



Audit on Perioperative Temperature of Patients and Warming Practices



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Introduction:

Perioperative hypothermia, defined as core body temperature of $<36^{\circ}\text{C}$, is associated with poor outcome. As many as 46% of general surgical patients undergoing abdominal surgery have a temperature below 36°C at the start of surgery and over one third will be hypothermic on arrival to the PACU^{1,2}.

Aims and Objectives:

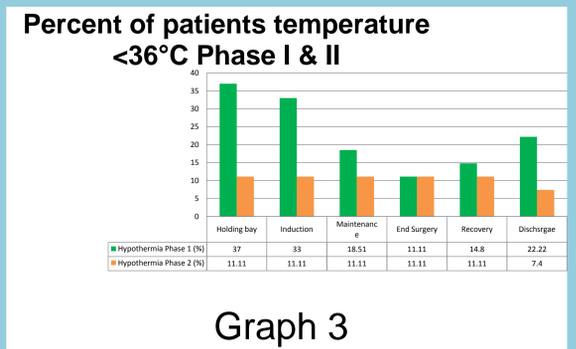
To investigate current warming practices in our institute; to know the temperature of patients during different phases of the perioperative period; to know the adequacy and usefulness of the methods used to reduce incidence of hypothermia and to see whether implementing strict NICE guideline reduce the incidence of hypothermia.

Methodology:

In phase 1, 27 consecutively selected adult surgical patients' core temperature were recorded at arrival in the holding bay, at induction of anaesthesia, continuously during the maintenance phase, at the end of surgery, at arrival in the recovery room and at the time of discharge from the recovery room. We also noted the practice of monitoring temperature and warming during surgery in the theatre. During phase II, recommendations of the NICE guidelines were implemented. Second set of consecutively selected 27 patients' temperature were recorded at the holding bay and active warming by forced-air warming device was initiated if the temperature was below the recommended 36°C .

Results:

During phase I, the mean temperature at all points of observation was $>36^{\circ}\text{C}$ except during maintenance phase. The temperature was $<36^{\circ}\text{C}$, in 37% of patients in the holding bay, in 33% at induction, in 18.55% during maintenance, in 11.11% at the end of surgery, in 14.8% in the recovery and in 22.2% during discharge. In phase II, after implementation of the NICE guidelines, the mean temperature was $>36^{\circ}\text{C}$ at all points of observations. In this phase, the temperature of $<36^{\circ}\text{C}$ was observed only in 11.11% of patients and during discharge there was further improvement when the temperature of $<36^{\circ}\text{C}$ was observed only in 7.4% of patients.



Graph 3

Discussion:

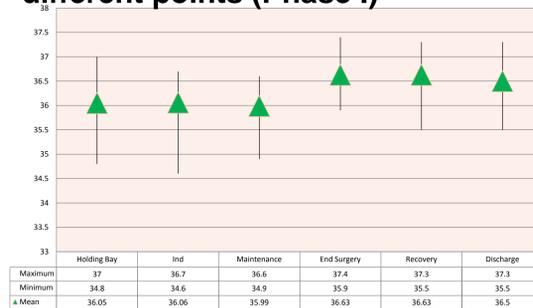
Incidence of hypothermia was 37% in the holding bay during the phase I, which was similar to the available evidences^{1,2} that reduced after implementation of nice guidelines to a considerable level of 11.11% during phase II and this improvement was seen at all points of observations. However, the incidence of hypothermia could not be eliminated.

Conclusion:

For proper implementation of these guidelines an increase in awareness of theatre staff and ward nurses is required and we think that a protocol may be prepared and steps be taken for proper implementation of the said guidelines during the perioperative period. In addition, there is a need to see the efficacy of different types and location of temperature measurement probes and their clinical use. There is also a need to see whether circulating water mattresses can be more efficacious than forced-air warming blanket.

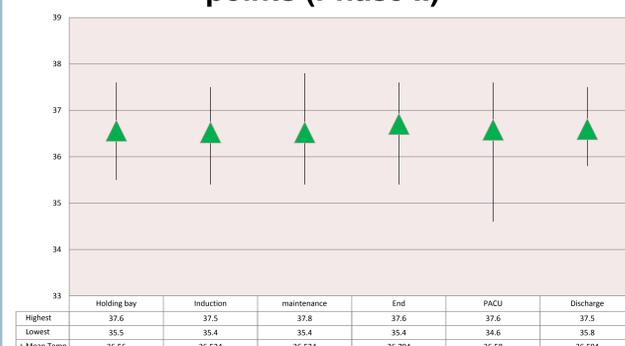
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Core body temperature at different points (Phase I)



Graph 1

Core body temperature at different points (Phase II)



Graph 2