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Original Article

Role of General Anesthesia in Dental Procedures in and around Konaseema Region

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Abstract
Introduction: *Most of the dental procedures can be performed under local anaesthesia, however non-compliant paediatric patients, patients with psychiatric disorders or mental retardation, orofacial trauma, severe craniofacial anomalies patients and patients with severe anxiety may need treatment under general anaesthesia.*
Method: *This is a prospective study, 36 cases of dental procedures performed under general anaesthesia which was taken from Teaching hospital, Department of dentistry in Konaseema region.*
Results: *The average age of the patients was 12 years. General anaesthesia were given to these patients because of cooperation difficulties in 21(58.4%), paediatric patients, mental retardation in 5 (13.8%) patients, and jaw surgery/ maxillofacial surgery in10 (27.8%) patients.*
Conclusion: *During dental procedures in paediatric patients under general anaesthesia is important due to the frequency of genetic syndromes and mental retardation. Non cooperative paediatric patients, dental fear and lengthy procedures on paediatric patients were the main reasons for the use of conservative, comprehensive general anaesthesia in dental procedures.*
Keywords: *general anaesthesia, Dental procedure, Paediatric patients.*

Introduction

General anaesthesia in dental procedures is preferred because of prolonged treatments in paediatric patients and multiple treatments can be performed in the same session and because it is cost- and time-efficient. General anaesthesia application by same-day admission is becoming frequent for dental examinations and interventions. Most children adequately treated by using behavioral techniques by Pedodontists. However, a few certain children cannot receive treatment via these methods [1]. Using general anesthesia (GA) Dental treatment is a rehabilitation treatment for pediatric patients[2]. GA is a controlled state of unconsciousness in which protective reflexes is lost[3]. It is nearly three decades that comprehen-

sive dental rehabilitation under GA has been offered to pediatric population [4]. Young age Pediatric patients and those suffering mental, physical, and cognitive or emotional immaturity or disability or those who need extensive rehabilitation with extreme anxiety are treated using GA [5-8]. These young children are not suitable candidates for conventional in-office treatments and are more safely and effectively treated under GA [7]. In this prospective study, 36 childern who underwent dental surgery under general anaesthesia for a period of one year are reported in light of the recent literature.

Materials and Methods

In this prospective observational study which was held in a teaching hospital for a period of one year. Thirty six patients who required dental procedure under general anaesthesia were enrolled in our study. Inclusion criteria were defined as all patients who needed interventional dental procedures, such as maxillofacial surgeries, impacted tooth and dental traumas. Excluding criteria were patients who have history of neurological abnormality, cardiopulmonary disease, drug allergies. Due to fear of injections and anxiety, inhalation anesthesia induced by halogenated volatile anesthetics is routinely used in child patients. Isoflurane, desflurane, Nitrous oxide and sevoflurane are inhalation agents. Due to pleasant odor, low blood/gas partition coefficient and less respiratory problems, sevoflurane is used as choice of induction agent. All patients were discharged when all vital signs went back to their normal values and when they gained their consciousness completely.

Results

The mean age of 36 cases that underwent dental intervention was 12 years and the female patients were 63.89% and male patients were 37% which was shown in (Table I). The reasons for performing general anaesthesia were as follows: cooperation difficulty in 21 cases (58.4%), mental retardation in 5 cases (13.8%) and maxillofacial surgery in 10 cases (27.8%) which was presented in (table II). Anesthesia induction was established by an inhalation agent (sevoflurane) was administered in all 36 cases.

Table: 1. Showing the male and female ratio.

sex	Number of patients	percentage
Female	23	63.89%
Male	13	36.11%

Table 2: showing reasons for performing general anaesthesia

Complication	Number of patients	Percentage
cooperation difficulty	21	58.4%
maxillofacial surgery	10	27.8%
mental retardation	5	13.8%

Discussion

In dental interventions among children, general anaesthesia is performed in large dental treatments like in major orofacial traumas, in major craniofacial anomalies that require treatment, in patients with broken jaws, in patients who cannot cooperate because of having mental or physical problems or because of being minor and in patients who are scheduled to undergo multiple treatments in one session [9]. General anaesthesia is commonly preferred in patients who cannot undergo dental treatment with local anaesthesia due to mental or psychological reasons because it allows multiple treatments in a single session, and it can be safely performed in prolonged interventions[10]. Similarly in present study general anaesthesia was preferred in children who underwent maxillofacial surgery and cases with presence of cooperation difficulty and having mental retardation.

Patients with cooperation difficulty are premedicated depending on their general condition. Pre-school children that appear calm prior to anaesthesia application are observed to be more scared of the intervention, and premedication is recommended. In premedication, commonly preferred is midazolam, which is a short-acting benzodiazepine, and it is reported that a dose of 0.5 mg/ kg−1 midazolam orally administrated does not prolong the duration of

stay in the hospital[11]. In present study no premedication was given to patients.

Laryngeal mask and nasal mask can be used safely in small and short dental interventions under general anaesthesia. Nasal endotracheal intubation in oral acvity surgeries is more commonly preferred than oral endotracheal intubation in dental treatment. In few studies nasal intubation is preferred in morethan 50 % patients oral intubation [12]. Similary in our study we preferred nasal intubation than oral intubation. The level of childs cooperation, the risk of general anaesthesia modality, the cost of anesthetic and dental procedures and the psychological impact of general anesthesia on the child are factors influencing parental decision to choose general anesthesia for their child [3]

Post operative complaints can be related to factors such as type of treatment, traumatic intubation, pre existing medical status and duration of general anaesthesia. However, postoperative complaints will be resolved in afew days and the recipients will regain their normal and routine physical activity soon. The most common post operative complaints reported are difficulty in eating, fever, nausea, vomiting, dental pain, sleep alteration and hoarseness.

Conclusion

The patients who needed dental rehabilitation under general anaesthesia especially the paediatric dental patients are increasing now a days. Parents consultation about the dental and anaesthesia procedures should be proper. Complete supervi-sion and attention must be paid by parents to the child after discharge and even before general anaesthesia. Dental general anaesthesia personnel need to be familiar to psychological demands of the child patient. Moreover concentrate to minimize or eliminate the risk of adverse reactions, it is important that anesthesiologist performs the procedures with care and caution. Non cooperative paediatric patients, dental fear and lengthy procedures on paediatric patients were the main reasons for the use of conservative, comprehensive general anaesthesia in dental procedures.

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