

■ CORRESPONDENCE

Anesthesiology
80:1401, 1994
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Propofol for Children Undergoing Magnetic Resonance Imaging

To the Editor:—Recently Frankville *et al.*¹ described the dose of propofol required to prevent children from moving during magnetic resonance imaging (MRI). Although they provide new information, we believe that the authors should have been more cautious with their conclusions and recommendations.

First, even if one admits that "intravenous propofol offers several potential advantages for anesthetizing children undergoing MRI," propofol is not recommended for use in children less than 3 yr of age for intravenous anesthesia and not at all in children for intravenous sedation.

Second, it should be stressed that the authors were not able to monitor *end-tidal* carbon dioxide concentration. Thus, although they administered oxygen *via* face mask, it was not possible to exclude hypoventilation (and increased intracranial pressure) by measuring normal hemoglobin oxygen saturation by pulse oximetry.

Third, we disagree with the judgment that this technique "would be especially beneficial at institutions where the number of anesthetics administered in the MRI suite does not justify the purchase of a dedicated MRI-compatible anesthesia machine." On the contrary, this technique may be most valuable for very experienced anesthesiologists accustomed to anesthetizing small children undergoing diagnostic procedures in daily practice.

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In Reply:—Panning *et al.* are correct in stating that propofol is currently *not recommended* for use as an anesthetic for children. However, this does not detract from the fact that the pharmacokinetic properties of propofol allow for precise control of the depth of anesthesia, an extremely important attribute in the magnetic resonance imaging (MRI) environment.

Our discussion clearly states that we "cannot quantitate the respiratory changes caused by propofol." However, we reviewed data from studies that suggested that respiratory depression is minimal after the effects of the initial propofol bolus have dissipated. As indicated in Methods, children with suspected increased intracranial pressure were specifically excluded.

With regard to the issue of what equipment is necessary: as stated in our Discussion, the anesthesiologist must *always* be ready to provide positive pressure ventilation or intubate the trachea if ventilation is judged inadequate, but an anesthesia machine should not be required to perform these tasks. In addition, anesthesiologists who are

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Reference

1. Frankville DD, Spear RM, Dyck JB: The dose of propofol required to prevent children from moving during magnetic resonance imaging. *ANESTHESIOLOGY* 79:953-958, 1993

(Accepted for publication February 28, 1994.)

not facile in anesthetizing children, whether in the operating room or in the MRI suite, should not be performing these cases under any circumstances. Finally, we believe that anesthesiologists should question the practice of applying operating room techniques, *en bloc*, to situations outside the operating room and proclaiming that this practice provides optimum "safety." Optimum familiarity and anesthesiologist comfort, yes; optimum safety, possibly not.

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(Accepted for publication February 28, 1994.)