

## Is the current usage of dental general anaesthetic appropriate?

Ten years on: Is dental general anaesthesia in childhood a risk factor for caries and anxiety?

*Br Dent J* 2017; **222**: 299–304 <http://dx.doi.org/10.1038/sj.bdj.2017.175>

Dental general anaesthesia (DGA) is a triad; it is not just 'putting to sleep' (hypnosis) but also pain relief (analgesia), and often muscle relaxation. It is the last resort if other pain and anxiety controls are inappropriate. This is especially useful for extremely anxious and dental phobic patients who cannot relax under sedation, and others who have developed drug tolerance. The NHS Dental Statistics for England revealed that dental caries treated under DGA is the most common cause of hospital admission for children aged five to nine years old. This figure is shocking because of the very fact that dental caries is preventable. Even worse, in many cases repeat DGAs are indicated due to the lack of proper and high quality pre-treatment assessment.

In a prospective study in the *BDJ* highlighting the longer term oral health outcomes following DGA, the authors found that DGA status

predisposed patients to increased risk of caries, corroborating previous research. The DGA status by age seven and oral health outcomes at age 17 were identified from a questionnaire. Out of 1,695 participants included in this analysis, 128 (7.6%) underwent DGA in childhood, and consequently had higher measures of filled or extracted permanent teeth in adolescence. The result demonstrated the ability to use DGA status as a useful indicator to assign patients to different caries risk categories. However, it was not clear whether repeat DGAs were included in the questionnaire, and it should be stressed that repeat DGAs carry higher risks.

The same paper attempted to untangle the bidirectional relationship between DGA and anxiety, with marked increase seen in individuals with DGA being classified as dentally anxious at age 17. DGA may be necessary in

some children who have severe phobia and anxiety. Alternatively, negative incidents at the time of DGA could lead to future anxiety.

With ever increasing figures of children having to undergo DGA in the UK, future work should focus on the downstream influence of DGA and its justifiable administration, to slash the number of DGAs for treatment of caries because ultimately, as healthcare professionals, we are obliged to deliver the best possible care so that we don't expose our patients to unnecessary risks. Many investigations introduced methods such as regular recall visits, fluoride supplementation, and, more aggressively, the use of antimicrobial therapies to arrest future development of caries. However, the central issue is, do we need as many DGAs at the first place?

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