



“Keeping them warm” - A randomised controlled trial of two passive perioperative warming methods



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Background

Inadvertent perioperative hypothermia is a common problem for patients undergoing surgery. Heat redistribution from the body’s core to the periphery after induction of anaesthesia is the major contributor to heat loss.

Cotton and reflective blankets are routinely used in operating theatres for peri-operative warming of patients undergoing short procedures.

The study aimed to determine if thermal insulation with reflective blankets is more effective than cotton blankets in reducing the temperature gradient from the body’s periphery to the core during the pre-operative phase in adult patients undergoing short surgery, thus reducing the intraoperative drop in core temperature.

Methods

A prospective randomized controlled trial was conducted in a regional base hospital operating theatre. 320 adult patients who underwent an elective surgical procedure with general anaesthesia, with surgery time less than 1 hour, were randomly allocated to 1 of 2 groups. One group received reflective blankets and the other cotton blankets. Up to eight temporal artery and two foot temperatures were measured during the perioperative period.

Results

There was a significant increase in foot temperature ($p < 0.001$) and a significant reduction in temporal artery/foot temperature gradient ($p < 0.001$) in the reflective blanket group compared to the cotton blanket group.

Conclusion

Reflective blankets provide an effective alternative over cotton blankets to warm patients’ periphery and hence reduce core to peripheral temperature gradient preoperatively. They may also be a more cost effective passive warming method for adult patients undergoing elective surgery under one hour, given that many patients in the cotton blanket group required several blankets.

For the full report on this project visit our website, follow the link to the Rural Research Capacity Building Program and click on ‘view completed projects’

Michael has a diverse background in nursing throughout Germany, Switzerland and Australia. He completed a graduate certificate and ‘Leading for a Better Patient Outcome’. In 2007 Michael published an article on the prevention of venous thromboembolism in the ACORN Journal. Michael has a strong interest in evidence based practice and clinical education. He currently works as a Clinical Nurse Specialist in the operating theatre of a rural base hospital.



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