

Multimodal analgesia and opioid prescription levels in sleep apnea patients undergoing total hip and knee arthroplasties - a population based study.

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Background – Multimodal analgesia

Simultaneous practice of different analgesic pathways

- Improve pain control
- Reduce opioid consumption
- Diminish drug related side effects

- OSA population prone to perioperative complications
- Guideline recommendation in OSA
- Population based data on trends and effect lacking

Methods

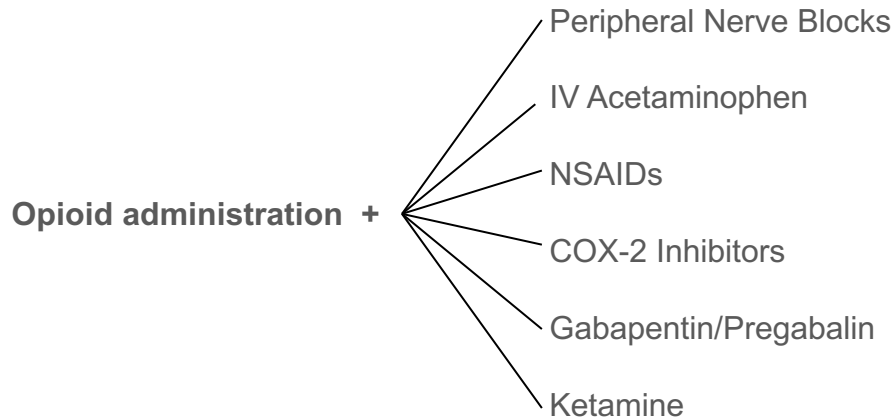
Objective association between multimodal analgesia use and outcomes in OSA

Data Premier Perspective, 627 national hospitals, 2006 - 2016

Patients N=181,182 OSA patients undergoing elective lower joint arthroplasties

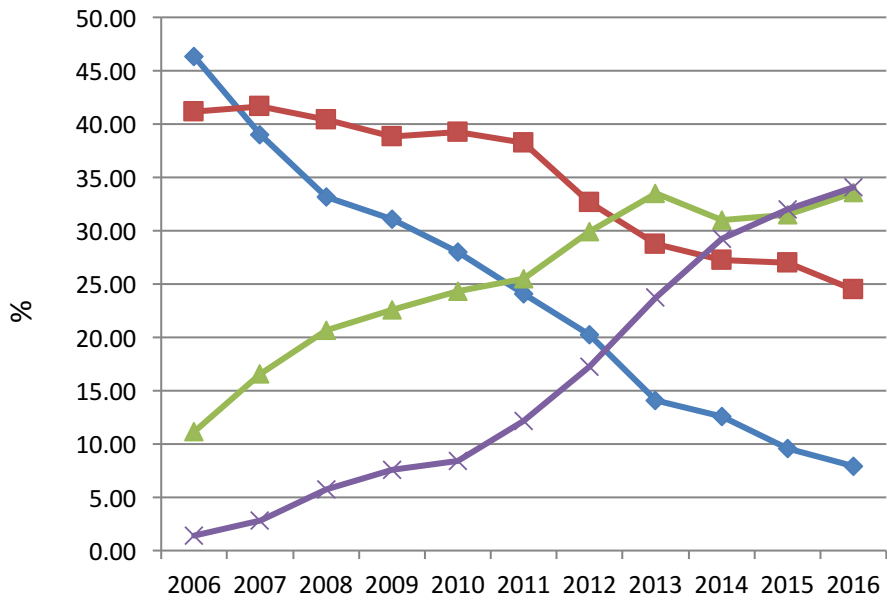
Intervention multimodal analgesia on day of surgery and day after

Multimodal analgesia

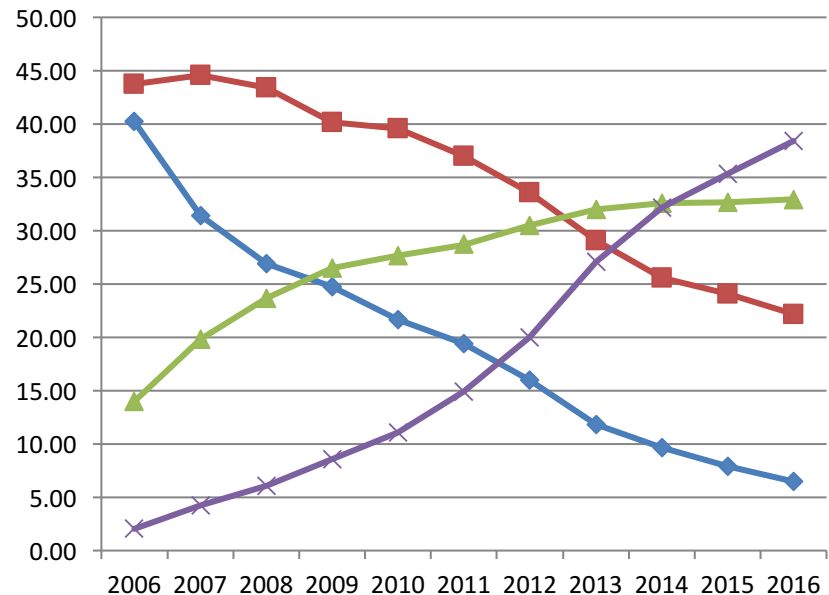


Trends in utilization of multimodal analgesia

THA



TKA



◆ Opioids Only
 ■ 1 Mode
 ▲ 2 Modes
 × 2+ Modes



Multilevel – Multivariable Regression Analysis, N=181,182

	Total Hip Arthroplasty			Total Knee Arthroplasty		
Opioid analgesia +	1 additional mode	2 additional modes	≥3 additional modes	1 additional mode	2 additional modes	≥3 additional modes
Opioid dose	%	%	%	%	%	%
Day 0	-0.2%	-1.9%	-2.7%	-3.0%	-2.9%	-3.0
POD-1	-7.5%	-12.9%	-16.7%	-7.6%	-12.9%	-15.9%
POD-1+	-7.7%	-13.0%	-13.8%	-7.5%	-10.5%	-13.2%
LOS	-7.4%	-11.5%	-14.0%	-5.6%	-9.3%	-12.8%
Cost	-2.2%	-2.8%	-2.6%	-2.5%	-3.3%	-3.5%

→ Dose response relation

all outcomes p < 0.0001



Summary

- Large-scale population based data in OSA
 - Utilization of multimodal analgesia increasing
 - Multimodal analgesia - associated with significant decrease
 - ↓ Opioid utilization
 - ↓ LOS
 - ↓ Cost
 - Dose response relation
- In line with guideline recommendations
- Analysis suggests a strong efficacy of multimodal analgesia in OSA



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