

Symptoms of Diseases of the Nose and Paranasal Sinuses

Prof. Dr. Samy Elwany

Symptoms List:

- Nasal obstruction.
- Nasal discharge:
 - Anterior (Rhinorrhea).
 - Posterior (Postnasal discharge).
- Epistaxis.
- Hyposmia and Anosmia.
- Headache.
- Snoring.

Nasal Obstruction

Definition: Obstruction to the nasal airway. It may be:

- ❖ Bilateral, unilateral, alternating, or position-dependent.
- ❖ Partial or complete.
- ❖ Continuous or intermittent.
- ❖ Acute, chronic or recurrent.

❖ Nasal obstruction may be:

1. **Structural** : due to an obstructing lesion ,e.g., adenoids or deviated nasal septum.
2. **Mucosal**: due to mucosal swelling and congestion, e.g. acute rhinitis and allergy.
3. **Mixed**: due to a mucosal disease that caused an obstruction lesion, e.g., rhinitis complicated by polyps or hypertrophied turbinates.

Causes:

- Almost all nasal diseases may cause nasal obstruction.
- Common cold is the commonest cause of nasal obstruction.
- Allergy is the second common cause of nasal obstruction in general, and the commonest cause of chronic or recurrent nasal obstruction.
- Common causes of chronic nasal obstruction in children are : allergy , rhinosinusitis, and adenoids.

Causes (Cont'd):

- I. Causes in **Nose**.
- II. Causes in the **Sinuses**.
- III. Causes in the **Nasopharynx**.

Causes (Cont'd):

A- Causes in the Nose:

1. Congenital choanal atresia.
2. Trauma, e.g. septal hematoma, foreign bodies, irritant fumes.
3. Rhinitis:
 - i. Acute, e.g. common cold (commonest cause)
 - ii. Chronic:
 - a. Non-specific: hypertrophic, atrophic (primary or secondary).
 - b. Specific (granulomata), e.g. scleroma

Causes (Cont'd):

5. Nasal Polyps.

6. Deviated nasal septum.

7. Nasal allergy and vasomotor rhinitis.

8. Tumors: e.g. inverted papilloma or carcinoma.

B. Causes in the Sinuses:

1. Acute rhinosinusitis.
2. Chronic rhinosinusitis.
3. Tumors

Causes (Cont'd):

C- Causes in the Nasopharynx:

1. Adenoids (Children).
2. Nasopharyngeal angiofibroma (young adult males).
3. Nasopharyngeal carcinoma (old males).

❖ Causes of chronic nasal obstruction:

1. Adenoids (in children).
2. Allergic and vasomotor rhinitis.
3. Chronic rhinitis.
4. Chronic rhinosinusitis.
5. Hypertrophied inferior turbinate.
6. Deviated septum.
7. Nasal Polyps.
8. Tumors.



Causes of Unilateral Nasal Obstruction:

1. Unilateral congenital choanal atresia.
2. Trauma, e.g. foreign bodies and fractures.
3. Deviated septum.
4. Antrochoanal polyp.
5. Dental maxillary sinusitis.
6. Tumors.

❖ **Management of Nasal Obstruction:**

A. Diagnosis:

1. Clinical examination.
2. Endoscopy
3. Assessment of nasal patency:
 - i. Subjective (scoring systems).
 - ii. Objective: Rhinomanometry and acoustic rhinometry.
4. Other investigations: X-rays, CT scans, MRI, allergy testing, biopsy....etc.

B. Treatment of the Cause.

Nasal Discharge

May be:

- ❖ Bilateral or unilateral (less common and more serious).
- ❖ Anterior (rhinorrhea) or posterior (postnasal discharge).
- ❖ Watery, mucoid, mucopurulent, or blood stained.

Causes:

- Allergy , vasomotor rhinitis, and viral infections (common cold) are the most common causes of rhinorrhea.
- In allergy and vasomotor rhinitis the discharge is characteristically watery.
- In common cold it starts watery then may turn mucopurulent with secondary bacterial infection.
- Chronic rhinosinusitis is the most common cause of postnasal discharge.

Causes of watery discharge:

A. Bilateral:

1. Allergic rhinitis.
2. Vasomotor rhinitis.
3. Early stages of common cold.

B. Unilateral:

1. Cerebrospinal rhinorrhea (CSF fistula).

Causes of unilateral foul smelling discharge:

1. Foreign bodies in the nose (commonest cause in children).
2. Oro-antral fistula.
3. Maxillary sinusitis of dental origin.
4. Fungal infections (may be also bilateral).
5. Malignant tumors with ulcerations.

Epistaxis

- The commonest variety in children and adolescents is **idiopathic epistaxis** from Little's area (more easy to stop)
- The commonest variety in old age is **hypertensive epistaxis** (posterior , more severe, more difficult to stop)

Types:

- **Anterior:** from Little's area or anterior part of the nose. The Little's area is located at the anterior inferior part of the nasal septum and is the site of anastomosis of branches of 4 arteries:
 - Sphenopalatine artery (artery of epistaxis).
 - Superior labial artery.
 - Anterior ethmoid artery.
 - Greater palatine artery.
- **Posterior:** from the sphenopalatine artery or its branches. Occur commonly in hypertensive patients.
- **Superior:** from the ethmoid arteries. Uncommon.

Causes:

A. Local:

- a. In the nose.
- b. In the Sinuses.
- c. In the nasopharynx.

B. General.

Local Causes:

A. In the nose:

1. Idiopathic (predisposed to slight trauma, hot weather, and physical exertion).
2. Trauma: Nose picking, fractures, and FBs.
3. Rhinitis: Acute, atrophic, scleroma.
4. Tumors: Bleeding polypus, carcinoma.
5. Deviated septum

B. In the sinuses:

1. Trauma
2. Tumors.

A. In the nasopharynx:

1. Adenoids.
2. Post-adenoidectomy bleeding.
3. Nasopharyngeal angiofibroma.
4. Nasopharyngeal carcinoma.

General Causes:

1. Hypertension: The commonest cause in old age, usually posterior, more difficult to control, more serious.
2. Drugs: anticoagulants and salicylates.
3. Blood diseases: hemophilia, purpura
4. Fevers.
5. High altitude.
6. Hormonal: Vicarious (False) menstruation and pregnancy.

Management of Epistaxis:

A. First aid measures:

1. Patient should be kept in the sitting position with the head slightly lowered forwards and the mouth open.
2. Pinching of the nose.
3. Ice packs.
4. Cotton packs soaked with vasoconstrictor solutions (not used in hypertensives)

B. General measures:

1. Recording of BP and vital signs.
2. Treatment of shock if needed.
3. Coagulants and other medications as required. (**do not use coagulants routinely in hypertensive atherosclerotic patients**)

Management of Epistaxis (cont'd):

C. Control of bleeding:

a) Anterior and superior epistaxis:

1. Cautery:

- i. Chemical (Silver nitrate sticks or 30% sol.).
- ii. Electrical cautery or diathermy.

2. Anterior nasal packs:

- i. Vaseline gauze (with antibiotic).
- ii. Haemostatic materials as Merocel.

3. Nasal Balloons.

Management of Epistaxis (cont'd):

B. Posterior Epistaxis:

1. Postnasal packs.
2. Haemostatic packs as Merocel.
3. Postnasal balloons.

C. Persistent or recurrent cases:

1. Endoscopic clipping or coagulation of sphenopalatine artery.
2. Ligation of other arteries as maxillary and anterior ethmoid arteries.

Management of Epistaxis (cont'd):

D. Treatment of the cause e.g. deviated septum

Smell Disorders

Hyposmia and Anosmia

- ❖ Hyposmia: Reduction in the acuity of smell.
- ❖ Anosmia: Total loss of the sense of smell.
- ✓ Hyposmia and anosmia are always associated with reduction of taste sensation.

Etiology and types:

A. Organic:

1. Conductive (nasal obstruction).
2. Sensory (lesions in the olfactory mucosa).
3. Neural (lesions in the olfactory nerves and pathways).

B. Functional:

1. Psychiatric disorders.
2. Malingering.

A. Organic :

I. Conductive :

- All causes of bilateral nasal obstruction.

II. Sensory :

1. Atrophic rhinitis.
2. Toxic fumes.

III. Neural:

1. Influenza.
2. Skull base fractures.
3. Frontal lobe abscess.
4. Thrombosis of the anterior cerebral artery.
5. Frontal lobe tumors.

B. Functional anosmia:

1. Psychological causes.
2. Malingering.

Investigations:

1. Standardized olfactory questionnaires.
2. Olfactory function tests (using bottles containing easily recognized odors).
3. Endoscopic examination of the nose.
4. Radiological examination.

Treatment:

- Treatment of the cause.

Other Olfactory Symptoms

❖ Cacosmia: Perception of bad odors.

Important causes include : FB, oro-antral fistula, dental maxillary sinusitis, and fungal infections.

- ❖ Hyperosmia: Decreased olfactory threshold. e.g. strychnine poisoning.
- ❖ Parosmia: qualitative, often unpleasant, change in the sense of smell. May be psychogenic or due to CNS diseases.
- ❖ Olfactory hallucinations: perception of undefined, non-existent odors. It is usually associated with uncinate fits.