Comparisons of All-Cause Mortality of NSAIDs

vs. Opiates and Adjuvants: A Cohort Study

ABSTRACT:

Background: Opiates and adjuvant medications are frequently utilized in chronic benign pain. The long-term impact of these combination medications is unclear. Randomized trials of opiates with multiple adjuvant medications are non-existent, but polypharmacy is a common practice.

Objective: To determine the relative risks and predictors of all-cause mortality (ACM) among patients prescribed NSAIDs only, opiates only and opiates with adjuvant medications.

Setting: Workers' compensation data.

Patients: 14,017 patients with opiates and 2,934 patients with NSAIDs.

Measurements: Risks and predictors of ACM for each medication groups.

Results: SLO + ASH group has the highest RR for death, 3.22 (95% CI, 1.60-6.94). Total medication prescribed is a significant predictor of mortality. SLO + MR/AD group also have increased ACM, RR 1.73 (95% CI, 1.15-2.59). Age, sex and the number of emergency room visits are significant predictors of ACM[*].

Conclusion: The use of anxiolytic, sedative/hypnotic medications with SLO poses a significant increased risk of ACM. A lesser, but still significant risk of death is noted when combining SLO and MR/AD medications. Routine prescribing of these medication combinations is not recommended.

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[*] short-acting opiates only (SA), short and long-acting opiates only (SLO), short and long-acting opiates with at least one anxiolytic, sedative, or hypnotic medication (SLO + ASH), and short and long-acting opiates with at least one muscle relaxer or antidepressant (SLO + MR/AD).

Table 5a. Multivariate Analysis – Short and Long-acting Opiates + Anti-Anxiety, Sedatives, Hypnotics.

Variable	RR	95% CI	p
Any Surgery	0.21	(0.06, 0.78)	0.02
Total Medication Prescribed	1.38	(1.07, 1.78)	0.01

Table 5b. Multivariate Analysis – Short and Long-acting Opiates + Muscle Relaxers, Anti-Depressants

Variable	RR	95% CI	p
Age at Injury Date (per 5 years)	1.36	(1.17, 1.57)	<0.01
Duration on Opiates (per 30 days)	0.99	(0.98, 1.001)	0.07
ER Total Visits	1.06	(1.02, 1.09)	<0.01
Sex	2.11	(1.10, 4.02)	0.02

Table 5c. Multivariate Analysis – Short and Long-acting Opiates Only

Variable	RR	95% CI	p
Age at t0 (per 5 years)	0.39	(0.21, 0.71)	<0.01
Age at Injury Date (per 5 years)	3.55	(1.87, 6.76)	<0.01
Any Surgery	0.33	(0.12, 0.96)	0.04
Legal Representation	3.07	(0.95, 9.89)	0.06
Total Medication Prescribed	1.45	(1.19, 1.76)	<0.01

Table 5d. Multivariate Analysis – Short-acting Opiates Only

Variable	RR	95% CI	p
Age at t0 (per 5 years)	1.32	(1.24, 1.40)	<0.01
Duration on Opiates (per 30 days)	0.98	(0.96, 1.004)	0.10
Marital Status	0.49	(0.26, 0.90)	0.02
Sex	1.91	(1.43, 2.58)	<0.01
Total Medication Prescribed	1.32	(1.19, 1.46)	<0.01

Table 5e. Multivariate Analysis – All Opiates

Variable	RR	95% CI	p
Age at Date of Injury (per 5 years)	1.33	(1.26, 1.41)	<0.01
Duration on Opiates (per 30 days)	0.98	(0.97, 0.99)	<0.01
Marital Status	0.47	(0.27, 0.82)	<0.01
Sex	1.90	(1.47, 2.45)	<0.01
Total Medication Prescribed	1.25	(1.17, 1.33)	<0.01

Table 5f. Multivariate Analysis – NSAIDs Only

Variable	RR	95% CI	p
Age at t0 (per 5 years)	1.06	(1.03, 1.09)	<0.01