

CLINICAL SUMMARY

Unexpectedly High Incidence of Hypothermia Before Induction of Anesthesia in Elective Surgical Patients

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TYPE OF STUDY

Retrospective analysis

STUDY OBJECTIVE

The data available about the core temperature before induction of anesthesia is not robust. Moreover, there is no data about the potential risk factors for preoperative hypothermia. This paper aimed to evaluate the incidence of hypothermia before administration of anesthesia and to identify factors that can predict its incidence.

METHODS

Seven prospective studies that investigated core temperature were analyzed. Adult patients who underwent different kinds of elective surgeries were included. The surgeries included head and neck, thoracic, abdominal, urologic, gynecologic, orthopedic, and trauma procedures. Core temperatures were measured using different methods, before inducing anesthesia: oral temperature (314 patients), tympanic temperature with infrared (143 patients), or tympanic temperature using contact thermometer (36 patients). Potential predictors considered were: American Society of Anesthesiologists status, sex, age, weight, height, body mass index, adipose ratio, and lean body weight. Logistic regression analysis was performed for each predictor to evaluate its association with the risk of preoperative hypothermia.

STUDY RESULTS

The total sample size from seven studies was 493 patients. Hypothermia was detected in 105 patients (21.3%; 95% confidence interval, 17.8%-25.2%). The median core temperature was 36.3°C (25th-75th percentiles, 36.0°C-36.7°C). The analysis to identify independent factors for predicting the risk preoperative hypothermia were male sex and age ($n \rightarrow 52$ years).

This study with 493 subjects is the largest to evaluate the core temperatures before induction of anesthesia. Since the incidence of hypothermia before anesthesia induction was found to be quite high, the paper suggests that core temperatures should be imperative 60 to 120 minutes before inducing anesthesia to enable corrective action.

CONCLUSION

As a consequence of the high incidence of hypothermia before anesthesia, measuring core temperature should be mandatory 60 to 120 minutes before induction to identify and provide adequate treatment to hypothermic patients.

ARTICLE AVAILABLE AT

J Clin Anesth. 2016 Nov;34:282-9. doi: 10.1016/j.jclinane.2016.03.065. Epub 2016 May 16.

YEAR OF PUBLICATION

2016