

Questions

Obstructive Sleep Apnea Revised: 10/16/08

1. Who should be suspected of having OSA?
 - a. An obese middle-aged female
 - b. A patient whose spouse says they snore loudly
 - c. A patient who has chronic daytime sleepiness
2.
 - a. Is hypertension thought to be a complication of OSA? Yes or No
 - b. Do patients with OSA have ↑ risk of being involved in a MVA? Yes or No
3. When you feel that your patient is at risk for OSA, what test do you order? What treatment do they offer? Does it work?
4.
 - a. Tracheotomy was the first treatment for OSA. True or False
 - b. Surgeries to reduce the anatomic problems with the collapse of the pharynx have been quite successful. True or False
5. If patients have only mild apnea, what can be done to try to alleviate the apneic episodes? True or False
 - a. Treat nasal polyps, allergic rhinitis, septal deviation to try to prevent snoring.
 - b. Avoid alcohol and other sedating agents.
 - c. Patients should lose 10-15 lbs.
 - d. They should raise the head of the bed and avoid the supine position.
6. Which of these are complications that your patient will complain about?
 - a. Nasal dryness
 - b. Nasal congestion
 - c. Nasal rhinorrhea
 - d. Air leakage from the mask
 - e. Claustrophobia
 - f. Skin abrasions
 - g. Conjunctivitis
7. Complications associated with OSA include:
 - a. Stroke
 - b. Myocardial Infarction
 - c. Congestive Heart Failure
 - d. Renal Failure
 - e. Liver Failure
 - f. Pulmonary Fibrosis
 - g. Impaired intellectual function, concentration, memory

Answer Sheet

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1. Who should be suspected of having OSA?
 - a. **An obese middle-aged female**
 - b. **A patient whose spouse says they snore loudly**
 - c. **A patient who has chronic daytime sleepiness**

However, you need to remember that patients who are chronically sleep deprived may have developed their symptoms so slowly they do not realize that they are not awake and alert during the day. Also, sometimes patients are not obese. They have fatigue and malaise but are thin. However, they can still have OSA secondary to anatomic collapse of the pharynx.

2. a. Is hypertension thought to be a complication of OSA? Yes or No

Although there are clearly profound changes in cardiovascular variables, it is still unclear whether there are sustained residual hemodynamic abnormalities. Most studies indicate an increased incidence of HTN.

- b. Do patients with OSA have ↑ risk of being involved in a MVA? Yes or No

There is a 2-7 fold increased risk of having a MVA in patients with OSA.

3. When you feel that your patient is at risk for OSA, what test do you order? What treatment do they offer? Does it work?

A sleep study. They then try the patient on a CPAP machine. It prevents collapse of the upper airway and the apnea is resolved. Some facilities are able to do the polysomnography the first part of the night and then place the patient on CPAP. They are able to see what level of continuous airway pressure the patient needs. Also, they can try several different mask sizes. The different mask sizes/shapes is important to increase patient compliance.

4. a. Tracheotomy was the first treatment for OSA. **True** or False

It prevents the collapse of the pharynx. Problems associated with it are the social stigmata and its risk of infection, etc.

- b. Surgeries to reduce the anatomic problems with the collapse of the pharynx have been quite successful. True or **False**

The patient may require surgery to reduce size of tonsils or move the tongue forward or to bring out the jaw. These are very painful and only reserved as a last choice for patients who can't tolerate CPAP.

5. If patients have only mild apnea, what can be done to try to alleviate the apneic episodes? True or False

a. Treat nasal polyps, allergic rhinitis, septal deviation to try to prevent snoring. **True**

b. Avoid alcohol and other sedating agents. **True**

They should raise the head of the bed and avoid the supine position. These sleep aids can cause snoring in patients who do not normally snore. Also, persons who normally snore may become apneic if the sleep aids relax the tongue and parapharyngeal muscles.

c. Patients should lose 10-15 lbs. **False**

They should try to lose 20-30 lbs. This can improve sleep apnea significantly.

d. They should raise the head of the bed and avoid the supine position. **True**

Elevation of the head tends to bring the tongue forward while sleeping on the side moves the tongue laterally.

Also improved sleep hygiene, exercise and smoking cessation.

6. Which of these are complications that your patient will complain about?

a. **Nasal dryness**

b. **Nasal congestion**

c. **Nasal rhinorrhea**

d. **Air leakage from the mask**

e. **Claustrophobia**

f. **Skin abrasions**

g. **Conjunctivitis**

A room temperature humidifier attached to the CPAP machine can help nasal irritation, and congestion can be treated with nasal sprays containing steroids/ipratropium or antihistamines. The CPAP machine should fit snugly, but if it is too tight it can cause abrasions.

7. a. **Stroke**, b. **MI**, c. **CHF**, g. **Impaired intellectual function**

Additional Information

Pathophysiology of Obstructive Sleep Apnea

Preponderance of evidence indicates that the pharynx is abnormal in size and/or collapsibility in patients with OSA. Partial collapse results in snoring, hypopnea, and in some cases prolonged obstructive hypoventilation. Complete closure results in apnea. This closure can occur anywhere in the pharynx from intranasal to palate or palate alone or palate to base of tongue or at base of tongue alone, etc. It is difficult to fix the problem with surgery alone. If patients have palatal surgery the snoring may be alleviated, but the sleep apnea may not be alleviated. The area of obstruction may be beyond the soft palate.

References:

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