Nasal obstruction and sleep apnea

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Obviously, we mean obstruction present when the patient is asleep and horizontal
- May not be a significant problem when upright and awake.
- Usually due to inferior turbinate enlargement.
- Leads to nocturnal mouth breathing.

Causes:
- Turbinate enlargement.
- Septal deviation.
- Valve collapse.
- Tumors.
- Combinations.

Diagnosis
- History:
  - Snoring
  - Allergies.
  - Medications.
  - Previous treatments
  - Sinusitis.
  - Other: smoking.
Exam:

- External abnormalities

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- External abnormalities
- Valve collapse:
  - External
  - Internal
Exam:
- External abnormalities
- Valve collapse:
  - External.
  - Internal.
- Septum.
- Turbinates.
- Nasal endoscopy.

Lab:
- Peak inspiratory flow
- Acoustic rhinometry.
- Sinus C.T.
- Polysomnogram.
- Allergy testing.

Treatment
- Therapeutic trials
  - Medications:
    - Nasal corticosteroids.
    - Antihistamines.
    - Decongestants
    - Other
Medical treatment of obstructive sleep apnea - success in 9%

Verse and Pirsig, 2003

When medical treatment is unsuccessful or not tolerated - consider surgery.

- For obvious anatomic cause(s).
- If unsure, additional trials.

1. Oxymetazoline (Afrin®) at bedtime:
   - Two nights.
   - Effect?
   - Sleep partner input.

2. Nasal valve dilator at bedtime:
   - Breath Right ®.
   - Other.

3. Combination of 1 and 2.
4. Chin strap?

Surgical treatment of obstructive sleep apnea - success in 18%

Verse and Pirsig, 2003
Surgery of the inferior turbinates

- Procedures:
  - Injection
  - Surface cautery
  - Deep cautery:
    - Temperature or energy controlled.
  - Excision.

- Procedures:
  - Submucosal removal of turbinate bone:
    - Mabry/Bernstein variation.
  - Microdebrider approach.
  - Other:
    - Laser
    - Cryotherapy
    - Heat
Surgery of the nasal valve
Septal Surgery

Combinations are common
Correction of nasal obstruction

- Improves nasal CPAP compliance.
- Decreases CPAP pressures.
- Usually improves sleep quality and daytime sleepiness subjectively.
- But... on occasion, correcting obstruction may increase the AHI in mild OSA cases.

Friedman et al 2000