Abstract

Introduction: Remifentanil, with its rapid activity onset and short duration of action, may be more effective than other opioids for providing hemodynamic stability during obstetric anesthesia. However, there is some evidence of adverse effects on neonatal respiratory function. We investigated maternal and fetal effects of remifentanil during cesarean section surgery. Methods: Eighteen women with singleton term pregnancies, and physical class status of I or II as defined by the American Society of Anesthesia (ASA), who were undergoing general anesthesia for semi-elective cesarean section were randomized into two groups (40 in each group) that received either an intravenous bolus of 0.5 g/kg remifentanil or the same dose of saline as a placebo. Maternal hemodynamic variables and neonatal umbilical artery pH and Apgar score at first and fifth minutes were evaluated in both groups. Results: Systolic and diastolic blood pressure were significantly lower after tracheal intubation and skin incision in the remifentanil group as compared with the control group (p<0.05). There were no significant differences regarding heart rate between groups at any time (p>0.05). Apgar scores at first and fifth minutes were not significantly different among groups (p>0.05). No neonate required assisted ventilation or naloxan administration. Conclusion: Remifentanil may be a safe and effective drug for the induction of general anesthesia and surgical stimulation without subsequent neonatal depression.

Keywords

Remifentanil, Placebo, caesarean.