

Category : **Cardiovascular: Monitoring**

A47 - Investigation of the correlation between perioperative oxygen reserve index and peripheral oxygen saturation and partial arterial oxygen pressure values in patients undergoing hypotensive anesthesia

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Introduction:

Excessive oxygen administration is known to cause absorption atelectasis during general anesthesia. There are concerns in using excessive oxygen during general anesthesia, the optimal fraction of inspired oxygen (FiO₂) for general anesthesia is not studied. Oxygen Reserve Index (ORI) is a new parameter for noninvasive monitoring. In our study, we evaluate the correlation between ORI and the Spo₂ in underwent hypotensive anesthesia adults.

Methods:

Our study is between the ages of 20-60; Twenty-four patients who will undergo elective tympanoplasty-mastoidectomy by applying hypotensive anesthesia are included in Group 1, and 9 patients who will undergo laryngectomy-neck dissection without hypotensive anesthesia are included as Group 2.

Results:

There are 24 patients who have peroperative hyperoxic period in Group 1 and 5 of them were detected as hyperoxic with ORI (20.83%). In group 2, there are 8 patients who have hyperoxic period and 6 of them were detected as hyperoxic with ORI (75%). In our study, the value of ORI = 0 for the 150 mmHg value that we accept the safe PaO₂ limit has high specificity and sensitivity.

Conclusion:

In our study, although there was a significant relationship between PaO₂ and ORI in both groups. In order to benefit from the mentioned advantages in terms of clinical use of ORI, we think that larger clinical studies may be beneficial in patients receiving hypotensive anesthesia.

References:

1. Richard L. Applegate, II, Ihab L. Dorotta, Briana Wells, David Juma, Patricia M. Applegate The Relationship Between Oxygen Reserve Index and Arterial Partial Pressure of Oxygen During Surgery. *Anesth Analg*. 2016 Sep; 123(3): 626–633.