

Dynamic thiol/disulphide balance in patients undergoing hypotensive anesthesia in elective septoplasties

Leyla Kazancioglu¹, Sule Batcik², Medeni Arpa³, Basar Erdivanli³, Zerrin Ozergin Coskun³, Ozlem Celebi Erdivanli⁴, Ilkay Bahceci⁴, Hızir Kazdal⁵, Ozcan Erel⁶, and Salim Neselioglu⁷

¹Recep Tayyip Erdogan Universitesi Tip Fakultesi

²Affiliation not available

³Recep Tayyip Erdoğan Üniversitesi

⁴Recep Tayyip Erdogan Universitesi

⁵Recep Tayyip Erdoğan University

⁶Yildirim Beyazıt Üniversitesi

⁷Yildirim Beyazıt University

April 10, 2021

Abstract

Objective: We aimed to investigate the effects of hypotensive anesthesia on oxidative stress with serum thiol/disulfide balance in patients undergoing elective septoplasty procedures under general anesthesia. **Methods:** Seventy-two patients between the ages of 18-60, with a physical condition I–II, according to the American Society of Anesthesiologists, were included in this prospective observational study. Septoplasty was chosen for standard surgical stress. According to the maintenance of anesthesia, patients were divided into the groups as Hypotensive Anesthesia (n = 40) and Normotensive Anesthesia (n = 32). Serum thiol/disulfide levels were measured by the method developed by Erel & Neşelioglu. **Results:** The native thiol and total thiol values of both groups measured at the 60th minute intraoperatively were significantly lower than the preoperative values (both $p < 0.01$). Intraoperatively, at the 60th minute, there was no significant difference in terms of post-native thiol and post-total thiol levels between hypotensive and normotensive anesthesia groups ($p = 0.68$, and $p = 0.81$, respectively). Age > 40 years and female gender were found to have a significant effect on dynamic oxidative stress ($p = 0.002$, and $p = 0.001$, respectively). **Conclusion:** This pilot study has found that hypotensive anesthesia had no adverse effect on dynamic thiol/disulfide balance in elective surgeries.

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CONSORT 2010 Flow Diagram



