

## EDITORIAL

# THE PSYCHOLOGICAL DISTURBANCES OF THE CHILD UNDERGOING SURGERY-FROM ADMISSION TILL BEYOND DISCHARGE

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The first part of this particular issue is dedicated to the psychological disturbances of the child undergoing surgery-From admission till beyond discharge. It includes five articles addressing the following topics: "Preoperative anxiety", "Premedication", "Emergence agitation", "Postoperative maladaptive behavioral changes" and "The child with behavioral disorders".

Providing anesthesia in busy hospitals is sometimes synonymous with achieving rapid turnover times and coping with the pressure of long operating room schedules. This may be at the expense of depriving the most vulnerable age groups, namely children from an individualized approach which may result in compromised psychological well-being. This may be especially true in hospitals that are not solely dedicated to children. The mental status of children undergoing surgery is a major concern for anesthesiologists and other health care providers. Preservation of the children's psychic safety and taking into account their emotional needs are an integral part of the role of the pediatric anesthesiologist, as well as their physical security.

Preoperative anxiety is a relatively common phenomenon in children. In fact, approximately 40-60% of children experience anxiety regarding an impending surgical experience<sup>1</sup>. Elevated levels of preoperative anxiety have been associated with difficulty in anesthetic induction, emergence agitation and the development of negative postoperative behavioral changes<sup>2,3</sup>. The first review by Ahmed et al<sup>4</sup> elaborates on the risk factors for preoperative anxiety, tools for quantifying children and parent's anxiety, and non-pharmacological strategies which may play a part in decreasing preoperative anxiety. This review will also tackle the controversies surrounding parental presence during a child's anesthesia induction and will provide the reader with a sound summary of the evidence that is accumulating in the literature regarding this issue.

Non-pharmacological strategies including parental presence are not in contradiction with the use of premedication in children. To achieve adequate anxiolysis, both modalities are often combined<sup>5</sup> especially if children are very anxious and parents are calm. Among all premedicant drugs, oral midazolam is by far the most popular. Abdallah et al review the pharmacological properties of the different drugs that constitute the premedication armamentarium used in pediatric practice. The specific indications and side effects of the different drugs and routes of administration are emphasized<sup>6</sup>.

Anxiety is not limited to the preoperative period, but is rather a continuum that extends through the whole perioperative period. The hostile hospital environment, anesthesia, surgery, pain and many other stressors constitute a major cause for mental distress that may lead to short or even long-term psychological

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consequences. One of the earliest manifestations of mental distress in the postoperative period is the phenomenon called emergence agitation or delirium. Despite being extensively studied in the literature this phenomenon is still subject to controversies regarding its definition, tools used for its measurement, predisposing factors and preventive measures. The anesthesia literature related to this topic is thoroughly analyzed by Nasr et al in the third review of this special issue<sup>7</sup>.

Following hospitalization, children may experience long term psychological disturbances such as sleep or eating disorders, separation anxiety, temper tantrums or new onset enuresis. These negative behavioral changes have been associated with traumatic anesthesia inductions by Eckenhoff more than 50 years ago<sup>8</sup>. The relationship of such behaviors with the different stressors encountered during the hospital stay has been studied and some of the risk factors linked to its occurrence have been identified. The best tool to avoid the occurrence of these negative behaviors remain preventive and include a comprehensive approach that aims at minimizing psychological distress and encompasses all the time intervals of the hospital stay from admission till discharge. Risk factors and controversies related to long term behavioral changes, as well as strategies to reduce their occurrence are the subject of the fourth review by Yuki et al<sup>9</sup>.

Children may exhibit behavioral disorders, which are the manifestation of normal development, or secondary to extraordinary life stresses. These can also be the consequence of disorders inherent to the child, such as attention deficit disorders, autism or any disorder that causes intellectual or learning disabilities. Awareness and understanding the special needs of this varied group of children is mandatory to tailor an individualized and humane approach throughout the hospital stay. In our last review by Yazbeck-Karam et al a comprehensive approach to the “difficult child” is presented<sup>10</sup>.

The ultimate goal of in this issue special articles of the *Middle East Journal of Anesthesiology* is to increase the these awareness of the Anesthesiologist about the visible and less visible psychological disturbances that accompany a child’s journey in the hospital. Our role is instrumental in tailoring a comprehensive approach to the child undergoing surgery that extends from the preoperative visit that precedes admission till discharge from the hospital. Tools and strategies to minimize children’s distress are abundant and range from extremely sophisticated and expensive setups to very simple and non-expensive tools that are of proven benefit. It is the duty of each Anesthesiology department to adopt a strategy with well-defined guidelines that best suits their resources, as well as to provide education to health care providers which is instrumental for the creation of a child friendly atmosphere in the hospital.

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