Comparing the effect of Etomidate and Propofol for induction of anaesthesia on intra ocular pressure of eye in cataract surgery by Phaco method

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Abstract
Aims: Etomidate is used for induction of anesthesia for cataract surgery. This study was conducted to compare the effect of using of Etomidate and Propofol as the anesthesia induction drug on intra-ocular pressure (IOP) in cataract surgery with Phaco technique.

Materials & Methods: this study is a double blind randomized clinical trial. 60 patients who have referred to one of Tehran’s hospital were selected among the other patients who were candidate for cataract surgery with Phaco technique and were divided into two experimental and control groups. Etomidate was used for experimental group and Propofol was used for control group. Intra-ocular pressure and hemodynamic indices were measured and evaluated for both groups. Data were analyzed using SPSS 14 software.

Results: Changes’ mean of intra-ocular pressure (IOP) before and after the anesthesia induction in Etomidate group was 4.81±2.67 mmHg and in Propofol group was 3.73±2.20 mmHg, which did not show statistically significant difference (p>0.05). in Etomidate and Propofol groups, mean heart rate was (6.50±6.39 per minute and 12.13±7.65 per minute, respectively), mean of systolic blood pressure changes was (16.60±9.26 mmHg, vs. 40.66±16.64 mmHg, respectively) and mean of diastolic blood pressure changes was (6.33±7.32 mmHg, vs. 14.06±11.72 mmHg, respectively) before and after anesthesia induction, which showed significant difference (p<0.05).

Conclusion: Etomidate is an effective drug for induction of anesthesia in cataract surgery without any clear clinical effect on intra-ocular pressure and patient’s hemodynamic status.

Keywords: Phaco, Etomidate, Intra-Ocular Pressure (IOP)