Sevoflurane: Approaching the Ideal Inhalational Anesthetic  
A Pharmacologic, Pharmacoeconomic, and Clinical Review

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ABSTRACT

Sevoflurane is a safe and versatile inhalational anesthetic compared with currently available agents. Sevoflurane is useful in adults and children for both induction and maintenance of anesthesia in inpatient and outpatient surgery. Of all currently used anesthetics, the physical, pharmacodynamic, and pharmacokinetic properties of sevoflurane come closest to that of the ideal anesthetic (200). These characteristics include inherent stability, low flammability, non-pungent odor, lack of irritation to airway passages, low blood:gas solubility allowing rapid induction of and emergence from anesthesia, minimal cardiovascular and respiratory side effects, minimal end-organ effects, minimal effect on cerebral blood flow, low reactivity with other drugs, and a vapor pressure and boiling point that enables delivery using standard vaporization techniques. As a result, sevoflurane has become one of the most widely used agents in its class.