Preextubation Fentanyl on Hemodynamics & Recovery Profile, A Prospective Randomized Controlled Study

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Background and rationale

Tracheal extubation, as well as intubation provoke stressful responses, including tachycardia and hypertension, extubation also provoke airways reflexes causing cough or strain, which are known to increase blood pressure and heart rate. These hemodynamic changes during extubation and emergence from anesthesia may cause dangerous cardiovascular complications. Fentanyl has been used extensively to maintain perioperative hemodynamic stability. This study was carried out to evaluate the effect of fentanyl on cardiovascular responses and recovery profile to tracheal extubation.

Methodology

We studied 126 patients with controlled hypertension, received chemotherapy undergoing mastectomy operation for breast cancer. The patients divided into 3 groups (n=42) were the first group received 2 mic/kg fentanyl at the end of anesthesia, the second group received 1 mic/kg, while the third group received 10 ml saline as placebo at the same time. Hemodynamics (Mean blood pressure, Heart rate), Extubation time, Behavioral status (Sedation, Alertness or Agitation) and Complication after extubation (Desaturation, Vomiting, Coughing, Laryngospasm and Shivering) were recorded.

Results and Discussion

In patients with controlled hypertension, received chemotherapy undergoing mastectomy operation for breast cancer; intravenous fentanyl 1mic/kg given at the end of

anesthesia blunts cardiovascular responses to tracheal extubation and emergence from anesthesia. This does not lead to respiratory depression or prolonged recovery. The use of 2 mic/kg fentanyl at the same time provides more control on the heart rate than 1mic/kg but with delay in the extubation time.

Conclusion

Preextubation intravenous fentanyl 1mic/kg given at the end of anesthesia is a simple, effective, and practical method in obliterating cardiovascular responses to tracheal extubation and emergence from anesthesia with no respiratory depression or prolonged recovery.