

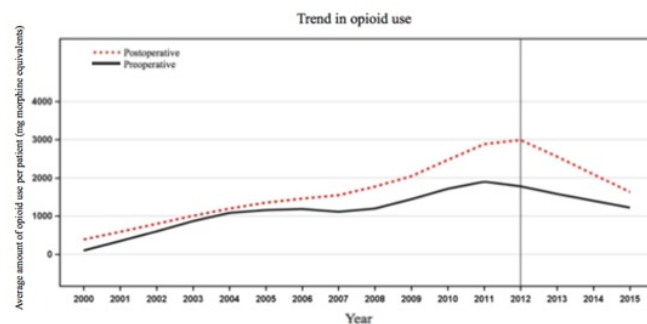
Retrospective Review of Preoperative Medical and Psychological Risk Factors Affecting Opioid Use in a Veteran Elective Lumbar Spine Surgery Population

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Introduction

Opioid abuse is a significant public health concern in the United States. Despite the well-characterized nature of opioid use in the general population, studies concerning factors related to opioid use in veterans is less prevalent. We studied comorbid conditions that affect opioid use in a cohort of veterans who underwent elective lumbar spine surgery.

Opioid Use Over Time



Methods

Charts from patients who underwent elective lumbar spinal surgery during a 16-year period at the Veterans Affairs Nebraska-Western Iowa Healthcare Center were reviewed (n=377). Comorbidities were compared to opioid use in 90-day preoperative and postoperative periods.

Mean Opioid Increase in Use in Select Conditions

	Median Opioid Use (mg morphine equivalents)			
	Preoperative	Postoperative	Increase	p-value
Allergic rhinitis	390	1562	933	0.01*
Obstructive sleep apnea	0	900	750	0.02*
Total comorbidity burden				
0	0	390	200	
1 to 3	0	700	400	0 vs 7+: <0.05*
4 to 6	120	900	300	other comparisons: >0.05
7+	300	1275	630	
Procedure code				
22###	0	1500	900	22### vs 63030/42: <0.0001*
63030/63042	180	599	250	22### vs 63047: <0.01*
63047	0	488	300	63030/42 vs 63047: >0.05

Results

As dichotomous variables, major depression (p=0.0197), hepatitis C (p=0.0207), degenerative joint disease (p=0.0331), alcohol abuse (p=0.0024), and other substance abuse (p=0.0018) are associated with increased preoperative opioid use, while diabetes mellitus type II is associated with increased postoperative opioid use (p=0.035). Lumbar fusion surgery (p<0.0001), allergic rhinitis (p=0.01), obstructive sleep apnea (p=0.02), and 7+ versus 0 total comorbid conditions (p<0.05) resulted in a relative increase in postoperative opioid use compared to preoperative opioid use. Overall, opioid use has risen slowly during the 16-year study period but has begun to trend downward in recent years.

Preoperative Opioid Use in Select Conditions

	n	Preoperative		p-value
		Using opioids (%)	Not using opioids (%)	
Alcohol abuse	31	24 (12)	7 (4)	0.0024
Degenerative joint disease	59	38 (20)	21 (11)	0.0331
Hepatitis C	13	11 (6)	2 (1)	0.0207
Major depression	74	47 (24)	27 (15)	0.0197
Other substance abuse	10	10 (5)	0 (0)	0.0018

Postoperative Opioid Use in Select Conditions

	n	Postoperative		p-value
		Using opioids (%)	Not using opioids (%)	
Diabetes I/II	72	63 (18)	9 (36)	0.035

Conclusions

Psychiatric comorbidities in this study were not significantly associated with increased opioid use after lumbar spine surgery while some non-psychiatric conditions were associated with increased opioid use. Psychiatric conditions do not necessarily preclude veteran patients from receiving lumbar spine surgery or indicate risk for increased opioid use in the postoperative period.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Identify potential comorbid conditions leading to increase opioid use in VA spine surgery patients, 2) Identify factors affecting an increase in postoperative opioid use in VA elective lumbar spine surgery patients

References

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