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Editorial

General Anaesthesia or Conscious Sedation in Preschool Children Undergoing Out-Patient Dentistry

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A large randomized controlled trial failed to identify deleterious effects of general anaesthesia on neurodevelopmental outcome after one single short exposure [1]. The United States of America Federal Drug Administration still consider however that repeated or lengthy use of general anaesthetic and sedation drugs during surgeries or procedures in children younger than 3 years or in pregnant women during their third trimester may affect the development of children's brains [2].

Performing a procedure under local anaesthesia alone in preschool children may prove a difficult task. Preschool children may require some form of intervention to alleviate anxiety particularly when they have to undergo repeated procedures. For dental procedures, various forms of pharmacological and non-pharmacological interventions [3-5] have been reported with variable degree of success.

Sedating a preschool child may be a difficult task. Authorities on the topic consider that regardless of the intended level of sedation or route of drug administration, the sedation of a pediatric patient represents a continuum and may result in respiratory depression, laryngospasm, impaired airway patency, apnea, loss of the patient's protective airway reflexes, and cardiovascular instability [6]. Guidelines from official societies (for instance The Joint Commission, the American Society of Anesthesiologists, and the American Academy of Pediatric Dentistry or The United Kingdom National Clinical Guideline Centre) have been published on monitoring and management of pediatric patients during and after sedation for a procedure and more specifically for children undergoing dental procedures [6,7].

In a survey sent to 4,216 board-certified pediatric dentists in the United States of America, Pham and colleagues found that 87% of the respondents used general anaesthesia in their clinical practices. Of these, 50.4% reported using a hospital setting, and 60.5% used a physician anesthesiologist [8].

In 2009, 2012 and 2015, The Cochrane attempted to perform a systematic review comparing sedation versus general anaesthesia for provision of dental treatment to patients younger than 18 years old in terms of morbidity and costs [9]. Despite an extensive search, they found no suitable randomized controlled trial [9].

At the moment, it is unclear if general anaesthesia increases or decreases risks and/or costs for preschool children undergoing dental procedures compared with local anaesthesia plus distraction or sedation. It is to hope that large randomized controlled trials will be conducted in the near future to answer this important question.

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Conflict of Interest

No conflict of interest.

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