

**Mini Review**

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# Chair-Side General Anaesthesia for Pediatric Dental Patients-A Review



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## Mini Review

Dental caries is one of the most common, chronic diseases of the oral cavity in children [1]. It is a disease that can never be eradicated completely because there are complex interactions of cultural, social, behavioural, nutritional, and biological risk factors that have a major role in its initiation and progression [2]. The most common immediate consequence of untreated dental caries is dental pain, which affects children's regular activities, such as eating, talking, sleeping, and playing [3]. There are various treatment modalities for restoration of decayed teeth depending upon the co-operation level of the child. Management of child patients for various dental procedures in dental office is very challenging. The behavioural problems are commonly seen in children under the age of 6 years due to various elements such as immature reasoning; restricted coping skills and anxiety/fear causing elements in dental office [4]. The pediatric dentists try to manage the behaviour of children with varied behaviour management techniques. The behaviour management techniques are broadly classified as non-pharmacological and pharmacological methods [5]. Most of the times the children can be managed with non pharmacological methods but there are conditions wherein pharmacological methods have to be applied. Conscious sedation has made it possible for many patients with specific characteristics to accept dental treatment in the dental office [6]. However, some children and some patients with development problems require the administration of general anaesthesia for the implementation of therapeutic measures in an efficient and safe way. Comprehensive dental rehabilitation under general anaesthesia is a treatment modality for many pediatric dentists. General anaesthesia is utilized for pediatric dental patients to provide comprehensive and high quality dental care when conventional dental treatment is not an option. Routine dental procedures for children are performed under GA for various reasons, including for patients: of a very young age; with complex medical/ physical/ mental conditions; with a need for extensive treatment; with a need for oral surgery treatment;

with a need for emergency treatment that is extensive; who require safety considerations; who have language barriers preventing communication; who travel long distances to receive specialty care [7]. The American Academy of Pediatric Dentistry (AAPD) endorses GA for pediatric dental patients who: are unable to cooperate; experience ineffective local anaesthesia; are extremely fearful, anxious, or uncommunicative; require significant surgical procedures; can benefit from GA protecting them from psychological trauma and/or reducing medical risks; and require immediate, comprehensive oral care. Furthermore, many medical conditions present with oral disease that must be managed in an inpatient setting, and the operating room (OR) is often the best place to provide such care [8]. Pediatric dentists are trained to recognize the need for hospital-based dental treatment and to work with an anaesthesia team to provide optimal care for their patients. The AAPD definition of medically necessary care includes services of GA and use of surgery facilities. General anaesthesia should be strictly limited to those patients and clinical situations in which local anaesthesia (with or without sedation) is not an option and the patients coming under ASA I and ASA II criteria [8].

The general anaesthesia can be provided as in patient after admitting the patient in the hospital or can be done as a day care surgery wherein the patient is treated chair side in the dental office. The day care surgery protocol otherwise known as chair side general anaesthesia in dental terminology has certain benefits. The earliest reference for day care surgery is mentioned as early as beginning of the 19th Century by James [9] a Glasgow surgeon who performed almost 9000 outpatient operations on children in 1903 and later in 1912 when Ralphwaters [10] from Iowa, USA described "The Down Town Anaesthesia Clinic", where he gave anaesthesia for minor outpatient surgery. However it lost its momentum within the next twenty years. But again the importance of day care surgery has increased recently. Apart from cost containment, other benefits of our patient's surgery

are: decompression of busy hospital beds, less nosocomial infections and early recovery in home environment with the family. Thus, there is less disruption of personal lives [11]. The added advantages for dental patients are: the dentist is well acquainted with operator so he can get the needed materials should the need arise, the patient appointments are lessened to a single visit, the co-operation level of child increases (the next time he visits a dentist) and also the patient does not have to wait for operating room availability. The parents are also opting for chair side general anaesthesia because of the changing parenting styles, less time at disposal for keeping multiple appointments. The advantages of chair side general anaesthesia outweigh the disadvantages and so slowly the trends are changing towards chair side anaesthesia rather than in operating room [12].

### References

1. Ribeiro NM, Ribeiro MA (2004) Breastfeeding and early childhood caries: a critical review. *J Pediatr (Rio J)* 80(5 suppl): S199-210.
2. Zafar S, Yasin-Harnekar S, Siddiqi A (2009) Early childhood caries: aetiology, clinical considerations, consequences and management. *Int Dent SA* 4(3): 24-36.
3. Milnes AR (1996) Description and epidemiology of nursing caries. *J Public Health Dent* 56(1): 38-50.
4. Baier K, Milgrom P, Russell S, Mancl L, Yoshida T (2004) Children's fear and behaviour in private pediatric dentistry practices. *Pediatr Dent* 26(4): 316-321.
5. American Academy of Pediatric Dentistry (2004) Special issue: Proceedings of the conference on behaviour management for the pediatric dental patient. *Pediatr Dent* 26(2): 110-183.
6. Jensen B, Stjernqvist K (2002) Temperament and acceptance of dental treatment under sedation in preschool children. *Acta Odontol Scand* 60(4): 231-236.
7. Becker DE, Rosenberg M (2008) Nitrous oxide and the inhalation anesthetics. *Anesth Prog* 55(4): 124-131.
8. American Academy of Pediatrics (2014) The paediatrician's role in the evaluation and preparation of pediatric patients undergoing anesthesia. *Paediatrics* 134(3): 634-641.
9. Nicoll JH (1909) The surgery of infancy. *Br Med J* 2: 753.
10. Waters RM (1919) The down town anaesthesia clinic. *Am J Surg (Anaesthesia suppl)*, 33: 71-73.
11. Korttila K (1995) Recovery from outpatient anaesthesia: factors affecting outcome. *Anaesthesia* 50 Suppl: 22-28.
12. Peretz B, Zadik D (1999) Parents' attitudes toward behaviour management techniques during dental treatment. *Pediatr Dent* 21(3): 201-204.



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