Abstract

Surgical drapes used during eye surgery are impermeable to air and hence risk trapping air underneath them. We investigated the effect of a forced-air warming blanket on carbon dioxide accumulation under the drapes in patients undergoing eye surgery under local anaesthesia without sedation. Forty patients of ASA physical status 1 and 2 were randomly assigned to either the forced-air warmer (n = 20) or a control heated overblanket (n = 20). All patients were given 1 L min⁻¹ oxygen. We measured transcutaneous and end-tidal carbon dioxide partial pressures, heart rate, arterial pressure, respiratory rate, temperature and oxygen saturation before and after draping, then every 5 min thereafter for 30 min. The mean (SD) transcutaneous carbon dioxide partial pressure in the forced-air warming group stayed constant after draping at 6.7 (0.2) kPa but rose to a maximum of 8.4 (0.4) kPa in the heated overblanket group (p < 0.0001 for the difference at time points 15 min and later). We conclude that forced-air warming reduces carbon dioxide accumulation under the drapes in patients undergoing eye surgery under local anaesthesia.

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