The ABCDEs of obstructive sleep apnea

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Symptoms of sleep-disordered breathing range from primary snoring and upper airway resistance to obstructive sleep apnea (OSA). Psychiatric disorders and OSA frequently are comorbid. In a study of veterans with OSA, 22% had depression, 17% had anxiety, 12% had posttraumatic stress disorder, and 5% had psychosis.[1] Treatments for OSA include dental devices, positive airway pressure ventilation, and surgery. Treating OSA often improves comorbid psychiatric disorders.[2] However, medication-induced weight gain (eg, from antipsychotics) and hypnotics can worsen OSA. The mnemonic **ABCDE** can help you remember precipitating factors of OSA, associated sleep patterns, and complications of untreated OSA.

Precipitating factors

Age, gender, and race. OSA has a higher prevalence among middle-age men and the incidence of OSA gradually increases in postmenopausal women. African American patients also are at increased risk.

Bulkiness. Obesity is a significant risk factor for OSA, especially among middle-age men. Secondary fat deposition around the neck and decreased muscle tone and lung volume may lead to OSA.

Circumference of the neck. A neck circumference of >16 inches in women and >17 inches in men indicates a greater risk of developing OSA.[3]

Disrupted air flow. Airway narrowing can be present in patients with a small oropharynx, large tongue or uvula, backward tongue displacement, nasal obstruction, or craniofacial abnormalities.[4] Certain medications (eg, muscle relaxants), alcohol, or hypothyroidism can reduce muscle tone and lead to OSA.[5] Gastroesophageal reflux, asthma, pregnancy, stroke, and neuromuscular disease increase susceptibility to OSA. Patients with cardiac failure often have associated central sleep apnea.[4]

Extended family members. Patients with first-degree relatives who have OSA are at an increased risk of developing it themselves.[5]

Associated sleep patterns

Arousals. Intermittent nighttime sleep, nonrestorative sleep, restless sleep, and insomnia are common among patients with OSA.[5]

Blocked airway and snoring. Snoring is common in OSA and signifies partial airway obstruction.

Choking, coughing, and gasping for air. As a result of decreased oxygenation, OSA patients usually wake up gasping for air. Associated gastroesophageal reflux also can cause cough.

Dry and/or open mouth. Most OSA patients breathe through their mouth because of obstruction in the upper airway.[6] Patients often complain of dry mouth and morning thirst.

Excessive daytime sleepiness. Because of lack of nighttime sleep, it is common for individuals with OSA to feel tired during the day or want to nap.

continued

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OSA and mental illness frequently are comorbid; treating OSA can improve psychiatric disorders

Complications of untreated OSA

Anxiety and depression. There is a strong relationship between untreated OSA and psychiatric disorders, especially anxiety and depression in adults.[1]

Body mass index elevation or obesity. Frequent apneas are linked to an increase in leptin and ghrelin levels, which leads to increased appetite.[4,5]

Cardiovascular complications. Increased incidences of pulmonary or systemic hypertension, cardiac arrhythmias, myocardial infarctions, and strokes have been associated with untreated OSA.[5]

Daytime tiredness and sleepiness. Attention problems, tardiness, and accidents are common among patients with OSA.

Endocrine abnormalities. Individuals with moderate to severe OSA have a higher risk of developing diabetes mellitus and hypercholesterolemia.[4]

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