

Role of Midazolam in Reducing Anxiety after Premedication in Clinical Practice at 250 Bed (Medical College) Hospital, Patuakhali, Bangladesh

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ABSTRACT

Background: In premedication, sedative premedication is generally directed before surgery. Premedication is the organization of medication before anaesthesia. It is utilized to set up the patient for anaesthesia and to help give ideal conditions to surgery. From numerous drugs midazolam has been utilized broadly worldwide for pharmacological premedication.

Objective: The main goal of this study is to scrutinise the effect of midazolam after premedication to reduce anxiety among patients.

Methods: The inclusion criteria of the study are the patients under 8 years of age scheduled for elective surgery or diagnostic procedures requiring anaesthesia, and patients who prescribed anxiolytic premedication with midazolam by the anaesthesiologist. At a local hospital named 250 Bed (Medical College) Hospital located in Patuakhali, Bangladesh, a prospective descriptive observational study was conducted with 100 paediatric patients scheduled for surgical or diagnostic procedures needful of anaesthesia techniques. The

study duration was almost two years from the October 2016 to October 2018.

Results: After numerous information and examination investigation it was discovered that midazolam is exceptionally viable drug for premedication with no symptom.

Keywords: Premedication, Midazolam, Anaesthesia.

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INTRODUCTION

Premedication is utilizing medication before some other therapy, generally surgery or chemotherapy to get ready for that pending therapy.¹ Sedative premedication is a progressive practice in pediatric anaesthesia administrations. It has been seemed to decrease tension in the children and their people at the time they are taken to the operating room, the agony easing necessities, and the time required for took in acknowledgment and orotracheal intubation.

The usage of pharmacological premedication has seemed, by all accounts, to be increasingly down to earth for controlling uneasiness when differentiated and the use of non-pharmacological methods, for instance, the closeness of the watchmen in the midst of acknowledgment, or behavioral preparation programs before surgery. Midazolam has been used broadly for pharmacological premedication, with adequate outcomes. Run of the mill models incorporate planning with a

sedative or analgesic before surgery; utilizing prophylactic antibiotics before surgery; and utilizing antiemetic or antihistamines before chemotherapy. Presently, premedication with sedative drugs is frequently utilized in pediatric practice as one of the modalities to decrease preoperative anxiety in kids experiencing surgery.

At the Red Cross Kids' College Clinic in manizales, an irritated arranging has been used since 2000, containing a mix of midazolam ampoules 15mg/3ml or more acetaminophen suspension 150mg/5ml. At the foundation, the mix is known as "midazophen", and after it is readied it includes midazolam 1mg/ml and acetaminophen 24mg/ml. the estimation used is a huge part of the body weight in cubic centimeters, which is proportionate to 0.5mg/kg of oral midazolam and 12mg/kg of acetaminophen. the measurements is offered orally to patients reserved for elective surgery.²

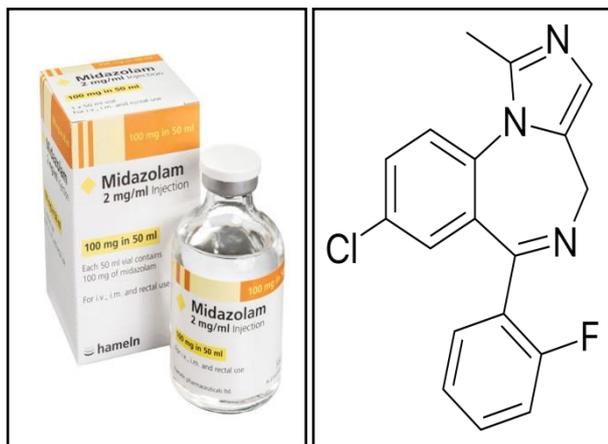


Figure 1a & 1b: Midazolam and its structure

OBJECTIVES

Main Objective

The main goal of this study is to scrutinise the effect of midazolam after premedication to reduce anxiety among patients.

Specific Objectives

The specific objectives of the study are:

- Communicative examination is to survey the acceptability of premedication
- Gauging the level of discomfort in the adolescents.
- Identifying the level of sedation required at the time of breathed-in enlistment.

METHOD

Inclusion Criteria

The inclusion criteria of the study are the patients under 8 years of age scheduled for elective surgery or diagnostic procedures requiring anaesthesia, and patients who prescribed anxiolytic premedication with midazolam by the anaesthesiologist.

Exclusion Criteria

The presence of a known illness, malignancy or a mental disease was considered as an exclusion criterion.

Study Area

At a local hospital named 250 Bed (Medical College) Hospital located in Patuakhali, Bangladesh, a prospective descriptive observational study was conducted with 100 paediatric patients scheduled for surgical or diagnostic procedures needful of anaesthesia techniques. The study duration was almost two years from the October 2016 to October 2018.

Study Procedure

Throughout the preoperative examination, the anaesthesiologist assembled demographic information of patients besides the usual information collection for the anaesthesia record.

The patients were examined by the acting anaesthetist, and given the modified Yale scale. Patients were taken with a stretcher to the operating room, and after setting up basic monitoring systems, inhaled induction process was instigated using sevoflurane. After 1 minute time, the Richmond-RASS sedation-agitation scale was used on the patients.

An account of the population, social and demographic data was assessed for the statistical analysis using various descriptive statistical tools. The social, medical, demographic, and anaesthetic variables seem in the form were correlated with the outcome variables of sedation efficacy using the Chi-Square test.

Table 1: Comparison: Emotional Expressivity to Interaction with relatives

Emotional expressivity	Interaction with relatives
Happy	Has fun, sits still
Quiet, withdrawn	Does not explore, sits close to relatives
Cries and does not want others near	Pushes with hands and feet and tries to get away
Neutral with no visible expression	Seeks contact with relatives
Sad, worried	Looks at relatives quietly, does not seek contact
Apparent state of arousal	Activity
Stimulated, looks around confidently	Curious, plays in the room

Table 2: Details about Emotional expressivity

Separation from parents: Crying
Indifferent
Quiet.
Richmond-RASS scale: Aggressive
Violent
Frequent movements Moderate sedation. Opens eyes does not fix gaze
Deep sedation does not respond to voice but does respond to physical stimulus
Very deep sedation does not respond to physical stimulus

RESULTS

The sample that was collected included 100 patients with age ranging from 6 months to 8 years old. Here, 30% (30) were females and 70% (70) were males. The use of the Yale scale presents the appropriate sedation and anxiolytics among 61% of the patients. It was in fact noted that at the time of assessment of the patents, the time elapsed from the moment the drug was given until the scale was used within an ideal range (15-90min) only in 25% (25) of the children. Additionally, of the 65 patients whom the administration of interval was suitable, 60% were found to have anxiety, and 40% did not suffer from thus. (Figure 2)

After the sedation-anxiolytics scale application (at the time, the children were separated from their parents) it was found that 60% (60) of the children were indifferent and quiet. At that stage, there was no appraisal of the time elapsed from the moment the midazolam-acetaminophen blend was given. When the Richmond-RASS scale applied, at the time of induction, it showed that 65% (65) of the patients had adequate sedation (score between -1 and 0), which resulted in easy and quiet acceptance of the facemask. (Table 2 and Figure-3)

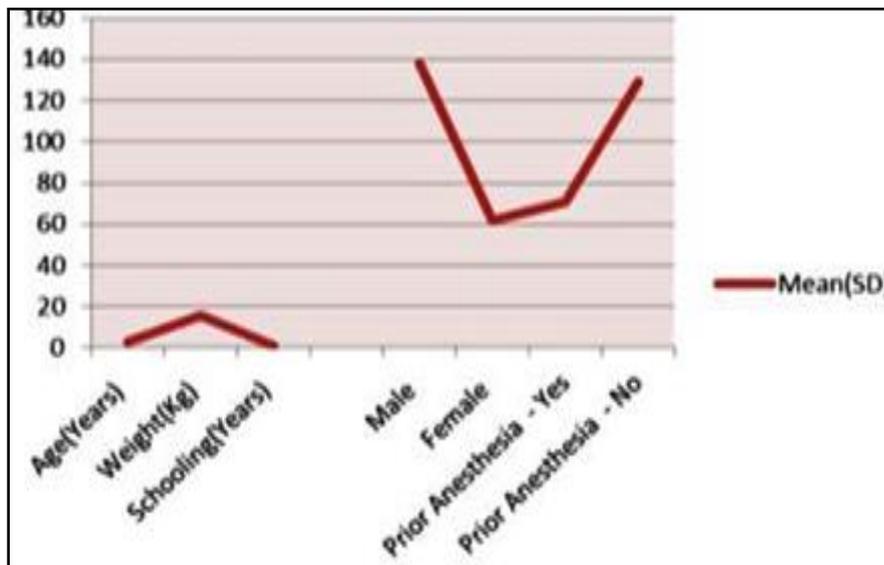


Figure 2: Demographic Characteristics of the Samples

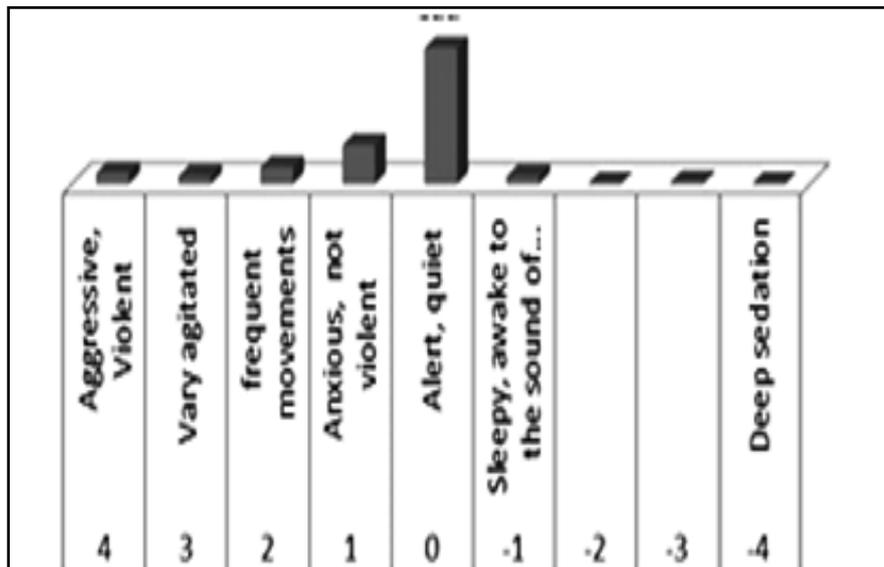


Figure 3: Behavioural Pattern of the Samples

DISCUSSION

Diminishing perioperative anxiety must be a standout amongst the most significant targets in pediatric anaesthesia, since anxiety has been related with postoperative adverse occasions, for example, expanded agony and negative social changes, including psychomotor agitation at emergence, crying, confusion, post-operative delirium, rest issue and avoidance behaviors in medical and hospital situations. The modified yale scale was connected before partition from the guardians, in the waiting room, so as to survey the nearness or nonappearance of anxiety by then, and anxiety was found in 61% of patients. This may be clarified on the grounds that the time elapsed between the organization of oral midazolam and that point in time was not adequate as a rule. For acquiring satisfactory sedation, a standout amongst the best pharmacological methodology is midazolam which is one of the drugs of choice on account of the simplicity of administration, safety, great bioavailability when given orally, and in light of the fact that it doesn't defer emergence from anaesthesia or an opportunity to discharge from the recovery unit.³⁻⁵ Another minute that may be awful and unpleasant for the kid and may make

psychological sequelae is anaesthetic induction with the utilization of a facemask. In this examination, it was found that, 70% of the patients indicated great acknowledgment of the anaesthetic induction, with great tolerance of the facemask; these outcomes are like those revealed by different creators. Intravenous midazolam joined with different drugs, for example, fentanyl and protocol has been utilized for profound sedation in patients taken to magnetic resonance imaging. Oral midazolam together with acetaminophen may be a decent and safe choice in less mind boggling, non-excruciating demonstrative.⁶⁻⁸

CONCLUSION

From the aforementioned result and discussion of the study, it is clear that premedication with branded version of midazolam plus acetaminophen used at the 250 Bed (Medical College) Hospital was much useful. Furthermore, it is shown to reduce anxiety at the time children are separated from their parents, and it indicates a good acceptance level of the inhaled anaesthesia induction which improves the whole experience before surgery, both for the children as well as their guardians.

REFERENCES

1. Naguib, M.; Gottumukkala, V.; Goldstein, PA. (Jan 2007). Melatonin and anaesthesia: a clinical perspective. *J Pineal Res.* 42 (1): 12–21.
2. Bailey Jr PD, Bastien JL. Preinduction techniques for pediatric anaesthesia. *Curr Opin Anaesthesiol.* 2005;18:265-9.
3. Isik B, Baygin O, Kapci EG, Bodur H. The effects of temperament and behaviour problems on sedation failure in anxious children after midazolam premedication. *Eur J Anaesthesiol.* 2010;27:336-40.
4. Horgesheimer JJ, Pribble CG, Lugo RA. The effect of midazolam premedication on discharge time in pediatric patients undergoing general anaesthesia for dental restorations. *Pediatr Dent.* 2001;23:491-4.
5. Fortier MA, Del Rosario AM, Martin SR, Kain ZN. Perioperative anxiety in children. *Paediatr Anaesth.* 2010;20:318-22.
6. Bozkurt P. Premedication of the pediatric patient -anaesthesia for the uncooperative child. *Curr Opin Anaesthesiol.* 2007; 20: 211-5.
7. Vagnoli L, Caprilli S, Messeri A. Parental presence, clowns or sedative premedication to treat preoperative anxiety in children: what could be the most promising option? *Paediatr Anaesth.* 2010;20:937-43.
8. Kazak Z, Sezer GB, Yilmaz AA, Ates Y. Premedication with oral midazolam with or without parental presence. *Eur J Anaesthesiol.* 2010;27:347-52.

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