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## Effect of active warming on unplanned hypothermia for newborns and children during intraoperative period

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This study is the investigate in the implementation of active heating method to examine the effects on unplanned hypothermia in newborns and children in the perioperative period and examining the effects of hypothermia on the waking up at the end of the operation, pain, shivering and hospitalization. This study comprised of patients aged 18 years and below who underwent surgical operation in the Department of Pediatric Surgery in İzzet Baysal Education and Research Hospital, Abant İzzet Baysal University. Two groups of 30 patients were planned randomly but patients who did not want to participate were excluded from the groups. For this reason; control group consisted of 28 patients and experimental group consisted of 28 patients. The first group of patients was actively heated during the surgery (Istanbul Medical- Medwarm rezistive system-W-500D + 80 \* 50 cm or 120\*50), And second group were followed as a control group. Datas were collected by face to face interviews with researchers and patient follow-up. In data analysis SPSS (Statistical Package for the Social Sciences) coded from the program of 20.0; it was analyzed with number, percentage, t test ve Mann- Whitney U tests. When body temperature is examined in the preoperative period; There was no statistically significant difference between the body temperatures in the control group (X: 36, 88±0.43) and the active warming group (X: 36, 80±0.35), indicating that the groups were homogeneous ( t(55) :.817; p≥.05). When body temperature is examined in the intraoperative period; there was no significant difference between the groups at the first 15 minutes of operation (p ≥ 0.05); but the mean rank of the active warming group was significantly higher than the control group in 30th , 45th , 60th minutes,. (P ≤ 0.001). When body temperature is examined in the postoperative period; active warming groups' body temperature mean rank was significantly higher than the mean rank of control group at the 15th, 30th, 45th and 60th minutes (p ≤ 0.05).

When pain is examined in the postoperative period; It was observed that the mean rank of the control group was significantly higher than the mean rank of the experiment group only in the 15th minute (Mann- Whitney U: 237,500; p ≤0.05). Tremors were observed in 44.8% of patients in the control group and 3.6% of patients in the active heating group and the difference between the groups was significant(X<sup>2</sup>:13.086; p≤.001). It was determined that patients in the control group had a higher stay in the hospital ((Mann- Whitney U: 281000; p ≤0.05) and the waking up at the end of the anesthesia was shorter in the active heating group than in the control group ( t(55) :2,832; p≤.05). In a nutshell; active heating with a carbon fiber resistive system was found to be an effective method to prevent unplanned hypothermia in newborns and children. It was also determined that there was less shivering, the waking up at the end of the anesthesia were faster and discharge times were shorter in active warming group.

### Biography

**Ganime Esra Soysal:** She is a research assistant in Bolu School of Health in Abant İzzet Baysal University in Bolu. She completed his master's degree in Programme of Hospital Administration, Department of Social Sciences in Gazi University in 2013and ,she she had graduated from second master program in 2016, at Surgical Nursing field in Faculty of Health Sciences, Abant İzzet Baysal University. She is now continuing her Ph.D.

**Arzu Ilce:** She had graduated PhD from Ege University in 2007, at Surgical Nursing field . She is now the Director of the School of Health Sciences in Abant İzzet Baysal University in Bolu. She has published 15 papers in international indexed journals and a total of 25 articles in reputed journals

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