

Comparison 2.j. Fentanyl intravenous (IV) compared with pethidine (IV)

Source:† Ullman R, Smith LA, Burns E, Mori R, Dowswell T. Parenteral opioids for maternal pain management in labour. Cochrane Database Syst Rev. 2010;(9):CD007396.

No. of studies	Study design	Quality assessment					No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl IV	Pethidine IV	Relative (95% CI)	Absolute (95% CI)		
Pain score (1 hour after drug administration)												
1	RCT	serious ^a	not serious	not serious	serious ^b	none	49	56	-	MD 0.2 lower (0.34 lower to 0.06 lower)	⊕⊕○○ LOW	critical
Mean doses of analgesia												
1	RCT	serious ^a	not serious	not serious	serious ^b	none	49	56	-	MD 0.4 higher (0.14 higher to 0.66 higher)	⊕⊕○○ LOW	critical
Nausea and/or vomiting												
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	4/49 (8.2%)	9/56 (16.1%)	RR 0.51 (0.17-1.55)	79 fewer per 1000 (from 88 more to 133 fewer)	⊕○○○ VERY LOW	critical
Anti-emetic needed												
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	0/49 (0.0%)	6/56 (10.7%)	RR 0.09 (0.01-1.52)	98 fewer per 1000 (from 56 more to 106 fewer)	⊕○○○ VERY LOW	critical
Maternal sedation												
1	RCT	serious ^a	not serious	not serious	serious ^d	none	0/49 (0.0%)	11/56 (19.6%)	RR 0.05 (0.00-0.82)	187 fewer per 1000 (from 0 to 35 fewer)	⊕⊕○○ LOW	critical
Caesarean section												
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	3/49 (6.1%)	3/56 (5.4%)	RR 1.14 (0.24-5.40)	7 more per 1000 (from 41 fewer to 236 more)	⊕○○○ VERY LOW	critical
Apgar score < 7 at 1 and 5 minutes - low score at 1 minute												
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	5/49 (10.2%)	9/56 (16.1%)	RR 0.63 (0.23-1.77)	59 fewer per 1000 (from 124 fewer to 124 more)	⊕○○○ VERY LOW	critical
Apgar score < 7 at 1 and 5 minutes - low score at 5 minutes												
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	0/49 (0.0%)	1/56 (1.8%)	RR 0.38 (0.02-9.12)	11 fewer per 1000 (from 17 fewer to 145 more)	⊕○○○ VERY LOW	critical

† Updated for the purpose of this guideline.

No. of studies	Study design	Quality assessment					Other considerations	No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision			Fentanyl IV	Pethidine IV	Relative (95% CI)	Absolute (95% CI)		
Naloxone administered													
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	1/49 (2.0%)	7/56 (12.5%)	RR 0.16 (0.02-1.28)	105 fewer per 1000 (from 35 more to 123 fewer)	⊕○○○ VERY LOW	critical	
Babies needing resuscitation/ventilatory support													
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	9/49 (18.4%)	10/56 (17.9%)	RR 1.03 (0.46-2.32)	5 more per 1000 (from 96 fewer to 236 more)	⊕○○○ VERY LOW	critical	
Neurobehavioural score (1-2 hours after delivery)													
1	RCT	serious ^a	not serious	not serious	serious ^b	none	49	56	-	MD 1.3 higher (0.15 higher to 2.45 higher)	⊕⊕○○ LOW	critical	
Neurobehavioural score (2-24 hours)													
1	RCT	serious ^a	not serious	not serious	very serious ^c	none	49	56	-	MD 0.9 higher (0.42 lower to 2.22 higher)	⊕○○○ VERY LOW	critical	

CI: confidence interval; MD: mean difference; RCT: randomized controlled trial; RR: risk ratio.

^a Effect estimate derived from a single study with a moderate risk of bias.

^b Small sample size.

^c Wide confidence interval crossing the line of no effect, small sample size and few events.

^d Small sample size and few events.