

Scandinavian SSAI clinical practice guideline on the use of single shot remifentanil for rapid sequence induction of general anaesthesia for emergency caesarean section in healthy parturients

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Abstract

Background: Rapid sequence induction (RSI) is considered the gold standard in an emergency caesarean section (CS). Use of opioids has been limited to after umbilical clamping to minimize neonatal respiratory depression. Lack of opioids during induction may cause severe adverse effects to the parturient due to elevated blood pressure, especially in high-risk cases, such as pre-eclampsia and intraoperative awareness. The aim of this guideline is to determine effect of a single shot of remifentanil during induction of general anaesthesia for CS.

Methods: A PubMed search was made to identify relevant studies. The PICO method was used to formulate the clinical question and the GRADE system was employed to assess the quality of evidence and create the recommendation. Quality of evidence was rated from very low to high and recommendations were classified as weak or strong by all the members of the study group.

Results: 39 studies were identified and 5 were included in the guideline, 2 systematic reviews and 3 randomised controlled trials, all from elective CS setting. Data had to be extrapolated into emergency CS. Relative risk (RR) for neonatal ventilatory support after single shot remifentanil was 1.1592, low Apgar score (0-7) at 1 and 5 minutes were 1.8009 and 1.0192, respectively, maternal highest systolic blood pressure was lower, mean of 136.38 vs 155.65 mmHg and RR of maternal intraoperative awareness was 0,987.

Recommendations and conclusion: Overall the quality of evidence was low (neonatal ventilatory support, maternal blood pressure and intraoperative awareness) to moderate (Apgar scores at 1 and 5 minutes). We suggest a single shot remifentanil can be used in RSI of general anaesthesia to reduce maternal hypertensive response during intubation without compromising the safety of the neonate.