

## Preoperative Preparation 2010.

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Preoperative preparation of every child should include an assessment which is adequate to ensure safe delivery of anesthesia care, plus, as is appropriate, psychological and pharmacologic therapy to minimize emotional upset and facilitate induction of anesthesia. Some children may require additional measures as a result of pre-existing circumstances.

Preoperative assessment in 2010 is frequently performed immediately prior to surgery; a course which is widely accepted in healthy children. It has also become a common practice for the assessment to be performed by a person other than the anesthesia care person who will administer the anesthetic. Indeed this may be largely delegated to a nurse practitioner in many units. Screening by a N/P has been demonstrated to be an efficient and safe mechanism. Provided there is a good mechanism to convey important information to the anesthetizing practitioner there is no evidence that this will compromise the safety of anesthesia (Though in my experience as an expert witness, lawyers will tend to question this!). In addition to compiling information about the child's health it is important to note any concurrent medication – in recent years an increasing number of children may be found to be taking parent-prescribed herbal medicines!

Many who care for children do prefer to meet the child and establish a relationship before the “moment of truth” and feel that this smoothes the process for both parties. (Though, in fact, one study notes that anesthesiologists tend to spend much more time talking to the parents than to the children!). Meeting with the child permits an assessment of the likely level of anxiety during induction - It has been suggested that pediatric anesthesiologists may be better at this than are the mothers. It is apparent that many children of school age prefer to have detailed information regarding their care, and especially about the amount of pain that they should expect. Detailed education about tonsillectomy pain did not decrease anxiety, pain intensity, sleep or oral intake in a recent study, however all the children felt that learning about pain helped, or would have helped them. The relative value of a hospital visit for a preoperative educational program versus information pamphlets and videotapes has been questioned.

Premedication drugs may be prescribed to calm the child, facilitate induction, and minimize psychological sequelae; how well they meet these expectations has been the subject of many studies; there is still debate about the conclusions. What perhaps is emerging is that premedication should be carefully and selectively applied. The two principal drugs in the armamentarium are midazolam and clonidine – both have advantages and disadvantages. By mouth midazolam is effective more rapidly, produces anterograde amnesia, may reduce postoperative psychological sequelae, and does not result in excessive prolonged sedation. Clonidine is effective as a sedative but has a longer onset time, may improve intra-operative hemodynamic stability and enhances postoperative analgesia. Certainly when carefully applied in selected cases preoperative sedation can be invaluable.

Parental presence at induction (PPAI) has enjoyed a popular vogue and also has been much debated. The bottom line seems to now have emerged; PPAI does little if anything to reduce child or parent anxiety (As compared to midazolam), may compromise behavior at induction in some children, but may make some parents happier!

Mangia G, Presutti P, Antonucci A et al, Diagnostic accuracy of anesthesiology evaluation timing: the one-stop anesthesia in pediatric day surgery. *Pediatric Anesthesia* 19; 764-769, 2009.

Varughese AM, Byczkowski TL, Wittkugel EP et al. Impact of a nurse practitioner assisted preoperative assessment program on quality. *Pediatric Anesthesia* 16; 723-33, 2006.

Crowe S, Lyons B. Herbal medicine use by children presenting for ambulatory anesthesia and surgery. *Pediatric Anesthesia* 14;916-19, 2004.

Kain ZN, Maclaren JE, Hammell C et al, Healthcare provider-child-parent communication in the preoperative surgical setting. *Pediatric Anesthesia* 19; 376-84, 2009.

Maclaren J, Thompson C, Weinberg M. Prediction of preoperative anxiety in children: who is most accurate? *Anesth Analg* 108; 1777-82, 2009

Fortier MA, Chorney JM, Rony RYZ et al. Children's desire for perioperative information. *Anesth Analg* 109;1085-90,2009.

Crandall M, Lammers C, Senders C, et al. Children's pre-operative tonsillectomy pain education: clinical outcomes. *Int J Ped Otorhinolaryng*. 72;1523-1533.

Rice M, Glasper A, Keeton D. The effect of a preoperative education program on perioperative anxiety in children: an observational study. *Pediatric Anesthesia* 18: 426-30, 2008.

Rosenbaum A, Kain ZN, Larsson P, Lonnqvist PA, Wolf AR. Pro-Con Debate: The place of premedication in pediatric practice. *Pediatric Anesthesia* 19; 817-28, 2009.

Chundamala J, Wright JG, Kemp SM. An evidence based review of parental presence during anesthesia induction and parent/child anxiety. *Can J Anesth* 56; 57-70, 2009.