**The dataset represents data from the study by Turan et al. “Relationship between Chronic Intermittent Hypoxia and**

**Intraoperative Mean Arterial Pressure in Obstructive Sleep**

**Apnea Patients Having Laparoscopic Bariatric Surgery”. *Anesthesiology* 2015; 122: 64-71.**

**Dataset: Hypoxia MAP**

Sleep apnea is when ones breath becomes very shallow or one may even stop breathing -- briefly -- while they sleep. These episodes of decreased breathing, called "apneas" (literally, "without breath"), typically last 20 to 40 seconds. It can happen many times a night in some people. Obstructive sleep apnea (OSA) happens when something partly or completely blocks your upper airway during sleep. Approximately 30% of the general population suffers from OSA. OSA is usually associated with a reduction in blood oxygen saturation.

An "event" can be either an apnea, characterized by complete cessation of airflow for at least 10 seconds, or a hypopnea in which airflow decreases by 50 percent for 10 seconds or decreases by 30 percent if there is an associated decrease in the oxygen saturation or an arousal from sleep. To grade the severity of sleep apnea, the number of events per hour is reported as the apnea-hypopnea index (AHI). An AHI of less than 5 is considered normal. An AHI of 5-15 is mild; 15-30 is moderate and more than 30 events per hour characterizes severe sleep apnea.

OSA has been linked to cardiovascular disease, while a diagnosis of moderate-to-severe disease (AHI ≥ 15) has been identified as an independent risk factor for all-cause and cardiovascular mortality. Patients suffering from OSA present with a chronic enhancement in sympathetic adrenergic activity (system involved in maintaining homeostasis) that is considered one of the major mechanisms in the development of cardiovascular health issues in this population. OSA patients may therefore be especially at risk for intraoperative and postoperative morbidity consequent to hemodynamic instability.

This study retrospectively examined the intraoperative blood pressure in patients who had laparoscopic bariatric surgery. Specifically, testing the hypothesis that nocturnal intermittent hypoxia consequent to OSA are associated with decreased intraoperative mean arterial pressure (MAP).

Eligible were all patients who had laparoscopic bariatric procedures between June 2005 and December 2009 and had a diagnosis of OSA within two preoperative years (N = 281). The main exposure variables were the percentage of total sleep time spent at Sao2 less than 90% and the minimum nocturnal Sao2 listed in polysomnography reports, two parameters indicating the nocturnal oxygenation status of the patients with OSA. Time-weighted average (TWA) intraoperative MAP was the main outcome in the analysis. MAP is a term used to describe an average blood pressure in an individual. It is believed that a MAP > 70 mmHg is enough to sustain the organs of the average person. MAP is normally between 65 and 110 mmHg. If the MAP falls below this number for an appreciable time, vital organs will not get enough oxygen perfusion, and will become hypoxic, a condition called ischemia.

A planned secondary analyses evaluated the relationship between percentage of total sleep time spent at Sao2 less than 90% and minimum nocturnal Sao2, and intraoperative use of vasopressor (yes *vs*. no). A vasopressor is any medication that tends to raise reduced blood pressure, including ephedrine, epinephrine, and phenylephrine.