Remifentanil via PCA in labour

IMPORTANT: *Consider individual clinical circumstances. Consult a pharmacopeia for complete drug information. Read the full disclaimer at https://www.health.qld.gov.au/qcg*

Aspect	Consideration
Indications	• Women in active labour who request pain management: o In whom an epidural is contraindicated, unachievable or unwanted o Following assessment by an anaesthetist of individual clinical circumstances • Only for use where there are: o Standardised protocols for intravenous line and device setup and management o Staff familiar with and who have appropriate expertise in administration
Administration	• Action: o Very short-acting opioid with fast onset and offset—facilitates controllability o Analgesic potency about 200 times higher compared to morphine • No other opioids or sedatives unless prescribed by an anaesthetist • Requires dedicated intravenous access and patient controlled analgesia (PCA) device • Follow local protocols for: o Concomitant anti-emetic, naloxone and oxygen prescription o Preferred dose (bolus and background infusion) and lock out period o Nitrous oxide use during administration o Device management, training, assignment of responsibility for care and escalation procedures o Documentation
Care provision	• Prior to commencement: o Baseline temperature, heart rate, blood pressure, oxygen saturation and respiratory rate, level of consciousness, cardiotocograph (CTG) • One to one midwifery care[1] • Ongoing intrapartum observations every 30 minutes; additionally o Continuous oxygen saturation[1]—maintain above 95% o Continuous CTG[1] o Clinical surveillance for decreased respiratory rate and sedation (increasing sedation is the best early clinical sign of respiratory depression[2]) o Observe for nausea, vomiting and pruritus

Risks and benefits

The following table reports the incidence of conditions when remifentanil is compared to epidural/combined spinal epidural and to other opioids (IV/IM). For example: remifentanil (via PCA) reported to have increased nausea and vomiting compared to epidural/combined spinal-epidural but decreased nausea and vomiting compared to other opioids (IM/IV).

Remifentanil (via PCA) compared to[3]:	**Epidural/combined spinal-epidural**	**Other opioids (IM/IV)**
Nausea and vomiting	Increased	Decreased
Oxygen desaturations (less than 92% and 95%)	Increased	No difference
Satisfaction with pain relief	Decreased	Increased
Requirement for additional analgesia	Higher	Lower
Pain intensity (at one hour and two hours post administration)	Increased	Decreased
Fetal heart rate or cardiotocograph abnormalities	No difference	Decreased
Respiratory depression less than eight breaths per minute	No difference	No difference
Hypotension	No difference	No data
Rate of caesarean section, assisted birth, augmented labour,	No difference	No difference
Need for neonatal resuscitation	No difference	No difference
Apgar less than seven at five minutes	No difference	Insufficient data
Need for neonatal naloxone	No difference	No data
Neonatal apnoea, sedation, umbilical cord pH (artery)	Increased	No data
Breastfeeding initiation	No data	No difference

Evidence relates to low risk women with cephalic presentation at term and may not be applicable to other higher risk groups. Quality of evidence generally low.

References

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2. Macintyre P, Schug S. Acute Pain Management: A practical Guide. 4th ed. United States: CRC Press; 2015.
3. Weibel S, Jelting Y, Afshari A, Pace NL, Eberhart LHJ, Jokinen J, et al. Patient-controlled analgesia with remifentanil versus alternative parenteralmethods for painmanagement in labour. Cochrane Database of Systematic Reviews. [Internet]. 2017 [cited 2017 July 20]; Issue 4. Art. No.: CD011989 DOI:10.1002/14651858.CD011989.pub2.

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