Original Article

Compare blood glucose changes in intravenous anesthesia by Propofol and inhalation anesthesia by Isoflurane in children between 4-6 years old that candidate for dentistry treatment under general anesthesia

Nasser Kaviani[1], Neda Ahmadi [2], Hajar Mohebinia[3]

1- Anesthesiologist, Assistant Professor of Oral and Maxillofacial Department and Dental Research Center, School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran

2- Assistant professor, Dept of Pediatric Dentistry, Dental School Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran.

3- Postgraduate Student of Periodontics, School of Dentistry, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran.

Corresponding Author: h.mohebinia@yahoo.com

Abstract

Background and aims: in General anesthesia many group of drugs can be used. Propofol have high metabolic effect. The purpose of this study was to compare blood glucose change during anesthesia by Propofol and Isoflurane in healthy child candidate for dentistry procedure under general anesthesia.

Methods: In this prospective Randomized clinical trial study, blood glucose change was survey in 27 healthy children that candidate for dentistry procedure under general anesthesia. Induction and maintenance of anesthesia was done in one group by Propofol and other group by thiopental and Isoflurane. Blood glucose was measure by glucometer before anesthesia, after induction, after operation and before discharge and analysis by T.test, Mann-Whitney test, regression analyses, variance analyse and Tukey in SPSS.

Results: No significant difference was seen in two groups before anesthesia. After induction, blood glucose was increase in two groups but had not significant difference (p=0.11). After finishing the operation blood glucose in propofol group (148.64 mg/dl) was significantly higher than Isoflurane (124.58 mg/dl) (p=0.029). Blood glucose after recovery in two group was decrease but no significant difference was seen between two groups (p=0.651).

Conclusion: General anesthesia with Isoflurane and Propofol can increase blood glucose but in Propofol group increase blood glucose was higher than Isoflurane. So recommend in children that increase blood glucose was dangerous, Propofol was contraindicated.

Keywords: General anesthesia, blood glucose, propofol, isoflurane, pediatric dentistry.

[Downloaded from jiapd.ir on 2026-09-05]

[DOI: 10.29252/ijpd.13.1.11]