningitis – due to damage of cribiform plate and floor of anterior Cranial fossa.
- Recurrence of disease

Antro choanal Polyp



Antro choanal polyp

- **Cause:** Actually unknown.
  Probably due to infection.

- Age: usually child and young adult.

- Site of origin: Maxillary antrum and passes through osteum into the nasal cavity and directed towards choana.

- Usually unilateral.

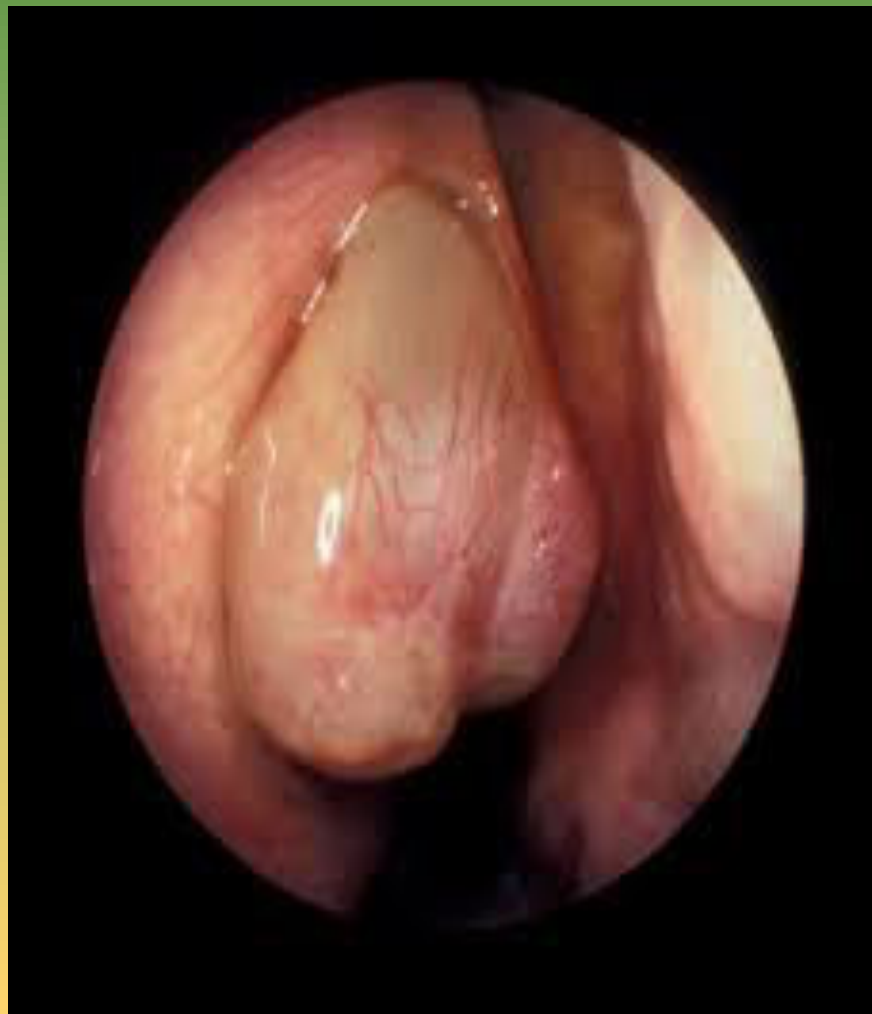
Antro choanal Polyp (cont.)

Symptoms:

1.Nasal obstruction- usually unilateral.

2.Nasal discharge (mucoid).

3.Thick and dull voice due to hypo-nasality.



Antro choanal Polyp

Signs:

- A Smooth, shiny, pale or white, unilateral polypoidal mass in nasal cavity which is soft in consistency, mobile , pedunculated, insensitive to touch & does not bleed to touch.

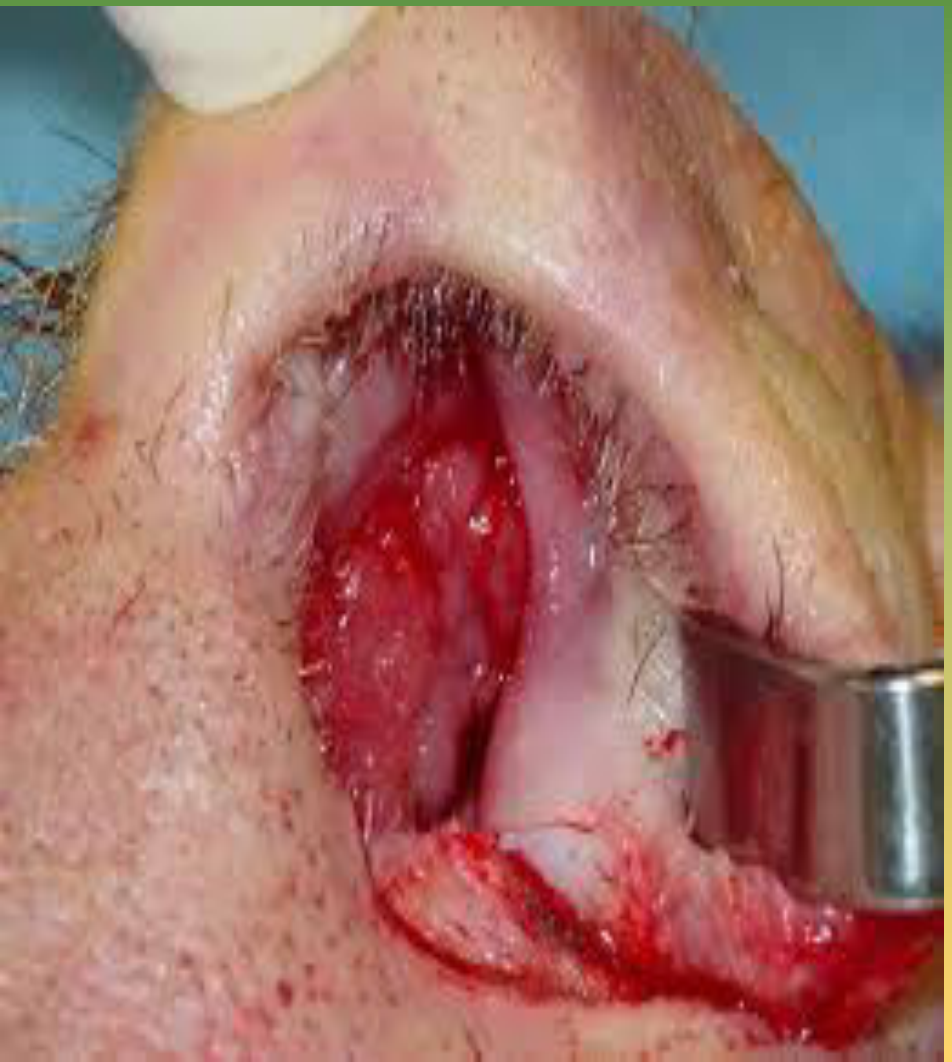
- During posterior rhinoscopy- a Globular mass in nasopharynx.

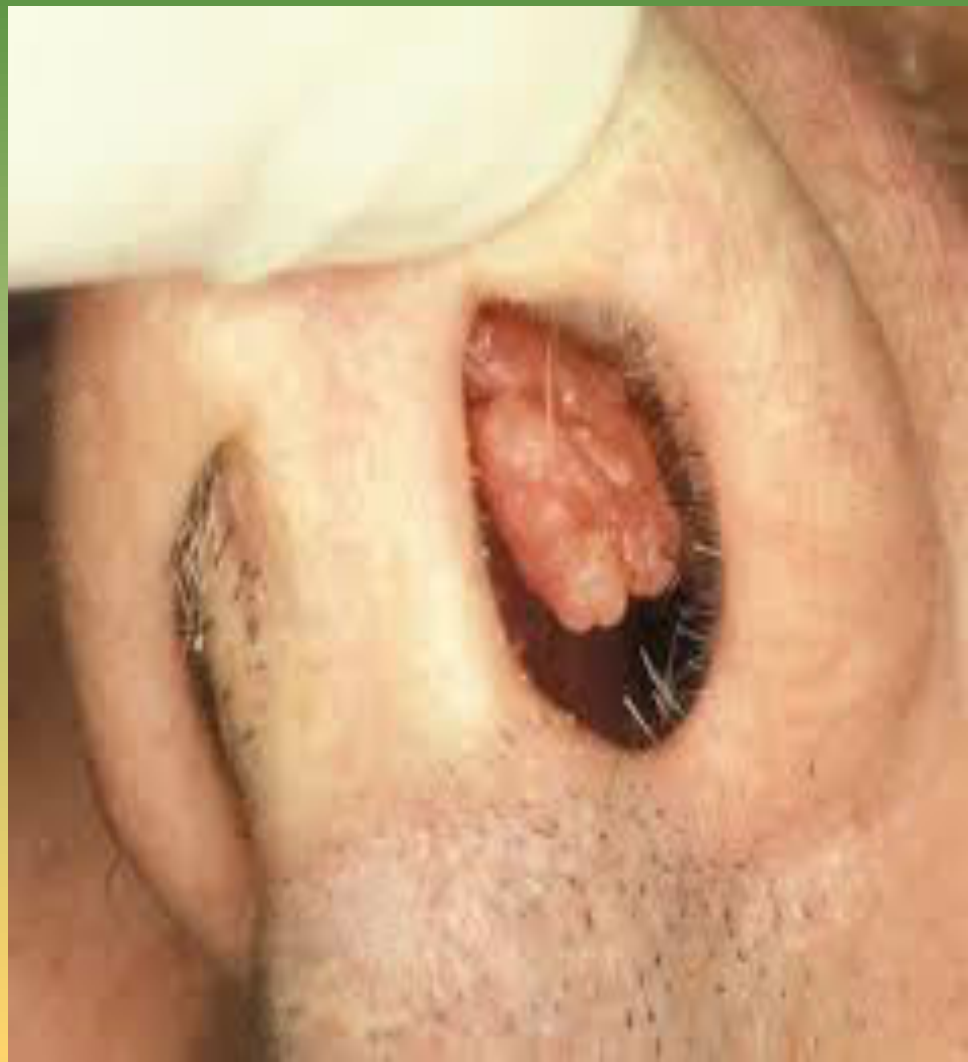
- Sometime large polyp hangs behind the soft palate.

Antro choanal polyp - D/D

- ✓ HIT
- ✓ Rhinosporidiosis
- ✓ Angiofibroma of septum.
- ✓ Squamous papilloma
- ✓ Inverted papilloma.
- ✓ Meningocele.
- ✓ Nasal cancer.

D/D of nasal polyps

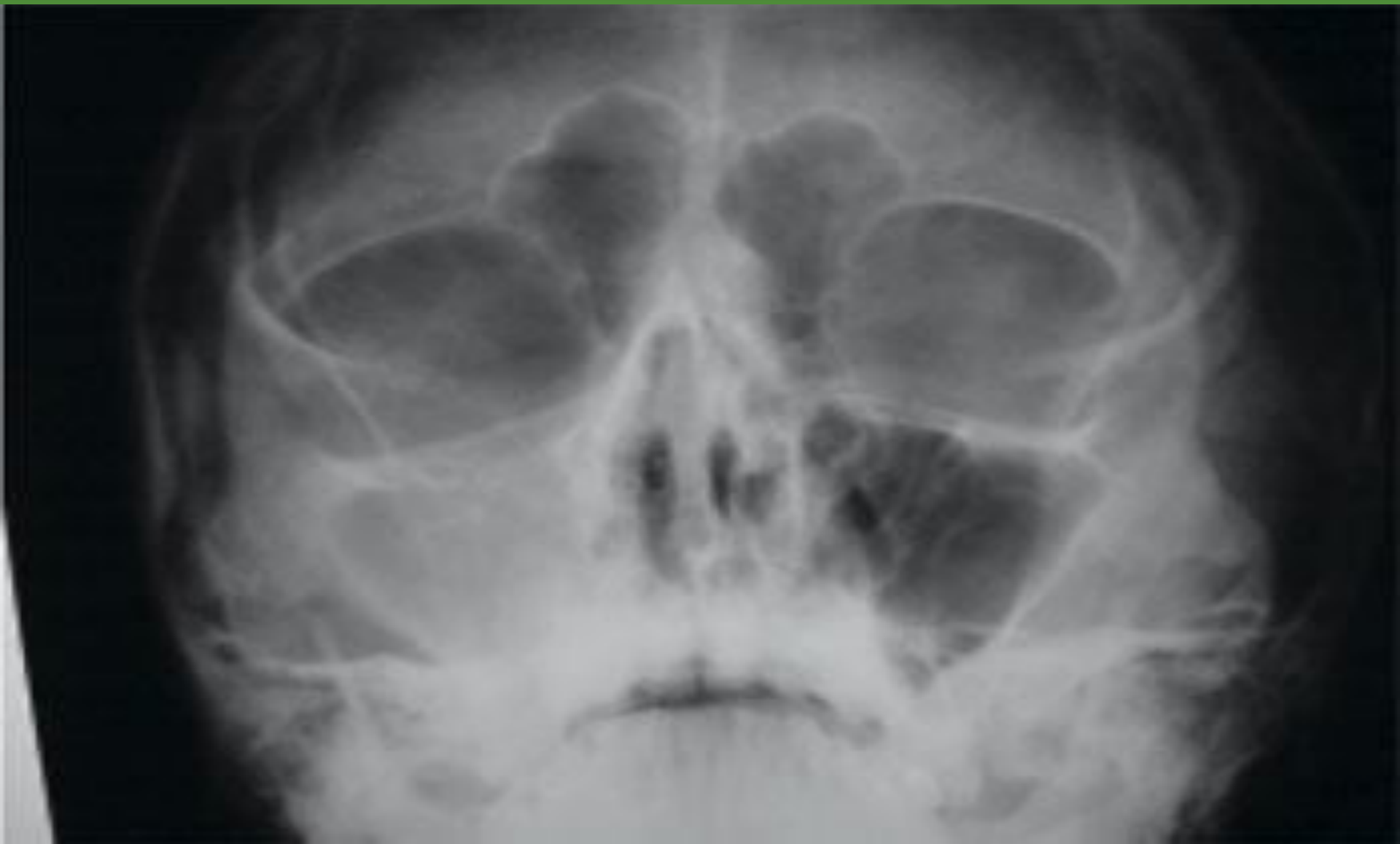




Investigations:

- X-ray of nose and P.N.S.– opacity in maxillary antrum and nasal cavity in same site.
- X-ray Nasopharynx lateral view- soft tissue shadow in nasopharynx.
- Other baseline investigations- for surgical treatment.

X-ray nose & PNS



Treatment:

- Treatment is surgery.

- Age below 16 yrs. –
  Intra nasal polypectomy & antral wash out.
- Age above 16 yrs- Cald well- Luc operation.
- FESS- can be done in any age.

Difference between Antro-choanal polyp and Ethmoidal polyp:

	Antro-choanal Polyp	Ethmoidal polyp
Age:	Common in children.	Common in Adult.
Cause:	Usually infection	Allergy
Number	Single	Multiple
Laterality	Unilateral	Bilateral
Origin:	Maxillary antrum	Ethmoidal sinus
Direction	Backward	Anteriorly
Size & shape	Tri lobed	Grape-like
Treatment:	Polypectomy, FESS, Cald well-Luc Operation	Polypectomy, FESS, Ethmoidectomy
Recurrence:	Uncommon	common


Thank you All
May flower