

Oxygen Reserve Index Guided Oxygen Titration in One Lung Ventilation With Low Fresh Gas Flow

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BACKGROUND/AIM: The decrease in Oxygen Reserve Index (ORI) provides a prediction for the development of hypoxemia and hyperoxia. Our aim is to determine the effect of ORI-guided oxygen titration on hyperoxemia-mediated morbidity.

MATERIALS AND METHODS: Consecutive 120 ASA I-III patients, 18-70 years of age, without severe obstruction or restriction, undergoing one lung ventilation (OLV), were included. Patients were divided into 4 groups. Oxygen titration without ORI monitoring with low-flow anesthesia (n=25) and high-flow anesthesia (n=28). Oxygen titration by ORI monitoring with low flow anesthesia (n=25) and high flow anesthesia (n=25). OLV time, duration of surgery and anesthesia, oxygen application time over 60%, vital signs, hospital and ICU stay time and complications were recorded.

RESULTS: There was a significant difference in terms of FiO₂ used during OLV (p< 0.05). There was no difference in ORI values (p <0.05). In Group 3, both PaO₂ and SpO₂ were significantly lower than the others both before and during OLV. There was no significant difference in ORI parameters between low and high flow anesthesia groups. There was a strong, positive correlation between the duration of hospital stay and FiO₂ used above 80% during OLV.

CONCLUSIONS: We concluded that ORI-guided thoracic anesthesia may reduce hospital stay and increase patient safety.