

Comparison 2.d(i). Morphine or diamorphine intramuscular (IM) compared with pethidine (IM)

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					Other considerations	No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision			Diamorphine/morphine IM	Pethidine IM	Relative (95% CI)	Absolute (95% CI)		
Pain relief described as poor													
1	RCT	serious ^a	not serious	not serious	very serious ^b	none	11/45 (24.4%)	9/45 (20.0%)	RR 1.22 (0.56-2.66)	44 more per 1000 (from 88 fewer to 332 more)	⊕○○○ VERY LOW	critical	
Additional analgesia needed													
2	RCTs	not serious	not serious	not serious	serious ^c	none	206/289 (71.3%)	202/285 (70.9%)	RR 1.00 (0.92-1.10)	0 fewer per 1000 (from 57 fewer to 71 more)	⊕⊕⊕○ MODERATE	critical	
Nausea and vomiting													
1	RCT	serious ^a	not serious	not serious	very serious ^b	none	3/45 (6.7%)	3/45 (6.7%)	RR 1.00 (0.21-4.69)	0 fewer per 1000 (from 53 fewer to 246 more)	⊕○○○ VERY LOW	critical	
Maternal sleepiness													
1	RCT	serious ^a	not serious	not serious	very serious ^b	none	9/45 (20.0%)	15/45 (33.3%)	RR 0.60 (0.29-1.23)	133 fewer per 1000 (from 77 more to 237 fewer)	⊕○○○ VERY LOW	critical	
Apgar < 7 at 1 minute													
2	RCTs	not serious	not serious	not serious	serious ^c	none	42/289 (14.5%)	36/285 (12.6%)	RR 1.15 (0.76-1.73)	19 more per 1000 (from 30 fewer to 92 more)	⊕⊕⊕○ MODERATE	critical	
Neonatal resuscitation													
2	RCTs	not serious	not serious	not serious	serious ^c	none	43/289 (14.9%)	44/285 (15.4%)	RR 0.96 (0.66-1.41)	6 fewer per 1000 (from 52 fewer to 63 more)	⊕⊕⊕○ MODERATE	critical	
Assisted vaginal delivery													
1	RCT	not serious	not serious	not serious	serious ^c	none	60/244 (24.6%)	46/240 (19.2%)	RR 1.28 (0.91-1.80)	55 more per 1000 (from 17 fewer to 143 more)	⊕⊕⊕○ MODERATE	critical	
Caesarean section													
1	RCT	not serious	not serious	not serious	serious ^c	none	47/244 (19.3%)	49/240 (20.4%)	RR 0.94 (0.66-1.35)	12 fewer per 1000 (from 67 more to 73 fewer)	⊕⊕⊕○ MODERATE	critical	

† Updated for the purpose of this guideline.

No. of studies	Study design	Quality assessment					No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Diamorphine/morphine IM	Pethidine IM	Relative (95% CI)	Absolute (95% CI)		
Maternal pain relief at 30 minutes												
1	RCT	not serious	not serious	not serious	not serious	none	244	240	-	MD 0.8 lower (1.24 lower to 0.36 lower)	⊕⊕⊕⊕ HIGH	critical
Maternal pain relief at 60 minutes												
1	RCT	not serious	not serious	not serious	not serious	none	244	240	-	MD 0.8 lower (1.26 lower to 0.34 lower)	⊕⊕⊕⊕ HIGH	critical
Maternal satisfaction with analgesia (number of women "satisfied" or "very satisfied")												
1	RCT	not serious	not serious	not serious	not serious	none	196/244 (80.3%)	170/240 (70.8%)	RR 1.13 (1.02-1.26)	95 more per 1000 (from 19 more to 153 more)	⊕⊕⊕⊕ HIGH	critical
Naloxone administration												
1	RCT	not serious	not serious	not serious	very serious ^d	none	3/244 (1.2%)	3/240 (1.3%)	RR 0.98 (0.20 to 4.83)	0 fewer per 1000 (from 10 fewer to 48 more)	⊕⊕○○ LOW	critical

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

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

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

^c Wide confidence interval crossing the line of no effect.

^d Wide confidence interval crossing the line of no effect and few events.