

Assessment of Proportion of Surgical Patients with Undiagnosed Obstructive Sleep Apnea Using STOP – Bang Score in Saveetha Medical College and Hospital

S.PrabuVignesh
Final year MBBS
Saveetha Medical College, Chennai.

Dr.Lakshmi
Professor and HOD
Department of Anaesthesia,
Saveetha Medical College, Chennai.

Abstract

➤ *Background:*

Obstructive sleep apnea is the most common type of sleep disorder breathing.90%of them remain undiagnosed. These patients may be associated with an increased risk of perioperative complications. Our objective was to evaluate the proportion of surgical patients with risk of undiagnosed Obstructive sleep apnea.

➤ *Methods:*

After research ethics board approval,patient attending preanesthetic clinic were asked to fill the STOP-Bang questionnaire.Prospective observational study is used with the sample size of 70 patients and the study duration is 4 months.

➤ *Results:*

In 70 patients, the proportion of surgical patients with the increased(intermediate-high) of developing Obstructive sleep apnea is 78%(55 patients)

➤ *Conclusion:*

This study is conducted to find out the percentage of surgical patients having undiagnosed Obstructive sleep apnea can be identified and treated to prevent perioperative complications.

Keywords:-Surgical population,Obstructive sleep apnea,STOP-Bang score.

I. INTRODUCTION

Obstructive sleep apnea (OSA) affects 9–24% of the general population[1][2],Obstructive sleep apnea (OSA) is a common sleep disorder,characterized by episodes of apnea or hypopnea during sleep, resulting in hypoxemia and hypercapnia. The obstructive apnea or hypopnea is caused by a complete or partial closure of the pharyngeal walls.Among the general population, undiagnosed OSA may be associated with increased morbidity and mortality. The adjusted hazard ratio for all-cause mortality in patients

with moderate-to-severe OSA is three- to six-fold higher compared with those without OSA[3][4].Undiagnosed OSApatients may present a variety of perioperative concerns:they have a higher incidence of difficult intubation,postoperative complications, increased admissions to intensive care unit (ICU), and longer duration of hospital stay.We suspected that the proportion of undiagnosed OSA remain undiagnosed in people undergoing surgery.We conducted a prospective observational study.

II. METHODOLOGY

This study was conducted in the preanesthetic clinic of Saveetha Medical College and Hospital,Thandalam,Kancheepuram.patient attending preanesthetic clinic aged between 20 to 60 years prior to elective surgical procedures(general surgery,gynecology,orthopedics) were approached and asked to fill the STOP-Bang questionnaire[5][6].

Exclusion criteria includes patient with upper airway disease,Known epileptic,patients on sedation and patients below 20 years and above 40 years.

The study type used is prospective observational study with the sample size of 70 patients and sampling method used is simple random sampling.

The STOP-Bang questionnaire includes 8 questions(snoring,feeling tired/sleepy during day,observed gasping/choking/apnea,high blood pressure,BMI>35,Age>40,neck size>40 cm,male gender) if the patient answer yes it will be given 1 mark if the patient answers no it will be given 0.

The STOP-Bang score 1-2 is considered as low risk,2-4 is considered as intermediate risk and 5-8 is considered as high risk of Obstructive sleep apnea(OSA).

The response of the patients and recorded in the form of table and the risk of developing Obstructive sleep apnea is recorded in the form of piechart.

III. RESULT

In 70 patients, the percentage of surgical patients with the low risk of developing OSA is 22% (15). The percentage of surgical patients with the intermediate risk of developing OSA is 44% (31) and the percentage of surgical patients with the high risk of developing Obstructive sleep apnea is 34% (24).

STOP-Bang Score	N	N%
1-2(Low risk)	15	22%
3-4(Intermediate risk)	31	44%
5-8(High risk)	24	34%

Table 1

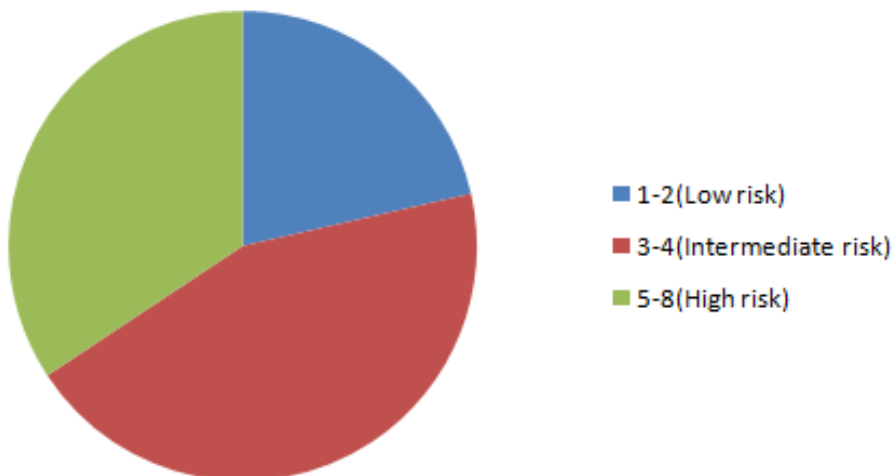


Fig 1

STOP-Bang questions		N	N%
Snore Loudly	Yes	36	52%
	No	34	48%
Feeling tired, fatigue, sleepy	Yes	46	65%
	No	24	35%
Witnessed apnea, Chocking, Gasping	Yes	28	40%
	No	42	60%
High blood pressure	Yes	42	60%
	No	28	40%
BMI(>35)	Yes	17	24%
	No	53	76%
Age >50 years	Yes	28	40%
	No	42	60%
Neck size >40 cm	Yes	21	30%
	No	49	70%
Male gender	Yes	44	63%
	No	26	37%

Table 2

IV. CONCLUSION

About 78% of surgical patients with the increased risk(intermediate-high) of developing Obstructive sleep apnea is identified using STOP-Bang questionnaire. we found that anesthetists and surgeons failed to identify a significant number of patients with undiagnosed Obstructive sleep apnea. This study method can be used to identify the risk of undiagnosed sleep apnea and to prevent the perioperative complication.

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