Evidence Profile 1.2.2. Comparison of Analgesics During Maintenance of Pain Management

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Analgesics**	**Analgesics**	**Relative (95% CI)**	**Absolute (95% CI)**		
Pain relief												
									See Network Meta-Analysis			CRITICAL
Pain relief speed (follow up: range 12 hours to 12 days)												
4 [1,2,3,4]	RCT	serious [A]	not serious	not serious	not serious	variable outcomes, poor reporting	332 across interventions		**NS** [B]		Low	IMPORTANT
Pain reduction maintenance (follow up: range 6 hours to 7 days)												
4 [1,3,5,7]	RCT	serious [A]	not serious	not serious	not serious	variable outcomes, poor reporting	602 across interventions		**Mostly NS** [C]		Low	CRITICAL
Quality of life												
0									not estimable			CRITICAL
Functional outcomes (follow up: range 7 days to 14 days; assessed with: KPS; Scale: 0 to 100 [best]*)												
2 [8,9]	RCT	serious [D]	N/A	not serious	not serious	sparse	173 across interventions		**KPS 4.9** [E] (NS) **KPS 3.0** [F] (-0.8, 6.8)		Low	IMPORTANT
Adverse Events: Respiratory depression (14 days, respiratory failure)												
1 [10]	RCT	not serious	N/A	serious [G]	serious [H]	single study	**Tapentadol** 1/62 (1.6%)	**Morphine SR** 0/31 (0%)	**RR 1.52** (0.06, 36.4)	**10 more per 1000 with tapentadol** (from 49 fewer to 65 more)	Very Low	IMPORTANT
Adverse Events: Sedation (follow up: range 3 days to 20 weeks)												
17 [6,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26]	RCT	serious [I]	serious [J]	serious [K]	none	sparse [L]	1748 across interventions		**NS overall** [M]		Very Low	IMPORTANT
2 [20, 28]	RCT	serious [N]	not serious	not serious	serious [H]	none	**Fentanyl** 22/142 (17% [O])	**Morphine SR** 25/142 (21% [O])	**RR 0.88** (0.52, 1.48)	**25 more per 1000 with morphine** (from 99 fewer to 99 more)	Low	IMPORTANT

***Abbreviations: CI**: confidence interval; **KPS:** Karnofsky Performance Status scale**; NS**: not statistically significant; **RCT**: randomized controlled trial(s).*

Explanations

A. Poor reporting of outcome.
B. All 4 studies NS. Data too variable and incompletely reported to allow meta-analysis:
Ketorolac 30 mg 1.3 hr, Ketorolac 10 mg 1.4 hr, Diclofenac 1.7 hr; P=0.209 across interventions.
Morphine CR 2 days (range 1-9 days), Oxycodone CR 2 days (range 1-10 days).
Codeine + Ibuprofen vs. Codeine: Difference = 12 hours (95% CI -6.4, 30.4), nominally favoring codeine + ibuprofen.
Morphine SR vs. Morphine IR: Difference = 0.4 days (95% CI -0.5, 1.3), nominally favoring morphine SR.
C. Data too variable and incompletely reported to allow meta-analysis.
1 study: Kadian every 24 hours had longer mean time to remedication (16 hr) than Kadian every 12 hours (9.1 hr) or Morphine CR (8.7 hr); P = 0.001.
2 studies: Ketorolac vs. Diclofenac:
Ketorolac 4.4 days (range 0-8 days), Diclofenac 4.2 days (range 0-8 days); NS. Duration of pain reduction efficacy.
Ketorlac 30 mg 5.4 hours, Ketorolac 10 mg 5.5 hours, Diclofenac 5.0 hours. No further data. Duration of positive analog pain intensity difference.
1 study: Codeine + Ibuprofen vs. Codeine: Difference = 1.4 hours (95% CI -1.0, 3.8), nominally favoring codeine + ibuprofen. Maintaining time.
D. In 1 study high attrition and unblinded outcome assessors.
E. Favoring Morphine over Methadone.
F. Favoring Ketorolac over Dexketoprofen
G. Unclear what is meant by respiratory failure.
H. Wide confidence interval.
I. High attrition, lack of blinding.
J. Highly heterogeneous rates across studies (see Explanation M).
K. Various specific outcomes.
L. Most comparisons evaluated by only a single study.
M. All NS within study. However, data too heterogeneous to allow meta-analyses (various definitions of sedation [sedation, somnolence, drowsiness, tiredness], 10 interventions : Fentanyl TD 3 studies 6-14%, Hydromorphone CR 1 study 7%, Methadone 2 studies 15-27%, Morphine CR 6 studies 6-19%, Morphine IR 3 studies 17-70%, Oxycodone CR 1 study 59%, Oxycodone IR 2 studies 32-65%, Tapentadol 1 study 4%, Tramadol + Fentanyl TD 1 study 6%, Tramadol + Tapentadol 1 study 9%.
N. Lack of blinding.
O. Meta-analyzed value.

Trials

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