

Post Operative Instructions in Children Treated Under General Anesthesia

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ABSTRACT:

Introduction: General anesthesia is a combination of intravenous drugs and inhaled gaseous medications that put you in a sleep-like state before a surgery or other medical procedure. The paediatric population is a very dynamic group of patients, since the physiologic processes that determine drug disposition undergo rapid changes as children grow and mature. Thus proper post operative instruction has to be given for those patients to prevent the post operative pain and other complications

Materials and methods: A cross sectional study was conducted among 125 pedo patients who were treated under GA in Saveetha dental college. The data was collected from Dias and is statistically analysed using spss software.

Results and discussion: From the results, we observe that the female population was slightly increased with a percentage of 52.85% when compared to the male population with 47.15% of children treated under GA . post operative instructions that were provided to the pediatric patients who were given dental treatment under general anaesthesia were soft diet for 3 days for 13.82% of the population , 18.70% of the patients was recommended head end to be elevated at 45 degree for few hrs post treatment, 2.439% were advised to maintain the suture line clean, 45.53% of the patients were insisted NPO 2 hrs post surgery, and 19.51% of the patients were advised to intake water after 2hrs post surgery.

Conclusion: NPO instructions and dietary instructions are given for the parents whose children are treated under General anesthesia.

Key words: General anesthesia, pediatric population, post operative instruction, NPO.

INTRODUCTION:

In the state of developing countries dental caries was found to be the most common health problem in children. (1) Thus providing dental treatment for children is essential for resisting the progression of caries to the developing tooth. The dental treatment can be achieved to the fullest when the child's behaviour is properly managed. (2). Most of the children are treated sufficiently utilizing behavior management techniques that include tell show do technique, voice control, modelling, positive reinforcement, distraction desensitization, providing rewards, enhancing control, hand over mouth exercise, etc. Few kids neglect to adapt to in-office cognizant state and can't be treated with these regular behaviour management modalities. (3) These pediatric patients include handicap, or those enduring physical, mental, psychological unstable patients, or with extreme anxiety and nervousness who needs to be safely treated using general anaesthesia (4,5).

General anesthesia is a combination of intravenous drugs and inhaled gaseous medications that put the patients in a sleep-like state before a surgery or other medical procedure. As indicated by the American Academy of Pediatric Dentistry (AAPD), a specific patient populace who may not endure routine dental treatment must be treated under General anaesthesia (6). The public's view on General Anesthesia has also advanced and the utilization of GA has become widely accepted (7).

The benefits of treating a child under General anesthesia include wellbeing, comfortability, accommodation, easy procedure, qualitative treatment and the dental treatment can be finished during one single visit minimising the trouble for the patient, parent and the dentist. (8) But as a coin of two sides the general anesthesia also has negative effects which includes temporary confusion and memory loss, dizziness, bruising or soreness from the IV drip, nausea and vomiting, shivering and feeling cold, sore throat due to the breathing tube, commonly the post operative pain. (9). Almaz in his study suggested that children treated for dental procedures under General anesthesia mostly had mild postoperative pain and were limited to the first day after the procedure (10). Post-operative complications are also influenced by certain factors such as patient age, intubation difficulty, staff experience, pre-medication used, total anesthetic time, patient medical status, and anesthetic medications which may lead to dental morbidity, pain and bleeding was highlighted by North in his article (11). In most of the cases postoperative dental bleeding was found to be more prevalent than other complications especially after extractions was given by nahid in his article (12). Thus proper post operative instructions has to be given for those patients to prevent the post operative pain and other complications. (13)

The aim of the study was to assess and evaluate the post operative instructions given for children treated under general Anesthesia.

MATERIALS AND METHODS:

A cross sectional study was conducted in a pediatric population of Saveetha dental college. Ethical approval was obtained from the Institutional review board before starting the study. The data was obtained from DIAS (Dental information Archiving software) After assessment in the university patient data registry, case records of 125 pediatric patients who were treated under general anaesthesia were included in the study and evaluated.

The inclusion criteria for the study consists of the children with an age group of 0-12 years who reported to the Department of pediatric Dentistry to be treated under General anesthesia. Only the children who were uncooperative and treated under GA were included in the study. The pediatric patients who reported for dental treatment without treating under GA were excluded from the study. Children above 12 years of age treated under GA were also excluded from the study.

Demographic details like age, gender, medical history, previous dental history and post operative instructions provided were recorded. Cross verification of data for errors was done with the help of an external examiner. The collected data

was compiled using excel and data analysis was carried out using SPSS software version 21 . Chi square test was used for test associations between categorical variables. p value < than 0.05 was considered as significant.

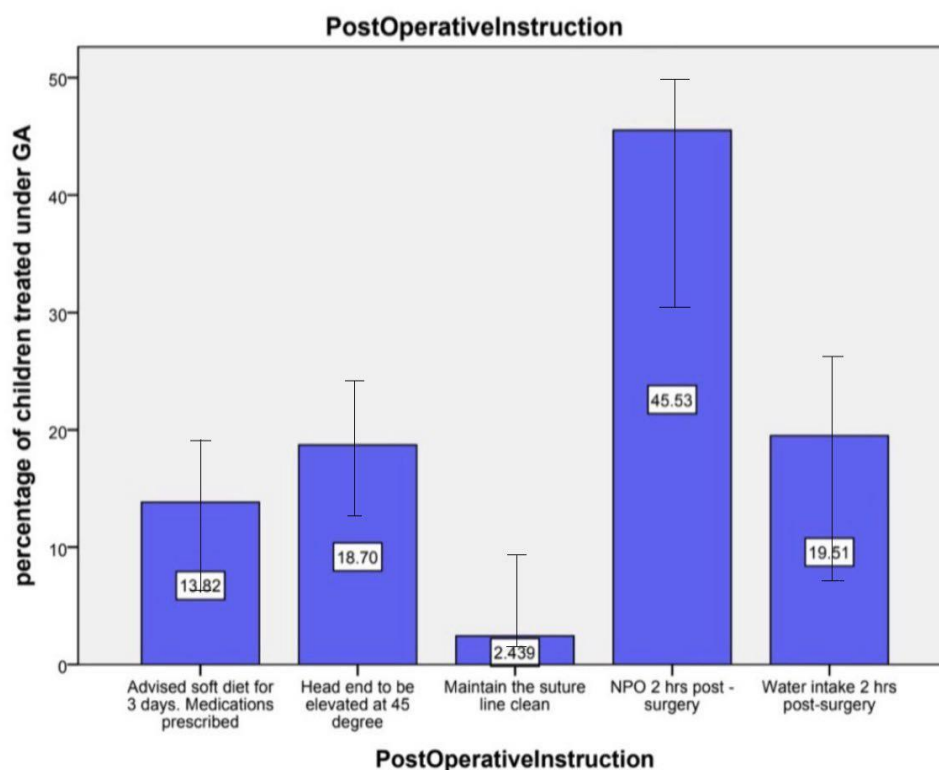
RESULTS :

The demographic details of the participants involved in this study are depicted in Table 1. Figure 1. represents the post operative instructions that were provided to the pediatric patients who were given dental treatment under general anaesthesia, in which 13.82% of the children treated under GA were advised soft diet for 3 days and medications were prescribed after the treatment, 18.70% of the patients after the treatment under GA was recommended head end to be elevated at 45 degree for few hrs post treatment, 2.439% of the patients were advised to maintain the suture line clean after the treatment with GA, 45.53% of the patients were insisted NPO 2 hrs post surgery, and 19.51% of the patients were advised to intake water after 2hrs post surgery

Table 1: Demographic details of the participants

Age (Mean \pm Std.deviation)	2.89 \pm 2.442
Gender	Males- 47.15% Females- 52.85%

Figure1 : Post operative instruction provided for the children treated under GA.



DISCUSSION:

From the results, we observe that out of the total children who were treated under General anesthesia majority were girls with a percentage of 52.85%. Previous studies have shown that the female children are always found to be more sensitive compared to the male children, they develop an extreme level of anxiety and fear while doing a dental treatment (14)

Some patients are also found to be handicap or physically, mental, psychologically unstable making the dentist difficult to render the treatment effectively. The previous dental sitting also played a major role in determining the mental state of the children (15) .

In the present study we observe that NPO 2 hrs post surgery was found to be highly recommended by the dentist with a percentage of 45.53% when compared to other post operative instructions. NPO (nil per os) is a guideline provided by the American Society of Anesthesiologists which means nothing by mouth. In this guideline it has been highlighted that NewBorn infants within 6 months who were provided treatment under GA are advised to take clear fluids after 2 hrs and intake of breast milk after 4 hrs of treatment. The children from 6 Months – 36 Months who were treated under GA are insisted to take clear fluids after 2 hrs, breast milk after 4 hrs, non human milk can be given for the patients after 6 hrs and solid food can be provided 6 hrs after the dental treatment. For the patients older than 36 months who are treated under GA are advised to take clear food after 2 hrs , non human milk after 6 hrs and a light meal after 6 hrs of the treatment under gone (16) (17). Other post instructions provided also include water intake after 2 hrs post surgery (19.51%) , water intake after the post treatment helps them to keep the infections away from their body and acts as a catalyst for the body to recover. Moreover water helps the body to get rid of the toxins from the anaesthesia. Hence drinking water post surgery helps in all aspects of recovery (18).

The next predominant post operative instruction advised for the patient treated under GA was head end to be elevated at 45 degree after procedure with a percentage of 18.70% . Head elevation at 45 degree to a sniff position reduces upper airway collapsibility and helps to maintain airway patency during anesthesia and recovery.(19).

Other instructions incorporate the soft diet intake by the patients for 3 days after the procedure which was undergone by patients with a percentage of 13.82%. The patients may feel uncomfortable due to the airway tube insertion through the gastrointestinal pathway . Hence soft diet and painkillers have to be prescribed for the patients to get rid of the postoperative pain and complications.(20). Followed by the post operative instruction after the treatment with GA given was to maintain suture line clean with a percentage of 2.439%. In some extractions and severe injuries suture is essential for the tissues to heal and recover faster, in that case the patients are advised to keep the suture line clean to prevent the area being infected. Thus the post operative instructions are essential for the patients to recover faster and to prevent them from post operative pain and complications.

CONCLUSION:

From the results of the present study it can be concluded only NPO instructions and dietary instructions are given for the parents whose children are treated under General anesthesia. The other post operative instructions are not effectively delivered to the parents and proper instructions are essential for the patients to recover faster and to prevent them from post operative pain and complications.

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CONFLICT OF INTEREST

Authors declare no potential conflict of interest.

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