

MEETING ABSTRACT

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Up to date in inhalation anaesthesia: desflurane

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Background

Inhaled volatile anaesthetics remain the most widely used drugs for maintenance of general anaesthesia because of their ease of administration and predictable intraoperative and recovery characteristics. The result has been an increasing reliance on fluorinated anaesthetics. The most recently introduced anaesthetics, desflurane and sevoflurane, are ethers halogenated solely with fluorine.

There is controversy regarding the relative perioperative benefits of desflurane versus sevoflurane when used for maintenance of anaesthesia in the ambulatory setting. Although studies have consistently demonstrated a faster emergence with desflurane (versus sevoflurane), the impact of this difference on the later recovery end points has not been definitively established.

Materials and methods

We randomized 90 outpatients undergoing superficial surgical procedures (umbilical or inguinal hernia repair) requiring general anaesthesia to one of two maintenance anaesthetic treatment groups. All patients were induced with propofol, 2 mg/kg IV, and after placement of a laryngeal mask airway, anaesthesia was maintained with either sevoflurane 1%–3% or desflurane 3%–4% in an air/oxygen mixture. The inspired concentration of the volatile anaesthetic was varied to maintain hemodynamic stability and a Bispectral Index value of 40–60. Analgesia was provided with local anaesthetic infiltration and ketorolac (30 mg IV). Antiemetic prophylaxis consisted of administration of tropisetron 5 mg at the end of surgery. Assessments included recovery times to eye opening, response to commands, orientation, Aldrete and Aldrete modified score. Patient satisfaction with anaesthesia, the ability to resume normal activities on the first postoperative day, adverse side effects, and the requirement for postoperative analgesic and antiemetic

drugs were recorded in the early postoperative period and during the initial 24-h period after discharge.

Results

The two study groups had comparable demographic characteristics. Emergence from anaesthesia was more rapid after desflurane; however, all patients achieved fast-track recovery criteria before leaving the operating room. Finally, the time to discharge home and the percentage of patients able to resume normal activities on the first postoperative day did not differ significantly between the two anaesthetic groups.

Conclusions

Use of desflurane for maintenance of anaesthesia was associated with a faster emergence. Despite the faster initial recovery with desflurane, no significant differences were found between the two volatile anaesthetics in the later recovery period. Both volatile anaesthetics should be useful for ambulatory anaesthesia.

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Reference

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