

## ◆ EDITORIAL VIEWS

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### *Anxiolysis—By the Parent or for the Parent?*

ALTHOUGH the presence of parents at the induction of anesthesia (PPIA) has been commonplace in some centers for a number of years, it continues to polarize health-care workers and laypersons alike, evoking strong emotional responses from supporters and detractors. To suggest that institutions that do not allow parents to accompany children during induction of anesthesia are abrogating their responsibility to the child and fostering substandard care is unfounded. To suggest that institutions that encourage parents to accompany their child during induction of anesthesia provide better care is equally unfounded. In all likelihood, the truth lies somewhere in between. In this issue of ANESTHESIOLOGY, Kain *et al.*<sup>1</sup> report the results of a randomized controlled study in which they compared the anxiolysis conferred by the combination of PPIA and oral midazolam premedication with midazolam alone. They conclude that PPIA confers no additional anxiolysis than does midazolam alone. Because of the controversial nature of PPIA, it is important to review the scientific evidence in its favor and the reasons it has not become the universal standard.

Epidemiologically, the incidence of and attitude toward PPIA vary widely.<sup>2-4</sup> In a survey of anesthesiologists in Great Britain and the United States, Kain *et al.*<sup>2</sup> noted that, although the majority believed that PPIA decreased anxiety and improved cooperation in children, parents were present at induction in 75% of anesthetics in Great Britain but in less than 5% in the United States. Obviously, in all instances opinion was not predicated on personal experience. Rather, the discrepancy in PPIA between the two countries may be attributable to cultural, anesthetic, medicolegal, economic, and re-

source-based (infrastructure) differences. Economic issues, such as operating room efficiency, and infrastructure issues, such as the lack of induction rooms, lack of personnel, and a patchy preoperative educational programs, probably limit the availability of PPIA.<sup>3</sup>

When asked their opinion, the majority of parents prefer to accompany their children during resuscitations, minor medical procedures, and induction of anesthesia, even when they feel more anxious.<sup>5-9</sup> Why do parents wish to be present during procedures? In the case of resuscitations, parents are more accepting of the finality of their child's death.<sup>5</sup> In the case of medical procedures and anesthesia, some parents believe they are expected to accompany their child and assist during the induction, although the latter may be more a perception than a reality. Legitimately, parents also wish to be present to comfort their child. In general, parents who are present at induction of anesthesia report they are less anxious than those who are not present, although these results have been disputed in controlled studies.<sup>6,9,10</sup> Interestingly, most parents, including those who are very anxious, would repeat the experience if it were offered again. The quintessential reason for PPIA is that parents find it very difficult to relinquish the care and protection of their child into the hands of strangers. Parental control and protection of the child relate more to the anxiety of the parent than to that of the child.

Although one might take umbrage with the notion that anesthesiologists are obliged to alleviate parental anxiety by allowing PPIA in all cases, no one would disagree that alleviating the anxiety of the child should take precedence over alleviating the anxiety of the parent. It remains the responsibility of the anesthesiologist to judge which of the available therapeutic options best satisfies the needs of the child. In the case of PPIA, I believe those parents should be required to attend an educational program on PPIA before the day of surgery or forfeit this option. If, in the opinion of the anesthesiologist, the options chosen benefit both the child and the parent, the entire family benefits; however, if the option benefits only the child, the parent should seek solace in the knowledge that under the circumstances, the anesthesiologist will provide the best care available.

By carefully selecting a combination of therapeutic options that best suits the child, we can ensure delivery of quality anesthetic care. The options available to anes-

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thesiologists include preoperative education, premedication, surrogate caregivers, and PPIA. Preoperative educational programs afford opportunities for children and their parents to familiarize themselves with anesthetic equipment, induction rooms, and possibly an anesthetic induction using a videotape. Karl *et al.*<sup>11</sup> demonstrated that the anxiety of parents who were anesthesia naive was attenuated after they viewed a videotape of actual induction.

In North America, oral midazolam is the most widely used premedication because of its rapid onset, reliability, anxiolysis, brief duration of action, and minimal adverse effects.<sup>12</sup> Kain *et al.*<sup>13</sup> demonstrated that oral midazolam was a more effective anxiolytic in children than PPIA alone. The combination of PPIA and a premedication was a more effective anxiolytic than PPIA alone.<sup>14,15</sup> Conversely, in this issue of ANESTHESIOLOGY, Kain *et al.*<sup>1</sup> demonstrated that PPIA did not augment the anxiolysis conferred by midazolam alone. In fact, in one study, 32% of the parents who participated in PPIA would have declined to be present had they known their child would be sedated and tranquil at induction.<sup>16</sup> On the basis of this evidence, midazolam is a superior anxiolytic to PPIA in children and should be the first-line strategy whenever anxiolysis is necessary.

The effectiveness of nonpharmacologic strategies for anxiolysis when children are separated from their parents has been seriously undervalued, most probably because of a dearth of scientific evidence. Our highly skilled operating room nurses and anesthesiologists are masters at distracting children, particularly unpremedicated children, when are separated from their parents. Their skills, together with the security and comfort of cuddling and sitting with the child on the lap, are reassuring to most children and help to dissipate any lingering fears. Unpublished data indicated that blinded psychologists could not distinguish between children who were accompanied by a parent during induction of anesthesia and those who were accompanied by a surrogate caregiver using behavior and cooperation scores (personal communication, T. Yemen, December 1999). In fact, children with surrogates scored significantly better than did children with parents. It has been my experience that many parents are surprised to learn that their child was calm and tranquil after separation. When used effectively, nonpharmacologic strategies can facilitate a smooth induction, although the evidence remains empirical.

Advocates of PPIA have been very effective in creating the perception that PPIA is a parental right rather than a

therapeutic option. In fact, PPIA is nothing more than a therapeutic option and, as such, must be evaluated with the same rigor as other interventions. The preponderance of studies published to date indicate that anxiety levels in children whose parents are absent are similar to or possibly less than those whose parents are present,<sup>7,10,17</sup> although some studies have shown a benefit from parental presence.<sup>8,9</sup> Kain *et al.*<sup>10</sup> identified a small subset of children whose anxiety (as evidenced by reduced serum cortisol levels) was attenuated by PPIA: those greater than 4 yr of age, those whose parents were calm, and those with low anxiety levels themselves. These are probably not the children whose parents would fuss about accompanying them to induction. Indeed, others have shown that the more anxious the parents, the more insistent they were to be present at induction, the less likely they were to contribute during the induction and the more likely they were to transfer their anxiety to their child.<sup>9,18</sup> Current evidence indicates that rather than being a panacea, PPIA confers anxiolysis to only a small subset of children.

When evaluating any therapeutic intervention, it is prudent to balance its benefits with its risks and harms. The stress associated with PPIA may pose a substantive risk of serious cardiac dysrhythmias or myocardial ischemia in some parents. When the potential for serious cardiac events is combined with the potential for other injuries, the liability from PPIA may be greater than previously appreciated. Case law from Illinois suggests that if one wishes to preclude litigation should the parent experience a mishap, the parents should not be invited to be present during a procedure.<sup>19</sup> Because some parents become distraught at the site of their limp and seemingly lifeless child at induction,<sup>20</sup> it is important to provide staff to support and escort the parent to suitable surroundings where they can recover. Furthermore, all involved staff also should be familiar with a contingency plan to protect the child (in the event the parent interferes with the anesthetic).<sup>21</sup> Finally, the potential adverse effects of PPIA on the health status of anesthesiologists remain unknown.

In summary, PPIA is not an inalienable right but a therapeutic option to be used at the discretion of the anesthesiologist, not the parent, to facilitate induction of anesthesia. Flexibility in the choice of therapeutic options ensures that each child receives quality anesthetic care. Furthermore, evidence-based research by Kain *et al.*<sup>13</sup> has clearly established the superiority of premedication over PPIA for anxiolysis in children. If anxiolysis is the objective, premedication is the treatment. Finally,

each department should draft guidelines for the appropriate use of PPIA. The time has come to expunge the emotion and rhetoric from this contentious issue and replace it with an evidence-based scientific approach, such as that promulgated by Kain *et al.*<sup>1,10</sup>

**Jerrold Lerman, B.A.Sc., M.D., F.R.C.P.C., F.A.N.Z.C.A.**  
 Professor of Anaesthesia  
 University of Toronto  
 Staff Anaesthetist  
 Hospital for Sick Children  
 Toronto, Ontario M5G 1X8, Canada  
 lerman@anaes.sickkids.on.ca

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