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Inhalational and intravenous anesthetics inhibit normal thermoregulation. Intraoperative hypothermia in infants may lead to tissue hypoxia, metabolic acidosis, cardiac arrhythmias, platelet dysfunction, and poor wound healing. As a result, convective warming devices such as the Bair Hugger® warming blanket have been used to diminish intraoperative heat loss. This device has a considerable margin of safety, although there are case reports of thermal burns in pediatric patients. We present a case of a healthy infant who suffered extremity burns from a Bair Hugger® warming blanket during a routine sixty-minute procedure.

A 6-month-old healthy ASA 1 male presented for extraction of a left congenital cataract. The patient was brought to the operating room, standard monitors were applied, and general anesthesia was induced by mask. A peripheral IV was inserted and intubation was performed. An esophageal temperature probe was inserted and initially read 36° Celsius. A pediatric underbody warming blanket (#555) was in place and warming was initiated. The temperature management unit (#505) was connected to the blanket's left upper entry point via the unit hose. The fill of the blanket was evaluated for symmetry and the device was set at 43° Celsius. The device was turned off after 45 minutes when esophageal temperature was 38.1° Celsius. The patient was extubated 15 minutes later and delivered to the PACU in stable condition. His temperature on arrival was 39.1° Celsius. Ten minutes after arrival, the PACU nurse noticed erythematous circular markings on his left arm and leg, each 5 mm in diameter. The markings were in a pattern consistent with the perforations of the warming blanket. The patient was evaluated and ultimately discharged to home 2 hours later. At time of discharge, the leg burns had nearly vanished, but the arm burns remained evident. All burns resolved within 2 days. The temperature management unit was quarantined and evaluated by engineering. It maintained a normal temperature output within standard deviation of guidelines.

A literature search produced isolated case reports of pediatric thermal burns due to warming blanket devices. Those patients were documented to have congenital heart disease, low flow states, and poor peripheral perfusion. Their intraoperative courses included cardiac surgery, hypotension, and vasopressor or transfusion requirements. Other themes included use of a warming blanket for >4-6 hours, proximity of the unit hose to the patient's skin, and use of the highest temperature setting. Our case was devoid of any cardiac history, intraoperative hypotension, abnormality in peripheral perfusion, or use of vasopressors. The warming blanket was used per manufacturer's specifications. The device was on for only 45 minutes. We did, however, use the device at its highest setting. In conclusion, constant vigilance of the pediatric patient is recommended during use of the Bair Hugger® warming blanket in all patients.

- 1.) Siddik-Sayyid et al. Thermal burns in three neonates associated with intraoperative use of Bair Hugger warming devices. *Pediatric Anesthesia* 2008; 18: 337-339.
 - 2.) Sessler, D. Mild Perioperative Hypothermia. *NEJM* 1997; 336: 1730-1737.
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