



Parental acceptance for Children's dental treatment under General Anesthesia

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Abstract

The aim of the study was to understand the parental acceptance of general anesthesia for dental treatment among children aged 3-6 years. A questionnaire assessing the acceptance and awareness of dental treatment under anesthesia was given to 100 parents of 3 - 6 years old children who reported to Dental outpatient unit. The obtained data was statistically analyzed. Results revealed, the preference for General Anesthesia procedure was low particularly among younger children aged 3-5 years. The acceptance was better when a family member had been treated under general anesthesia. The low acceptance rate of the dental treatment under general anesthesia could be due to fear and safety concerns of the parents. Hence creating awareness by counselling parents is the key to successful dental treatment.

Keywords: Parental acceptance, Pediatric, Dental treatment, General anesthesia

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1. Introduction

Dental caries is the most common oral health disease among young children [1]. Most children can be successfully treated in a chair side procedure using the behavior modification techniques that forms the major part of dental treatment in pediatric dentistry [2]. But it is difficult to treat children who are uncooperative, very young children, children with special health care needs, and children requiring full mouth rehabilitation on the chair side procedure [3]. In addition, parents in the present times do not approve of certain behavioral management techniques [4,5]. Hence in the current times, pharmacological management using general anesthesia (GA) could be a good choice for uncooperative children. It also has several

advantages including avoidance of multiple visits to the dentist, absence of pain and thus increased comfort for the child [6].

On the other hand, pharmacological treatment is more invasive and thus parents may be reluctant to accept the procedures under general anesthesia [7]. It is important to understand the parental acceptance of general anesthesia in developing countries like India, where there is a high prevalence of childhood caries. Parental acceptance will have a direct impact on the choice of treatment and successful completion of treatment. It is also important to understand the reasons for non-acceptance as this can be targeted during patient counseling or during the pre-operative period. Thus, the purpose of the study was to

assess parental acceptance and awareness about general anesthesia as a means of providing comprehensive dental care to children.

2. Materials and Methods

This cross-sectional study was conducted to assess parental acceptability and parental awareness of general anesthesia as a technique of providing comprehensive dental care to children. The sample size was calculated to be 100 using the sample size formula $4pq/d^2$ by setting an acceptable margin of error to be 0.1. The inclusion criteria were parents of children aged 3-6 years who reported to Dental Outpatient, were willing to participate, and parents of uncooperative children. Parents of all socioeconomic status irrespective of their age, gender, educational status, and occupation were included. The exclusion criteria were parents of children with mental or physical disabilities or with systemic diseases. The patients were clinically examined in the dental chair. The diagnosis was made after the investigations were done. The parents were explained about the treatment plan. Each parent was given a questionnaire that included questions on demographic details as well as questions about their acceptance of the general anesthesia procedure. The questions were closed choice, with responses being a Yes or a No. The questionnaire was printed in both English and vernacular language, and parents were instructed to complete it after a verbal explanation of the questions. The answers were evaluated by the investigator and statistically analyzed.

3. Results

Responses were collected from 100 parents. Table 1 shows the response for each question. The data was further analyzed by categorizing the participants based on the age of the children. Statistically significant difference in the acceptance of the dental treatment under GA were seen between the age groups of 3 to 5 years and 5 to 6 years ($p = 0.03928$). [Table 2] Statistically significant difference ($p = 0.032468$) in parental acceptance were also seen between male and female children. [Table 3]

4. Discussion

Behavior management is an important aspect of pediatric dental practice that contributes significantly to the successful delivery of dental care to children. However, parental preferences for behaviour management techniques have shifted in the last decade as a consequence of changing parenting styles and lower parental expectations of child behavior [8]. Parents do not agree with all techniques, even if clinicians believe they are effective. Parental acceptance of aversive techniques such as voice control, physical restraints, is low [9,10]. Hence pharmacological management using general anesthesia could be a good

alternative among the uncooperative and young children. In addition, some children require pharmacological management due to factors such as psychological immaturity, cognitive development, and special health care needs [2]. The acceptance of treatment under general anesthesia among parents is very important for successful dental outcomes. In the present study, only 35% of parents preferred general anesthesia for their uncooperative children, despite 49% of parents agreeing general anesthesia is effective to treat all damaged teeth in one appointment. This result is similar to earlier studies which reported that general anesthesia was the least accepted technique [11,12]. On the contrary, a study conducted in Odisha, India stated that 56% of parents accepted general anesthesia and rated it fourth after Tell-show-do, positive reinforcement, and modelling. The parents favored pharmacological behaviour management techniques over aversive techniques like voice control, physical restraints [13]. The differences in findings could be attributed to the urgent need of treatment, which drives both the selection of a certain technique and parental acceptance of that technique. The parental education qualification was also found to play an important role in accepting pharmacological treatment. The parental knowledge of pharmacological behaviour management was high, if their family members had previously undergone similar treatment. This finding was consistent with another study which found that parents who had previously undergone pharmacological management were more willing to accept the technique due to their awareness and knowledge of the pharmacological behaviour management technique [14].

The study also showed that parental preference was higher among older children than among younger children. This could be attributed to parental confidence in accepting the procedure with increasing age. In this study, only 26% of parents reported to have researched regarding sedation and general anesthesia on the internet. This may indicate the lack of need or awareness of using general anesthesia for treatment of dental problems in children. Hence it is important to create awareness among the general public regarding the usefulness, convenience and safety of using general anesthesia for children. Though most parents do understand that treatment under general anesthesia is an effective treatment measure, many parents still did not prefer it over the chair side procedure. This could be attributed to fear and unawareness regarding the safety of the procedure. Hence it is important to educate the parents regarding the advantages and disadvantages of procedure prior to denial of treatment under anesthesia to their child. It is important to explain the procedure to both parents and children to encourage a positive attitude for successful treatment [15]. Future studies may also examine the various parental (education, urban vs rural) and child factors (age, gender, severity, number of dental caries) that may influence the preference of dental treatment under general anesthesia.

Table 1: Responses of parents to the questions

Questions	Responses	
	Yes	No
Have any of your family members ever been treated under general anesthesia?	20%	80%
Would you prefer general anesthesia for your uncooperative child's dental treatment?	35%	65%
Dental treatment under general anesthesia is advantageous because all teeth can be treated in one appointment.	49%	51%
Have you researched for the details of dental treatment under General Anesthesia on the internet?	26%	74%
Should the child follow certain diet restrictions before undergoing general anesthesia?	22%	78%

Table 2: Chi-square test for Age of the child Vs parental acceptance for GA

Age of the child	Parental acceptance of GA		p value
	Yes	No	
3 to 5 years (n =54)	14 (25.9%)	40 (74.1%)	.03928*
5 to 6 years (n= 46)	21 (45.7%)	25 (54.3%)	

* Significant at p < .05 level

Table 3: Chi-square test for Gender of the child Vs parental acceptance of GA

Gender of the child	Parental acceptance of GA		Pvalue
	Yes	No	
Male (n=43)	10 (23.3%)	33 (76.7%)	.032468*
Female (n=57)	25 (43.9%)	32 (56.1%)	

* Significant at p < .05 level

5. Conclusions

To conclude, parental preference for dental treatment under general anesthesia was less. But an adequate explanation about the procedures and safety of pharmacological management is important to gain parental acceptance. Fact sheets, videos and parent testimonials can help parents make confident decisions.

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