#### A Retrospective Study of Pediatric Dental Patients Treated under General Anesthesia

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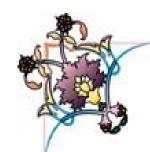
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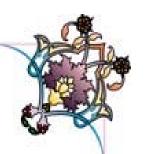
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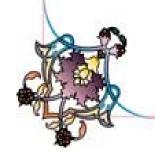
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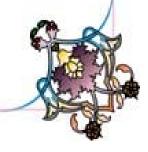




"وَهُلِ اعْمَلُواْ هَسَيَرَى اللَّهُ
عَمَلَكُمْ وَرَسُولُهُ
وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ
وَالْمُؤْمِنُونَ وَسَتُرَدُّونَ
إِلَى عَالِمِ الْغَيْبِ
وَالشَّمَادَةِ فَيُنَبِّنُكُم بِمَا
كُنتُمْ تَعْمَلُونَ "

سورة التوبة الآية ٥٠٥







## Dedication

This work is dedicated to my loving parents. Without their knowledge, wisdom, and guidance, I would not have the goals to strive for and do the best to reach my dreams.

This and other achievements I may realize are dedicated to them and my supportive and encouraging brothers.

Thank you for believing in me; for allowing me to further my studies.

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#### Introduction

In many developed countries, caries prevalence of primary dentition has declined in the last few decades and tends to have stabilized (Holm, 1990; O'Brien, 1994; Spencer et al., 1994; Blinkhorn and Davies, 1996; Almeida et al., 2000 and Brown et al., 2000). However, even with this decline, it is still one of the most common infectious diseases of childhood. There is a group of children who express high caries susceptibility but are not recognized early. Young children with numerous carious teeth require comprehensive dental rehabilitation and caries preventive regimens.

It is important to ensure that children and adolescents receive safe and effective pain control. A range of techniques are available, comprising four overlapping categories: behavioral techniques, local anesthesia, conscious sedation and general anesthesia (Figure 1) (Davies et al., 2008).

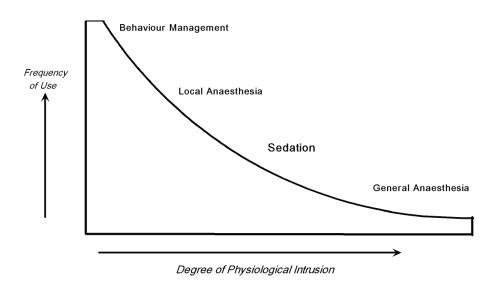


Figure1: The Spectrum of Patient Management

There are several categories of dental problems in children that cannot be treated optimally in the office settings and are best managed in the hospital theatre. The ability to treat children in the hospital environment in order to provide comprehensive dental care using general anesthesia is a valuable option to the pediatric dentist, despite some degree of risk to the patient (McDonald and Avery, 2004).

The clinical guidelines of the American Academy of Pediatric Dentistry for 2003-2004 stated that the goal of general anesthesia for the pediatric dental patient is to eliminate cognitive, sensory, and skeletal motor activity to facilitate the delivery of high quality comprehensive diagnostic, restorative, and/or other dental services (AAPD Guidelines, 2003-2004).

Particular emphasis is placed on the importance of comprehensive treatment planning to ensure a satisfactory standard of oral health after a dental general anesthesia (Davies et al., 2008).

General anesthesia allows dental treatment to be rendered under optimal conditions, theoretically ensuring ideal outcomes (**Tate et al.**, **2002**). A study by **Eidelman et al** showed that the quality of restorative treatment performed under general anesthesia was better than the quality of treatment performed under conscious sedation (**Eidelman et al.**, **2000**).

Day-stay facilities are gaining popularity in general surgery, especially in children's surgery. In dentistry, day-stay care has been shown to be of great value for the treatment of specific groups of child patients, including special health care need patients and those too young to tolerate treatment with local anesthetic alone (Holt et al., 1991).

General anesthesia provides optimum conditions for restorative treatment such as maximum contamination control, immobilization of the patient, efficient and effective working environment, and elimination of unwanted patient reflexes. In spite of providing optimum conditions for restorative procedures, high restorative failure rates, mainly in composite and amalgam restorations when compared to stainless steel and strip