

## Obstructive Sleep Apnea: Referral for Surgical Consultation

### About the Guideline

- This guideline provides clinical practice recommendations for referring adults with obstructive sleep apnea (OSA) for surgical consultation.
- The American Academy of Sleep Medicine (AASM) created a task force of experts in the fields of sleep medicine, bariatric surgery, and otolaryngology to review the most recent literature, assess the evidence, and develop recommendations to guide clinicians in treating OSA.
- The recommendations were created using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology.
- This guideline provides recommendations regarding when to refer patients with OSA for surgical intervention and which patients are to be categorized into one of the following situations:
  - Intolerant or unaccepting of positive airway pressure (PAP)
  - Persistent, inadequate PAP adherence due to pressure-related side effects
  - Obvious upper airway anatomic abnormalities potentially amenable to surgery as initial OSA treatment
- For the purposes of this guideline, “sleep surgeon” refers to an otolaryngologist, or oral and maxillofacial surgeon experienced in upper airway surgery related to OSA.

### Key Clinical Considerations

#### Positive Airway Pressure

- Positive airway pressure (PAP) is noted as the most effective treatment for most individuals with OSA.
- For patients with OSA who are intolerant or unaccepting of PAP and who have a body mass index (BMI) less than 40 kg/m<sup>2</sup>, referral to a sleep surgeon is recommended.

#### Potential Adverse Effects of Surgery

- When considering upper airway surgery, possible persistent long-term side effects should be considered (although the incidence of these effects are low). Possible side effects include the following:
  - Dysphagia
  - Aspiration
  - Hemorrhage
  - Taste alteration
  - Mandibular paresthesia
  - Perceived worsening of facial appearance
  - Globus pharyngeus

#### Surgery as a Rescue Therapy

- Upper airway surgery may be used as a rescue therapy for these individuals to improve one or more of the following:

- Excessive sleepiness
- Blood pressure
- Snoring
- Sleep quality
- Quality of life
- Respiratory disturbance index (RDI)
- Apnea-hypopnea index (AHI)

### **Bariatric Surgery**

- For patients with OSA who are intolerant or unaccepting of PAP and are considered obese (class II/III, BMI greater than or equal to 35), referral to a bariatric surgeon is recommended.
  - Benefits of bariatric surgery for these individuals may include an increase in the minimum oxygen saturation during sleep (LSAT) and a reduction of the following:
    - AHI/RDI
    - Excessive sleepiness
    - BMI
    - Snoring
    - BP
    - Oxygen desaturation index (ODI)
    - Optimal PAP level
  - While the incidence is low, the potential harms of bariatric surgery include the following:
    - Gastroesophageal reflux disorder
    - Vitamin deficiency
    - Bowel obstruction or leak
    - Gastric ulcer
    - Iron malabsorption
    - Gastric band slippage

### **Referral to Sleep Surgeon**

- To facilitate PAP use for patients who are nonadherent due to pressure-related side effects and who have a BMI greater than 40 kg/m<sup>2</sup>, referral to a sleep surgeon is suggested.
  - The use of surgery as an adjunct measure was found to reduce the optimal PAP level and improve PAP adherence.

### **PAP as Initial Therapy**

- PAP is suggested as the initial therapy for patients with OSA and major upper airway anatomic abnormality.
  - No harm was noted in using PAP as an initial therapy if surgical indications are not present.

### **Reference:**

Kent, D., Stanley, J., Aurora, R. N., Levine, C., Gottlieb, D. J., Spann, M. D., Torre, C. A., Green, K., & Harrod, C. G. (2021). Referral of adults with obstructive sleep apnea for surgical consultation: an American Academy of Sleep Medicine clinical practice

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