

CLINICAL SUMMARY

The Effect of Patient Warming During Caesarean Delivery on Maternal and Neonatal Outcomes: A Meta-Analysis

AUTHORS

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TYPE OF STUDY

Meta-analysis

STUDY OBJECTIVE

Although perioperative warming is recommended for surgeries under general anaesthesia, there is no consensus on its role in caesarean delivery. This meta-analysis attempted to evaluate the outcomes of active warming after elective caesarean delivery.

METHODS

Randomized controlled where forced air warming or warmed fluid was used within 30 min of induction of neuraxial anaesthesia. The primary parameter evaluated was the temperature change. Other maternal and fetal parameters were also evaluated; maternal (end of surgery temperature, shivering, thermal comfort, hypothermia) and neonatal (temperature, umbilical cord pH and Apgar scores) outcomes.

STUDY RESULTS

13 studies including a total of 789 patients (416 warmed and 373 controls) were selected for final analysis. The change in temperature was lower and the end of surgery temperatures were higher ($P < 0.00001$) in the groups which were warmed. The warmed groups were associated with lower incidence of shivering ($P = 0.0004$); improved thermal comfort ($P = 0.001$), and decreased hypothermia ($P = 0.003$). Umbilical artery pH was higher in the warmed group ($P = 0.04$). The meta-analysis concluded that active warming for elective caesarean delivery reduces the fall in maternal perioperative temperature and decreases the incidence of hypothermia and shivering. Forced air warming or warmed fluid should be used for elective caesarean delivery.

CONCLUSION

Active warming for elective caesarean delivery decreases perioperative temperature reduction and the incidence of hypothermia and shivering. These findings suggest that forced air warming or warmed fluid should be used for elective caesarean delivery.

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