Effect of Obstructive Sleep Apnea on Post Operative Patients Oxygen Saturations

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Objectives
- Recognize the benefits of how education of patients and involving them in their care for surgical procedures, makes care more efficient and effective, thereby increasing nurse satisfaction.
- Describe Nursing and their colleagues’ considerations for managing and delivery of care in assessing patients prior to surgery regarding CPAP thereby strengthening the nurse-patient relationship.

Inspiration
- As patients pass through the Post Anesthesia Care Unit, the care team noted an increasing number of patients having a higher number of oxygen desaturation episodes.
- Based on the type of patients who were experiencing difficulty, we thought these patients may have undiagnosed obstructive sleep apnea (OSA).

Vision
Desired Outcome:
We as a team of Pre-surgical Nurses and Post Anesthesia Nurses collaborated to design a study to investigate the problem in an effort to:
- Improve the safety of our patients by involving them in their care prior to admission
- Develop a better protocol for caring for our patients with OSA.
- Deliver optimal care for these patients with OSA to obtain the best outcome.

Hypothesis:
The Hypothesis was patients with an unknown OSA status and having risk factors for OSA have a greater number of desaturation episodes, LOS, and nursing intervention minutes in PACU than those diagnosed with OSA/CPAP and those patients without risk factors for OSA.

Evidence:
- We reviewed the literature, looked at National Guidelines, research studies on OSA and available Evidence Based Practice articles.
- There was noted to be a lack of information on patients with undiagnosed OSA.
- Prior to the study asking patients OSA status was not routine in Pre-admission testing and Pre-surgery.
- The Post Anesthesia Care Unit Nurse would have difficulty with patients who desaturated frequently and required additional recovery time in the PACU due to known or unknown OSA.

Prospective exploratory study:
- All study subjects were greater than 18 years old, English speaking and managed in the PACU postoperatively
- Approved by the IRRB
- 265 patients consented over a three month period

Education
As a result of our findings we made clinical changes in our practice areas throughout surgical services.
- All of the nurses working in perianesthesia areas were educated as to findings and changes being made.
- The results were also shared with the whole hospital nursing staff through a Nursing Grand Rounds presentation.
- Patients and families were asked to bring their CPAP machine for their safety on the day of surgery to enable us to give the patient the best and safest care possible.
- Patients being discharged home that use CPAP are instructed, and family members are also informed, to use their device the day of surgery if they nap or get sleepy and at night as they normally would to prevent desaturation episodes.
- Patients that experience desaturation episodes and signs of OSA are referred for a Sleep Study to determine OSA status for their health and safety. They may have to stay in the hospital overnight with continuous pulse oximetry the day of surgery to monitor for desaturation episodes for safety and best outcomes even if they were scheduled for outpatient surgery.

In conclusion, perianesthesia nurses develop therapeutic relationships with the patient, communicate and coordinate with others helping with the patient care, and educate the patient and family of the surgical patient with OSA of need to bring the CPAP machine to the hospital and to use it after sedation to improve oxygen saturation, and for optimal outcomes.
- Patients with undiagnosed OSA are also educated and encouraged to have a Sleep Study done if they have desaturation episodes after sedation for their best health and safety.
- Through better therapeutic communication with colleagues involved with the patient and family, and working together we improve the health and safety of our patients.
- The care by the nurse is also more effective and results in higher nurse satisfaction.