

A 'happy-air' alternative to general anaesthetic?

Does relative analgesia with nitrous oxide reduce the number of general anaesthetic sessions and dental loss?

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Sleeping children – though often a rarity for parents, are unfortunately all too common in the dentistry world. There has been much publicity about the conscious sedation service being both overwhelmed with referrals and underfunded, potentially resulting in more patients unnecessarily being treated under general anaesthetic (GA). Relative analgesia (RA) (or inhalation sedation) is a safe and effective way of facilitating routine dentistry, but is this unnecessarily being underused?

The authors highlight that current literature suggests RA carries good success rates of between 83–97% in the paediatric population for patients undergoing extractions and restorative procedures. Also, it is much cheaper per session compared to GA (£273.01 vs £719.90) and more than 70% of patients could be treated in two or less appointments.

Treatment planning for GA can often be radical. Thus the authors of this study aimed to assess if there was a reduction in the

Expert view

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This is a timely paper with the Local Government Association in England having recently highlighted the large number of children receiving dental extractions under general anaesthesia (GA).¹ This subject has been well covered within the press earlier this year and it is only appropriate for the profession to look to see how it can decrease the number of children receiving GA. The paper offers insight into the clinical effectiveness of inhalation sedation for delivery of care for children and provides an important contribution to the discussion about cost effectiveness of differing treatment modalities.

The authors describe how 88% of children referred for GA have been successfully

treated with inhalation sedation in a local community dental service (CDS) and how this is consistent with other research. In addition it will resonate with the experience of many clinicians providing dental care under sedation. The decrease in morbidity, reduced number of extractions and the ability to restore teeth is also evidenced within the paper and this supports other research findings. At a time when there is ever increasing pressure on budgets, an increase in sedation services has both a clinical advantage for patients and a monetary advantage for commissioners alike. The argument for a redistribution of funding to sedation services is well made.

Whilst this paper focuses on the CDS in Cornwall, it would be equally applicable to all providers of GA exodontia services for children across the whole UK. The recommendation to offer inhalation sedation where clinically appropriate is supported by national guidance.^{2,3} The authors make a very valid point in that referrers must ensure they discuss different treatment modalities and consider referral for sedation services rather than directly to hospital for

GA.^{2,3} Ideally, service providers should be able to provide sedation and access to GA services thus enabling children to be assessed and offered the most appropriate care at a single assessment visit. With this in mind, commissioners may wish to consider this paper and in conjunction with local managed clinical networks in paediatric dentistry, develop appropriate care pathways for children unable to access care in the general dental service thus developing sedation services locally with a seamless provision to access GA when it is deemed clinically appropriate. ■

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Author Q&A

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Why is relative analgesia not used more widely?

Relative analgesia is not used more widely possibly because this type of sedation requires extended appointment times, and specific equipment and its maintenance. The current NHS UDA contract and Conscious Sedation Service funding does not reflect these requirements.

What was the biggest challenge in carrying out your study?

There are not many studies highlighting the number of teeth that are being saved by treating children under conscious sedation as opposed to GA. This greatly impacts on the child's quality of life. The data presented in this study were initially presented in the dissertation aspect of my MSc qualification so the challenges I faced were also those involved with having to juggle a full-time job, collecting all the data and working on this project in my own time.

What changes would you like to see in practice as a result of this research?

I would hope that this research project would highlight the point that financial savings can be achieved by opting for conscious sedation,

with careful patient selection, as an alternative to GA. One of the conclusions of this study is that in 50% of the cases more than one appointment was needed to complete a course of treatment; therefore, the funding of this service should reflect that in a more appropriate and realistic way.

Studies like this one will hopefully show that there is a need to change the way that the Conscious Sedation Service is being funded. This would help to reduce the ever-increasing waiting lists for GA and to allow placement of colleagues providing this type of service.

Another change that would benefit all is to educate general dental practitioners to produce more appropriate referrals, thus helping to get the relevant treatment to these children sooner. ■

number of dental extractions by providing more conservative dentistry via RA than would be possible under a GA-based treatment plan.

Over a period of 26 months, the authors performed a service evaluation of their referrals for GA in a community dental setting (South West of Cornwall). Before the initiation of this study, the service did not provide fillings under GA unless in exceptional circumstances, and no IV/ oral sedation treatments were provided for patients under 18.

As part of the study, 118 patients (children/young adults) were recruited, with strict inclusion criteria for study participation (patients without learning difficulties, aged between 4–18, mild to moderate dental anxiety and who were willing to try RA). All had their treatment attempted under RA, and the success rates were recorded.

The success rate for RA was 88%, which is consistent with the values seen in previous studies. The average age of patients being treated was 7.8 years, with a large proportion of patients being under 7 years of age, highlighting suitability in younger patients. The authors determined that 141 teeth were 'saved' by avoiding the need for GA (34 deciduous and 107 permanent teeth). Approximately 50% of patients were successfully treated in one visit, and 85 GAs and 20 special GAs (extractions and filling cases) were successfully avoided, which would have cost over £75,000.

This is more evidence supporting the effectiveness of RA, raising the question whether we as a profession need to move away from treating patients routinely under GA, unless RA is unsuccessful or contraindicated.

Patient safety is paramount, particularly in paediatric populations; therefore avoiding GA might not only increase patient safety but also avoid associated morbidities.

By George Jones

105 General Anaesthetics
were **avoided** by successfully treating patients
with inhalation sedation,

not only **saving 141 teeth**



but also producing cost savings of

£75,589.50

118 children and young
adults in the study

