

The Effect of Preanesthetic Administration of Melatonin, as a Premedication, on Anxiety of Children Undergoing Tonsillectomy

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Abstract

Introduction: Undergoing surgical operations and entering into the operating room are common causes of anxiety and fear in everybody's life. This issue is especially important in children, when staff try to separate them from their parents; because they may not cooperate before the surgery and this may create adverse mental and psychological complications in the future. Sedatives can reduce children anxiety. Melatonin is an indoleamine hormone secreted naturally by the pineal body. It has some receptors in various parts of the body, including the central nervous system. The aim of this study was to investigate the effect of preanesthetic administration of melatonin, as a premedication, on anxiety of children undergoing Tonsillectomy.

Research method: This study was conducted on 80 children aged 2-8 years who were classified according to the American Society of Anesthesiologists, as ASA 1 and 2. Simple random sampling method was used on the basis of even and odd days, when surgeries were conducted. The study population included all children who were candidates for tonsillectomy in the Peymanieh Hospital, from September 2016 to May 2017. All children fasted for 6-8 hours before entering the operating room. Data were collected using demographic information form and the Anxiety Score Scale. Data were analyzed in SPSS 21, using Mann-Whitney and t-tests.

Results: The mean age of the patients in the melatonin and control groups were 5.23 ± 2.08 and 6.07 ± 2.52 years, respectively. The Mann-Whitney test results showed that there was a significant difference between the melatonin and control groups in terms of the anxiety scores of children when entering the operating room for tonsillectomy ($p\text{-value} < 0.001$). In the melatonin group, 40% of the children suffered from grade 1 anxiety, 33.3% grade 2 and 26.7% suffered from grade 3 anxiety. In the control group, 50% of the children suffered from grade 4 anxiety, 20% grade 3 and 16.7% suffered from grade 5 anxiety and the rest of the participants suffered from various grades of anxiety.

Conclusion: Melatonin administration was effective in reducing children's anxiety levels when entering the operating room for tonsillectomy.

Keywords

Author Keywords: melatonin; children; anxiety; tonsillectomy