GuestEditorial

Dental caries in children and the level of repeat general anaesthetics for dental extractions.

A national disgrace

Approximately 46,500 children and young people under 19 years of age were admitted to hospital for general anaesthesia (GA) with a diagnosis of dental caries in England in 2013–14.¹ In Scotland and Wales, the corresponding figures are 11,455 and 8,904, respectively.²,³ This latter figure is 1.32% of children in Wales. These children suffer pain, miss schooling, and experience effects on body weight, growth and quality of life.⁴,⁵ Dental caries is the most common reason a child between five and nine years of age is admitted to hospital in both England and Scotland (30.9% of all GAs) and these figures are increasing year on year, as are the average numbers of teeth removed, according to RCS Eng.⁶ These admissions are closely associated with very significant morbidity and are not without the risk of mortality.⁴,⁷ The cost of these hospital admissions in England was £30 million in 2012–13.⁸,⁹

When we consider that dental caries is an almost entirely preventable disease, these facts are shocking enough but, when we consider that many of these children undergo more than one GA, words fail us. A recent study from the north-west of England reported repeat GA rates ranging from 12 to 37%, depending on which hospital provided the service and, in Glasgow, some 48% of accompanying parents of 150 recent consecutive GA cases for exodontia had also had GA for carious teeth removal. The reasons for this must be multifactorial and include disease incidence, provision of dental services, provision of preventive interventions, deprivation and the quality of the pre-treatment assessment. A recent audit in Sheffield of a service where all children are assessed by a consultant in paediatric dentistry led service revealed a repeat GA rate of less than 1%.

So how do we address this terrible state of affairs? Firstly, at a public health level, there needs to be public health interventions in England similar to Childsmile in Scotland.¹¹ Childsmile has reduced caries prevalence in 5-year-olds in Scotland from more than 60% at age 5 to its current level at 30%, which is now comparable to England. This level of decay in our young children and the burden of care is totally unacceptable for a preventable disease. All primary care dental professionals need to follow evidence-based national preventive guidelines fully and restore primary teeth to address the very low Care Index which, even in the best areas, is only 15%.¹²

We have to accept that some children will need removal of teeth under GA. So how do we ensure that these children receive the optimal level of care, which ensures that they do not require unnecessary repeat GAs, with associated risks and morbidity?¹³ It seems obvious that all children should be under the care of a consultant in paediatric dentistry and treatment planned by a specialist, who has the appropriate training to plan treatment adequately, as has been recommended in the recently published Standards for Conscious Sedation in the Provision of Dental Care for children whose needs cannot be managed by local anaesthetic or inhalation sedation alone.¹⁴ No other group of patients ‘go under the knife’ without specialist care by specialists being given, so why should the dental care of children be different? This assessment must include radiographs, except for the rare occasions when these are not necessary, ie all approximal surfaces are visible or, unfortunately, as is frequently the case, all primary molars are to be removed.¹⁵ For those children whose level of co-operation, be it because of anxiety, age or medical condition, does not permit a thorough examination, the operating room must allow conditions permitting examination under anaesthetic, including radiographs. Some people are concerned that this may prolong the time the child is asleep and therefore the risks of the GA. However, this shows a misunderstanding of the risks involved. Firstly, the taking of bitewings, particularly digital ones, add only a few minutes and during this time the child will be stable. The times of greatest risk under GA are actually during induction.

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The Dental Faculty of the Royal College of Physicians and Surgeons of Glasgow offers its Fellows and Members Dental Update as an exclusive membership benefit.

Chris Deery
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and recovery. The risk from GA certainly increases if another GA is required. So why would anyone want to subject a child to this additional risk by omitting to take radiographs and carrying out all treatment necessary at the initial GA opportunity? Failure to plan treatment correctly and failure to provide the best possible care when it is available is negligent. We, as a profession, have to address the dental disease levels in our children and reduce the number of GAs for the treatment of dental caries. Those of you who witnessed the complacent attitude of the Chief Dental Officer and Public Health England at the recent Parliamentary Health Select Committee, looking at the issue of our children’s dental health, will realize that Dentistry has to start acting as a Profession by arguing for the benefit of our patients.

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Abstract

Applying fluoride varnish prevents dental caries in primary and permanent teeth. This study explores what is needed to support dental professionals to make full use of this quick, easy and, most importantly, effective intervention.

Within Scotland there is a network of Childsmile dental practices within primary dental care that are currently offered remuneration for applying fluoride varnish at least twice each year to the teeth of all children from 2 years old. However, evidence from monitoring data identified that only about 8% of children attending Childsmile practices meet this target. This suggests providing additional funding for applying fluoride varnish does not alone encourage its use. This study aimed to understand further the factors that may act to influence general dental practitioners (GDPs) in Scotland to apply fluoride varnish to children’s teeth. To do this, Gnich and co-authors developed a questionnaire using the Theoretical Domains Framework. This approach explores factors that may influence the behaviour of health professionals when it comes to implementing current evidence and professional guidelines. A questionnaire was posted to all GDPs working within the NHS in Scotland in 2011. In total, 1090 dentists responded (54% response rate). There was an equal distribution of dentists who worked in a Childsmile practice and those who did not. Analysis revealed that the four main perceived drivers for GDPs’ compliance with guidelines for fluoride varnish application, the study suggests that an intervention is needed that will target both GDPs’ knowledge of guidelines and beliefs regarding professional responsibility, but also raise parental expectations that fluoride varnish is a routine part of all children’s current dental care.

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