Background

Evidence has revealed that the prevalence of Obstructive Sleep Apnea (OSA) is increasingly widespread, with patients undergoing sedative procedures that have undiagnosed OSA. Risks for complications related to this condition are often respiratory events, including upper airway collapse and oxygen desaturation.

Statistically, between 82-92% of men and women who actually have moderate-to-severe OSA have not been diagnosed. Other diseases linked to OSA, such as hypertension, heart disease, and obesity, usually further predispose patients to adverse respiratory effects when undergoing sedation.

Sedation Creates Additional Risks for Patients with OSA

IV sedative medications cause relaxation of the upper airway muscles, as well as decreased with of the airway. Smaller doses of sedative medication than normal can affect the already narrow airway in patients with OSA.

Sedative medication decreases arousability, a vital protective mechanism in OSA patients.

Supine lateral positioning during colonoscopy, sleep deprivation, and airflow is restored.

Hypoxemia is the most frequent complication of the adverse effects of sedation on use of the STOP-BANG questionnaire.

OSA is a sleep disorder where the patient unconsciously stops breathing for periods of time during sleep.

Pauses in breathing may last a few seconds to minutes, and can be unaware of sleep arousals, but the disrupted sleep patterns account for daytime sleepiness and fatigue characterized by patients with OSA.

IV sedative medications cause relaxation of the upper airway muscles, as well as decreased with of the airway. Smaller doses of sedative medication than normal can affect the already narrow airway in patients with OSA.

Sedative medication decrease arousability, a vital protective mechanism in OSA patients.

Supine lateral positioning during colonoscopy, sleep deprivation, and discontinuation of CPAP therapy, can contribute to a higher risk for OSA patients undergoing sedation.

Hypoxemia is the most frequent complication of the adverse effects of sedatives on patients with OSA.

Implementation of a Screening Tool To Assess Risk for OSA

Screening via questionnaire has proved feasible and has a high incidence of accuracy in predicting risk for OSA. The STOP-BANG questionnaire was determined to be the most accurate in predicting OSA risk.4

In our Midwest community hospital outpatient setting, nurses were educated on use of the STOP-BANG questionnaire. The results of each questionnaire was used to identify patients who have been diagnosed with OSA, or who may be at high risk for OSA.

29% of Our Patients Have Diagnosed OSA Or Screened High Risk for OSA

In a seven month study using the STOP-Bang questionnaire, we realized that 29% of our outpatient population either have OSA or are at high risk for OSA (Illustration A).

Of the 29% of patients who screened high risk, 44% had a known OSA diagnosis. 56% of the high risk group had no diagnosis or knowledge of their risk for OSA. (Illustration B).

How do we Keep Our Patients Safe?

Our current practice for monitoring all sedated patients is use of pulse oximetry along with capnography during the intra-procedure phase. In recovery, patient’s respiratory status is monitored with pulse oximetry only.

Evidence supports the high prevalence of undiagnosed OSA; a more vulnerable population when considering patient safety and potential complications related to sedation.

We feel that with identification of patients at risk for OSA, nurses can have an impact on how patients are managed, resulting in practice changes in our unit.

Understanding OSA

Obstructive Sleep Apnea

Obstructive sleep apnea is a sleep disorder in which the airway of the patient is blocked during sleep.

During sleep, the muscles that control breathing relax. If the muscles become too relaxed, the airway can collapse, causing the patient to stop breathing for a few seconds to a few minutes.

Patients with OSA are at increased risk of daytime sleepiness and fatigue. They may also experience other symptoms such as snoring, loud breathing, and restless sleep.

Understanding Obstructive Sleep Apnea (OSA) and Potential Risks for Endoscopy Patients: Breaking the Mold in Patient Safety by Implementation of OSA Screening

Julie Forsberg, BSN, RN, CGRN & Cecelia Pezdek, MSN, MSHA, RN, CGRN

References


5. Elsaid, E., Low, W., & Kwan, K. (2009). The effectiveness of the presurgical evaluation and management of adults with obstructive sleep apnea, JAMDA.


