

## **Abstract approved for ESA:**

**"A new effective warm-air mattress gives access to the patient"** by E.Selldén, P. Gannedahl.

### **Background and Goal of Study**

To maintain a patient's core body temperature (CT) during anaesthesia is important (1,2). We evaluated the intraoperative efficacy of a new warm air mattress. It is placed under the patient, thus giving full access to the upper surface of the patient.

**Materials and Methods:** After ethical approval and informed consent, 12 patients (ASA I-II), scheduled for major abdominal surgery were included. CT was measured rectally (RT) and in the esophagus (ET). Skin temperature (ST) was measured between the skin and the mattress. The warming mattress was started before the induction of general anaesthesia. The aimed CT was  $\geq 36.5^{\circ}$  C. The air mattress was disconnected after emergence of anaesthesia and extubation. The RT was recorded 2 and 4 hours postop. The skin was inspected for burns or decubital sores 2 hours postop and the next day. Data are presented as median and range.

**Results and Discussion:** All patients reached the aimed CT. The initial RT awake was  $36.9^{\circ}$  C (36-37.3). The lowest RT (36.3, 35.5-36.8) and ET (36.0, 35.5-36.4) were found 79 (20-118) and 79 (15-105) min. after the initiation of the warming. The time to achieve the aimed CT was 68 (0-210) min. for RT and 120 (15-165) min. for ET. The highest ST was  $39.6$  (37.8-40.5) $^{\circ}$  C. The postop RT were  $37.5$  (36.0-37.8) $^{\circ}$ C at 2 hours and  $37.9$  (35.9-38.6) $^{\circ}$ C at 4 hours. No signs of burns or decubital sores were found.

### **Conclusion**

Cutaneous warming with this mattress was an effective means of preventing intraoperative hypothermia during prolonged abdominal surgery. No device-related adverse effects were observed. The mattress also gives access to the patient without interrupted warming.

### **References**

1. BJA 1997;79:796. 2. Anesthesiology 2000: 92: 578.

### **Acknowledgements**

This study was supported by KanMed, Bromma, Sweden.