

The perioperative impact of sleep apnea in a high-volume specialty practice with a strong focus on regional anesthesia.

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Background

- **OSA:**
 - High prevalence
 - Risk factor for postoperative complications
 - Guidelines recommend regional anesthesia
- **Hospital for Special Surgery (HSS):** a high-volume orthopedic surgery hospital with a strong focus on regional anesthesia
- **Aim:** To study the impact of OSA on postoperative complications at HSS

Methods

- Institutional, administrative data of HSS
- Cases of primary total hip and knee arthroplasties (THA/TKA) from 2005 to 2014
- **Outcome of interest:** Association between OSA diagnosis and postoperative in-hospital adverse events

Cardiac complications

Gastrointestinal complications

Wound and surgical site complications

Falls

Respiratory complications

Urinary complications

Thrombosis

Prolonged length of stay (LOS) (>4 days)

Results

- n = 41,766 patients (21,022 THA; 20,744 TKA)
- n = 3,223 diagnosed with OSA (7.7 %)
- Type of anesthesia: 97.8 % neuraxial, 2,2% general

Multivariable logistic regression analysis outcomes – odds ratios of each complication in patients with OSA compared to non OSA patients.

Outcomes	OR (95% CI) for OSA patients	p-value
Cardiac	1.06 [0.82, 1.34]	0.6611
Respiratory	1.70 [1.37, 2.09] *	<0.0001 *
Gastrointestinal	1.39 [1.03, 1.86]	0.0273
Renal/genitourinary	1.18 [0.94, 1.46]	0.1481
Wound/surgical site	1.12 [0.56, 2.01]	0.7312
Thrombosis	1.00 [0.67, 1.44]	0.9966
Falls	0.79 [0.27, 1.78]	0.6095
Prolonged LOS	1.38 [1.26, 1.50] *	<0.0001 *

* statistically significant at $p < 0.00625$

Conclusion

- Despite the predominant use of regional anesthesia, OSA was associated with a substantial increase in risk for respiratory complications (+70%) and prolonged length of stay (+38%)
- Our study underscores the significance of OSA even in a regional anesthesia setting
- Further evaluation of possible measure of precaution is needed

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THANK YOU!

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