

Experience in Total Intravenous Anaesthesia (TIVA) for surgery in prone position without the use of Neuro-muscular blocking agents.

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Introduction: Total Intravenous anaesthesia (TIVA) using a laryngeal mask airway (LMA) offers good recovery characteristics and a lower incidence of sore throat as compared to conventional inhalational anaesthesia and endotracheal intubation. (1) It also allows the use of controlled ventilation without muscle relaxants. However, in patients undergoing surgery in the prone position intubation & ventilation is the standard technique. We present an observational study of TIVA for patients undergoing surgery while prone using a laryngeal mask & controlled ventilation without the use of neuro-muscular blocking agents (NMBA).

Method: We selected 36 patients who had no risk factors for aspiration & were undergoing surgery prone. All patients received Propofol-Remifentanil target controlled infusion for induction and maintenance of anaesthesia. The LMA was inserted while patients were supine and subsequently positioned prone while taking care to keep their chest and upper abdomen free. All patients were mechanically ventilated with volume controlled ventilation. Airway pressures, ventilator volumes, non-invasive blood pressure and ETCO₂ were measured during surgery.

Results: None of the patients suffered from aspiration or any other airway complications. Only two patients required vasoactive drugs. The mean of the highest recorded peak airway pressure was 18.85 cm of water. There were no episodes of hypercapnoea or desaturation. Mean duration of surgery was 41.11min (SD+/-21.19) with a range of (16 mins-106 mins) and recovery time was 8.57mins (SD+/-1.85) range (6 mins-12 mins).

Conclusion: Our study shows that in selected patients LMA using TIVA is a safe option for short to medium duration surgery while prone. We did not notice a higher incidence of clinically significant haemodynamic instability with TIVA in prone patients as suggested by previous studies (1, 2). The safety of using an LMA in prone patients as suggested in previous studies was borne out in our study by the absence of airway complications and maintenance of satisfactory gas-exchange and acceptable airway pressures. All this was achieved without the use of NMBAs with all their potential side-effects.

References:

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