IN BRIEF

- The benefits and rationale of conscious sedation with restraint are discussed.
- This approach is described to aid parents in the decision-process of whether general anaesthesia or conscious sedation should be given to their young child.
- The purpose of this paper is to present to the UK dentist a dilemma that paediatric dentists face in the US and in other countries as well.

Strap him down or knock him out: Is conscious sedation with restraint an alternative to general anaesthesia?

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When confronting a defiant or pre-co-operative young patient with extensive dental decay the dentist must decide between treatment under conscious sedation with passive restraint or general anaesthesia. Although some practitioners prefer to attempt and exhaust sedative techniques in most cases and use general anaesthesia as a last resort, many others do not mandate that alternate approaches first be attempted before treating under general anaesthesia and routinely recommend it as their first choice. What are the considerations involved in this decision-making process? Should the use of conscious sedation with restraint be revisited and perhaps even be considered the preferred method? What is the role of the dentist in the decision-making process? The purpose of this opinion-based paper is to present to the UK dentist a dilemma that paediatric dentists face in the US and in other countries as well and allow the reader to establish an opinion.

When confronting a defiant or pre-co-operative young patient with extensive dental decay the paediatric dentist must decide between treatment under conscious sedation (CS) with passive restraint or general anaesthesia (GA). This dilemma is not limited to the dental profession but is frequently encountered by physicians as well. Sedation is routinely used in paediatric patients undergoing diagnostic procedures such as: computed tomography, endoscopy, electroencephalography, and bone marrow biopsies.

In the past 5 years, the number of non-operating room procedures performed on the paediatric population requiring sedation has skyrocketed. Some of these procedures, such as bone marrow aspiration or dental restorations, may be painful and anaesthesia departments are being asked more and more frequently to provide the sedation and monitoring for these procedures.[1] However, more and more parents accept and consent for GA than for CS with passive restraint,[2] and the use of GA in managing difficult children has increased.[3] Rather than have their child face a difficult situation and teach their child to cope and overcome their fears, today's parents may prefer to avoid any potentially stressful situation and opt for GA. The situation is more troublesome when multiple treatments are expected and thus the child will be repeatedly exposed to GA and all its risks. Although some practitioners prefer to attempt and exhaust sedative techniques in most cases and use GA as a last resort, many others do not mandate that alternate approaches first be attempted before treating under general anaesthesia and routinely recommend it as their first choice.

Conscious sedation or general anaesthesia? (Cartoon courtesy of BDA Museum, LDBDA 7947)

What are the considerations involved in this decision-making process? Should the use of CS with restraint be revisited and perhaps even be considered the preferred method? What is the role of the physician or dentist in the decision making process?

The purpose of this opinion-based paper is to present to the UK dentist a dilemma that paediatric dentists face in the US and in other countries as well. The article is not a research study but rather an opinion-based position paper. It is the intent of the author to illustrate how the care of young children is managed in other countries. Perhaps this paper will allow readers not exposed to the methods described in this paper to be aware of this debate and establish an opinion.

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THE COMMON IMAGE OF RESTRAINT

The appropriateness of physical restraints is known to provoke much debate among clinicians and parents. According to an article published in a UK dental journal restraining devices (such as the Papoose board) are not acceptable in UK dental practice.[4] Perhaps this may be due to a misunderstanding regarding the use of restraint when coupled with CS. In both the professional and lay media restraint is routinely referred to as 'strapping down' or 'tying up a child'. One recent article, entitled 'Strap him down', described such treatment for a young dental patient as perhaps causing lasting psychological damage. An ethicist went as far as commenting that such treatment may be seen as a case of proposed child abuse and that physicians should refuse to treat patients with a restraint device. All of the ethicists were axiomatic that the use of restraint is ethically wrong and focused on only one ethical issue, namely, may the physician perform treatment (using restraint) on a child which is dictated by insurance companies and yet is in conflict with the physician's ethical and moral standards (who preferred treatment under GA). The misconception and misinterpretation of the use of restraint with CS is clearly evidenced in the extreme and harsh statements published in the aforementioned article: 'To strap a child to a board for the time required to complete treatment' or 'The image of a screaming terrified child, pinned to a board for several hours of work on his mouth.' and 'She [the dentist] mustn't follow a plan [of restraining the child for dental treatment] that's inhumane and risky'. What is the basis of such biased and negative opinions of the technique? Why do many suppose that GA is less harmful to the child's well being than treatment with CS and restraint? Are there studies that support these views or perhaps data exists which actually contradicts them. Perhaps today's ethicists are products of a society in which parenting styles have drastically changed and affected their view on such matters? This paper will attempt to address this issue and introduce to the reader the advantages of CS in comparison with the clear disadvantages of GA and some less obvious disadvantages that may be overlooked by both the parents and even some physicians.

The situation in the UK appears to be different and the use of physical restraint is presently not acceptable.

Before proceeding, a description, of how widespread the use of physical restraints coupled with CS is, will be presented.

USE OF PHYSICAL RESTRAINTS

A recent national survey of members of the American Academy of Pediatric Dentistry revealed that approximately 75% of the respondents indicated that they used some form of physical restraint during the sedation procedure.[5] This number was only slightly less than the number (82%) that indicated use of physical restraint in a survey conducted in 1995. The study concluded that there is an overall increase in the use of sedation in the US. In another survey of US paediatric dentists' management of children 3 years of age or younger, 73% of the respondents replied that they use a Papoose board or other restraints on their patients.[6] The Guidelines of the American Academy of Pediatric Dentistry[7] state that partial or complete immobilization sometimes is necessary to protect the patient, practitioner and/or the dental staff from injury while providing dental care. In the US, the courts have considered restraint a proper modality for healthcare when an appropriately documented decision to use it is made by a physician or a dentist.[8]

The situation in the UK appears to be different and the use of physical restraint is presently not acceptable.[4] However, in the UK all dental treatment requiring a general anaesthetic has recently been limited to a hospital setting, which has immediate access to critical care facilities, by law.[9] This has amplified the need for conscious sedation as a method of anxiety management for young children. A recent survey confirmed that there is an increase in the use of conscious sedation in the UK.[10] Previous authors have investigated trends in the provision of primary care dental general anaesthesia (DGA) and sedation in the General Dental Service and Community Dental Service following the revised guidance from the General Dental Council. The findings indicated a substantial reduction in the numbers of DGA by 75% between the first quarter of 1997/98 and the first quarter of 1999/2000, with the number of sedations increasing fourfold during the same time period.[10,11] As an adjunct to conscious sedation, the use of passive restraint in the UK should be revisited and reconsidered. It may facilitate success of CS and thus contribute to decreasing the amount of referrals of children to hospital for GA.

The key to accepting restraint with CS is the understanding of the rationale behind its use.

THE RATIONALE OF THE USE OF PASSIVE RESTRAINT WITH CS

The purpose of the use of restraint on patients receiving sedation is to pre-emptively intercept possible disruptive movements that can result from reflex responses or child resistance rather than rely on deeper sedation or GA to override opposition. It is suggested that the Papoose Board (or Pediwrap), which is defined as passive restraint, only be used if it is coupled with conscious sedation. CS is employed to lessen irrational fears and anxiety to the point that the medical care may be administered in an effective way. The use of a restraining device with a patient who is under this reduced degree of consciousness succeeds in stabilizing the child and allowing a successful safe treatment. The goal, however is not only to enable treatment to be performed but also to establish a positive psychological response to treatment. The child is not 'violated' by the restraint, rather the patient is assisted to obtain the treatment he or she is in need of. It follows that the use of local anaesthesia is always used when employing this technique to ensure that no pain be experienced by the patient during treatment.

Perhaps the following anecdotal descriptions can bring home the point:

'The first case involves a 4-year-old child who was unsuccessfully treated by a general dentist who used restraint without any premedication or local anaesthesia. The parents turned to a qualified pediatric dentist for assistance. The child was successfully treated with restraint and CS. After treatment, the child was asked by his mother how he feels? He answered that he did not like the previous dentist. Why, asked the mother? The child answered, because he tied me up! But this dentist did the same, said the mother. The child answered, no he didn't, he put a blanket on me and helped me not to move so he could fix my teeth and they won't hurt me anymore. The child was subsequently seen throughout his childhood at the same dentist and became an enthusiastic dental patient with good dental health.

The other incident involved a first year resident that was treating a 3-year-old child under CS with restraint. At the beginning of treatment the restrained child was crying. Later, the attending dentist entered the treatment room and observed that the child was quietly being treated but the restraint had been opened. When the resident was asked why she had removed the restraint she answered that she wanted to reward the child for calming down and stopping to cry. The resident quickly added

when she saw the look of disapproval on the face of the attending dentist that she had warned the child that if he began crying again the restraint would be immediately secured. The resident was subsequently taught that she had misused the restraint. She viewed it as a punishment for the sedated child and not as an aid. The child should be made to view the 'blanket' as being comforting, allowing the sedative to facilitate his state of relaxation and allow treatment. In this case, the entire concept of restraint was not understood by the doctor using it. A child will sense any hesitation on the part of the care provider. It is essential that the doctor be confident that the treatment he is giving is both morally correct and for the benefit of his patient.

Let us now review the risks of GA and try to weigh them against the supposed disadvantages of CS.

RISKS OF GA AND CS

Although it is generally accepted that GA is relatively safe when administered in a hospital setting, it is not without risk of complications. One of the most frequent questions asked of a paediatric anesthesiologist is 'What are the risks of general anaesthesia for my child?'.

Unfortunately, few studies have examined the consequences of general anaesthesia in children. However, no medical authority would disagree that general anaesthesia involves a certain element of risk and major complications may occur, even life-threatening complications such as allergic reactions and bronchospasms. There is an increased risk for paediatric patients.[12,13]

The risk of death in all children undergoing hospital GA is high and ranges between 2 and 6 per 100,000 anaesthetics.[14] Setting aside the increased risk of major complications, one must also consider, nonetheless, non-life threatening complications that routinely occur and may be expected.

Sore throat and pharyngitis are common occurrences and are due to the intubation procedure, which often may cause damage to the pharyngeal wall. During dental procedures, nasotracheal intubation is the method of choice since it does not restrict the operating field during dental surgery, however, it can cause trauma and dislodgment of adenoidal tissue. Damage to adenoidal tissue can increase the risk of postoperative infection, bleeding and sore throat.[15]

The risk of death is much lower in CS. A recent study[16] showed that minimal minor adverse events occur with an oral sedation regimen.

The conclusion that one must derive from the data presented is that parents, when subjecting their child to GA, are exposing their child to increased risks and complications. How can one explain this trend? Perhaps it is due to their assumption that restraint with CS will psychologically affect their child thus justifying the increased risk of GA but a review of the scientific evidence may prove this reasoning wrong.

EFFECTS OF CS ON FUTURE PATIENT BEHAVIOUR

Despite a widespread assumption that the use of restraint with CS may affect a patient's self-respect and leave psychological scars which may cause a change in their personality and behavior, there has been little clinical study of the influence of either method of treatment on the child's future dental behaviour.

Studies[17–19] conducted regarding this issue have shown surprisingly different results than one would expect. The results of these studies support the view that conscious sedation with physical restraint does not affect the future dental behaviour of children in a negative manner.

Children undergoing CS with restraint and separation may remember their treatment, but the majority will not view it as being difficult or bad. These children may develop into co-operative and even enthusiastic patients. Sedation, regardless of its effectiveness or the time elapsed between the sedation and future dental treatment, did not lead to negative behaviour or dysfunctional strategies for coping with fears or anxieties in the dental setting.

On the other hand, children who had been previously treated with GA had a poorer level of co-operation and acceptance than those who had conscious sedation. Children who have conventional treatment more often show a lasting positive acceptance than do children who had received GA. How can one explain these seemingly paradoxical results?

One suggestion may be that children undergoing GA probably do not experience the positive feeling of having coped with a difficult situation by their own efforts and thus were not given the possibility of changing their negative attitude towards dental treatment. Or perhaps a child may fail to develop any personal relationship or attachment to the surgeon when being treated in the operating room in a hospital in comparison with treatment administered in a familiar and non-threatening dental office.

Based on the conclusions of these studies, parents may be reassured that there is no difference between GA and CS in regard to a child's future behaviour. If their child visits a dentist who will employ the wide spectrum of management techniques including: tell-show-do, positive reinforcement and desensitization in a gentle manner with patience and skilful confidence their child has the potential to evolve into a co-operative and enthusiastic dental patient regardless of their experience of being restrained with CS.

So we see that CS is safer than GA and actually may allow children to become co-operative patients. Increasing awareness of the potential risks of general anaesthesia led researchers to develop alternative methods[20] and should lead parents to accept perhaps controversial but safer methods to treat their child. Are parents open-minded to consider them? Why is it 'so obvious' to parents as well as to ethicists that restraint is a bad thing? Do parents make the right decisions for their children with regard to restraints? Not always.

A child's discomfort and cries may cause many parents to make irrational decisions. For example, it is a well-known fact that car restraints are essential for safe transportation of children. One may assume that the majority of parents are aware of state laws regarding child restraint in private vehicles. Yet, motor vehicle crashes were the leading cause of death for all children in Arizona over 1 year of age and only 18% of child passengers who died were known to be appropriately restrained.[21] I will consider the parents and their influence on their child's treatment in the next section.

THE PARENT'S CHOICE AND APPROVAL

The single most important issue in the informed consent of a paediatric patient is the question of who decides. Treatment decisions in the paediatric setting are supposed to be guided by the best interests of the child. Society deems parents the default decision makers for infants and children. This may not always be the ideal. Considerations of financial expense and psychological stress on parents are often the dominant forces in the decision-making process.[22]

The subject of this discussion, the decision to use a general anaesthetic or CS, is often subject to parent bias regarding its safety, costs and practicality.[23] For example, children treated under GA will achieve their treatment during a single session. Parents may opt for such treatment in comparison to prolonged and numerous treatment sessions and ignore concerns about the safety of each mode of treatment. Dental phobic parents may be so affected by their dental anxiety that they are unable to comprehend the advantages of CS.

Another mistaken parental assumption is that GA allows for optimal condi-

tions under which dental treatment can be performed. Yet restorative failures are not uncommon. Studies report that between 9%[24] and as high as 39%[25] of children who had been treated under GA needed to be retreated within 18 months or sooner from initial treatment.

Treatment under GA may include a less than obvious negative aspect. Once treatment is completed under GA, parents may not perceive the need or importance for homecare prevention and many fail to keep appointments for this purpose and low return rates for follow-up have been reported.[26] Perhaps, this may be attributed to the feeling some parents may foster following GA of false confidence that the treatment rendered in a hospital in the operating room under GA is of a more permanent nature than in the dental office. The child also may fail to develop any personal relationship or attachment to the surgeon when being treated in the operating room.

THE PARENTING COMPONENT OF THE PROBLEM

Increasingly, the acceptability of behaviour management techniques is being held to the reasonable parent's standard and not to adherence to the professional community standard for determining acceptable behaviour management practices.[27] The role of parenting in healthcare and health behaviours is now well established and has been noted by the medical community. With the emphasis on children's rights and the increasing participation of parents in the decision process, the attitude of parents toward behaviour management constitutes an important factor when a method of treatment is selected and parents need guidance in the decision-making process. The past decade has seen a revolution in public and professional attitudes toward the management of children, which may not necessarily be for the benefit of the child. Paediatric dentists overwhelmingly report changes in parenting have occurred during their practice careers and these changes were regarded as negative.[28] Parenting changes have affected child behaviour and thus the practice of paediatric dentistry. Divorce, parental fatigue, and a hurried lifestyle prevent parents from setting limits and providing consistent discipline. Children do not have consequences for their behaviours in today's child rearing paradigm.[29]

Dentists have shifted their behavioural management techniques to less assertive ones as a result of perceived parenting changes. This may be the result of a protective response to counter more involved and difficult parenthood and not be for the benefit of the child.

The use of GA in managing difficult children has increased.[3] Rather have their child face a difficult situation and teach their child to cope and overcome their fears, today's parent may prefer to avoid the stressful situation and opt for GA. It is the paediatric dentist that must assist them in their decision making and be aware of the advantages and disadvantages of each method.

THE ROLE OF THE DENTIST

Parents' misconception of restraint is embedded so deep in their minds that although much evidence may be brought to justify its use they still may prefer the GA option. However, the dentist may play a role in the decision-making process and increase the parent acceptability of restraint with CS:

- Parental attitudes can be influenced by the way that proposed dental behaviour management procedures are presented.[30] Personal oral delivery of information is most likely to result in parents who feel well informed and who are likely to provide written consent.
- The acceptability of a management technique will differ with the parent's assessment of the necessity and severity of treatment need. As a procedure becomes more mandatory for the child's well being and comfort, more techniques become acceptable and the percentage of parents approving the techniques increases.[31]
- Also, parents should be informed that when treating a child under GA, the dental surgeon will prescribe a more radical and aggressive approach of treatment to avoid future treatment failure and the need to return to the OR. Thus, parents should be made aware that children under GA will be treated with more extractions and crowns than those who will be treated under CS.
- Another concern of parents with the use of CS and restraint is their perception that a child's crying is indicative of pain. Many parents may object to the use of restraint and sedation if hysterical, interfering child's behaviour including crying, and body and extremity movements may be expected and perhaps cause their child psychological trauma. However, parents should be reassured that crying is not necessarily related to a child's pain. Crying is a form of communication. While infants cry from need, toddlers and preschoolers generally cry out of frustration. Toddlers seek independence and may scream in protest at losing the power he or she has enjoyed since birth. Power struggles that include crying are not limited to the dental office and may occur over toilet training, eating, sleeping and separating.
- And finally, parents need to be told that successful sedations do not mandate complete and absolute patient immobility or somnolence.

CONCLUSIONS

- Safe and effective use of sedation in combination with restraint and local anaesthesia is a realistic alternative to general anaesthesia for many outpatient procedures.
- The use of GA should be reserved for use when sedation attempts are inadequate or believed to be high risk or inappropriate.
- The goals of CS should be understood and parents should not have false expectations.
- Sedation is usually successful and although a child under conscious sedation may cry during treatment they experience no pain and only minimal discomfort.
- It is suggested that the Papoose Board, which is defined as passive restraint, should only be used if it is coupled together with conscious sedation and local anaesthesia.

If GA is preferred by the parents they should be told to consider:

- The increased risks involved with GA.
- The treatments prescribed will be more aggressive and radical (for example in dentistry: extractions, crowns).
- Children who have conventional treatment more often will show a lasting positive acceptance than do children who receive GA.
- Returning to the dental clinic for preventive treatments is essential since the child treated for early childhood caries is highly susceptible to the disease.

Let us conclude our discussion with two descriptive cases (see boxes for Cases 1 and 2). These cases are hypothetical and are not scientifically representative of the outcome of each form of treatment. However, they are illustrative of the author's personal experiences in daily practice. *Which method would you choose for your child?*

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Case 1 Hypothetical case description of conscious sedation with passive restraint

Sara, aged three and a half, arrived for the sedation appointment with her mother at 8.30am. She was fasting since midnight. She refused to take her syrup from her mother and was forced to swallow her medication via a syringe, lying back. Her mother pinched her nose closed; the dentist squirted the medication slowly into her larynx. The child cried, but eventually swallowed all her medication.

Sara continued to cry and was given a sticker as a reward, which partially helped her calm down. She played in the waiting room for 45 minutes and went to the bathroom.

Later in the treatment room Sara was placed on the Papoose Board and covered with its 'blanket' and wristbands. Sara cried out for her mother, but was distracted by the nasal mask and was asked what smell she would like to have chocolate or strawberry?

Sara was reassured that her mother was waiting for her and that, as soon as her teeth are fixed, she will go home. Sara screamed and the dentist immediately requested of the child to be quiet and breathe through her nose with her mouth closed. Minutes later, the child was calm.

Sara was quiet, but during local anaesthesia she again cried out but she immediately calmed down. Fifteen minutes later into treatment, Sara closed her eyes, but was easily arousable when talked to. Towards the end of the treatment the child again started to cry constantly. All planned treatment was completed.

Sara was sweating and flushed with signs of the nasal mask and wrist restraints showing. The mother, who was prepared for such a scenario, received the child with a smile and reassuring words.

Sara then left the office upset and crying. She went for a walk with her mother and returned one half hour later, alert and calm. Sara selected a present from the dentist, said thank you and left for home.

Sara returned to clinic 3 weeks later for another session of conscious sedation to treat the other half of her mouth. The visit was similar to the first. She then returned 1 week later for a post-sedation follow-up exam and received praise and a present.

Sara is now 6-years-old and has been coming to the dental office for biannual check-ups. She has just completed placement of four sealants on her 6-year molars and tolerated the procedure well.

Case 2 Hypothetical case description of dental treatment under general anethesia

Jessica, a 3-year-old, only child is very unco-operative. She refuses to communicate with her dentist during her initial exam and exhibits defiant behaviour. Her parents in general, do not like to demand of her nor reprimand her. They have decided to have her dental treatment preformed under general anaesthesia in a hospital.

A month later, Jessica is admitted to same day surgery. She is hysterically crying and extremely frightened. The admitting nurse requests she change into a hospital gown and the anesthesiologist administers a sedative in suppository form to calm the child.

Jessica is brought into the typically stark, green colored operating room clinging to her mother and is placed on the operating table. Her mother continues to hold her hand, but Jessica is very drowsy and incoherent. The anesthesiologist places a mask on Jessica's face covering both her nose and mouth, forcing her to inhale the anaesthetic. She resists and tries to pry it off her face but eventually succumbs and her little body goes limp.

The mother is whisked away and escorted to the waiting room. Now that the mother is out of the room the anesthesiologist gets to work. He must work quickly for this is one of the most crucial parts of GA: intubation. He takes his laryngoscope blade, pries open Jessica's mouth and begins to insert through her nose a nasotracheal tube which will continue and enter through the back of Jessica's throat, perhaps scraping some adenoidal tissue on the way, and eventually reach Jessica's trachea. The tube is now connected to the inhalation machine and Jessica is thus ventilated. An intravenous line is inserted in her arm and monitors are placed on her surgically wrapped body.

The dentist begins his treatment. The treatment plan is radical, including extractions and crowns, since that is the routine approach when performing dental treatment under general anaesthesia.

Two and a half hours later Jessica awakens in the recovery room, her mother by her side. Her throat is sore and she has a taste of blood in her mouth. She is swollen throughout her mouth, since the entire mouth was treated. Eventually, Jessica is released home.

Although Jessica's parents were told to return for a follow-up exam they did not. They had promised Jessica that she would not have to return to the hospital ever again. The entire experience was very 'traumatic' for them and Jessica. A year later, Jessica complains of a toothache....

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The previous article describes a philosophy for treatment that would be unacceptable in the UK, and to ensure that readers appreciate the UK situation the following two articles were commissioned by the Editor of the *BDJ*. The first describes a perspective on current thinking in the UK with regard to the general treatment of children, with an emphasis on sedation. The second looks at the legal implication in the UK to restraint.

A UK perspective

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Within the United Kingdom it is well recognised that the process of receiving dental care may be anxiety provoking. The reason for this includes fear of pain, a feeling of vulnerability or lack of control and many other factors. In children, anxiety can derive from a negative influence from peers or relatives and also from their own experiences. The need to prevent such anxieties in early life and establish a positive and fear-free attitude towards dental care is essential in establishing continuing care for life. Two basic concepts underline the treatment of children.

- It is important to treat children in a way that encourages them not to be afraid of the dentist.
- If they are afraid they should be treated in a way that encourages them not to be afraid of the dentist.

The generally accepted approaches to patient management using local anaesthesia are:

- The use of tender loving care (TLC) and a variety of behavioural management techniques.
- The use of these techniques along with *effective* conscious sedation, such that care can be properly carried out and without causing anxiety to the patient. The effectiveness of the conscious sedation technique is of paramount importance.

A half effective technique may be the worst of both worlds, as it may be regarded as a failure by the patient and further enhance anxiety.

To be effective the treatment should be acceptable to not only the child and parent/carer but also the whole dental team. The use of conscious sedation in the UK requires techniques that provide a calm and controlled response within the child such that treatment can be safely and effectively completed.

Acceptability of treatment to the dental team within the UK would not include the use of restraint. This is not necessarily just a reflection of the current expectation of present day society but a professional stance. The image of the professional dentist using restraint is one that is considered inappropriate, unattractive and one that UK dentists would find repugnant.

In the course of treatment, reassurance may be required through physical contact by the dentist and/or nurse. The use of restraint would not be considered to be a reassuring and comforting technique by dentists in the UK. On the contrary, such a policy would be regarded as one of creating anxiety rather than a management strategy to alleviate anxiety. The child may cry for reasons that are not related to fear or anxiety but rather stem from the child's self interest ie 'I want my own way'. In such situations a positive management technique may well be appropriate but physical restraint crosses the boundaries of what is considered acceptable in terms of civil liberty for the child.

In the UK, children are often treated as part of a family and although under parental care, even at a young age the wishes of the child as an individual in their own right are both respected and protected. An expression of resistance may also be considered in many ways a natural response as it may reflect the normal development of the child ('terri-

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ble twos') and with patience and good effective management may be transformed into an accepting child and grateful parent.

The quiescent and extremely reserved child who offers no communication is probably more of a worry to the UK paedodontist than the lively resistant youngster. A child's freedom of will whilst on some occasions is regarded as inconvenient remains an essential tenant of UK society.

It may be suggested that a modern attitude towards children is softer than in years gone past and this fosters the 'nanny society'. Pain threshold varies between societies and cultures. Tolerance of discomfort is almost certainly a requirement for dental treatment and may be considered to be at one end of the spectrum of the pain threshold.

There may be an unwritten perception in some cultures that a low pain threshold is considered weak and reflects inadequacies in a person and that a high tolerance to pain is an admirable quality. However the days of dental treatment without the use of local anaesthetic along with the child management line of 'don't make a fuss' or 'be good' are surely something now to be avoided. Far from strengthening resolve such an approach may have created many of our dentally anxious patients. Fear is a protective and natural response and not a sign of weakness.

Situations of conflict arise when it is considered in the interest of the child's health that action is taken against the will of the child. Weighing the balance between the child's best interest against the will of the child when reaching a decision has a professional and legal aspect. The extent to which the professional aspect (of the child's best interest) is pursued may depend on the severity of the condition and the effectiveness of the proposed treatment and/or prevention.

For example in the case of treatment of a grossly decayed lower first molar in a seven year old various options are available. Restoration or extraction with: local anaesthetic, local anaesthetic with effective conscious sedation, or general anaesthesia. If the first two are not possible due to the child's non-compliance then the general anaesthetic route would be appropriate. The use of conscious sedation with restraint to avoid general anaesthetic 'at all costs' would be considered to be a totally unacceptable technique in order to affect what is considered best for the child (getting the job done).

The idea of general anaesthesia in the UK for dental work is very tightly controlled. Current standards demand facilities such as proximity to critical care, which is a requirement not necessarily applied in other surgical specialities. Contrary to some popular feeling general anaesthetic is a safe procedure. At a risk level of 1:180,000 death relating to general aneasthesia is less risky that death relating to, having an accident at home (1:11,000) or on the roads (1:8,000).[1] Although of course such statistics enable us to make these dispassionate comparisons, for the very rare case where death of a child occurs, for the parent of that child the tragic loss is 100%. Therefore although general anaesthetic is a safe procedure, it is a further intervention and its use should be carefully considered.

The opening premise to this comment identified a need for the management of anxiety in some patients attending for dental care. Conscious sedation without the use of restraint is an excellent technique for safely providing an environment of calm control in which good dentistry can be provided. This is well recognised in the United Kingdom where both intravenous and inhalation sedation are taught at undergraduate and postgraduate level. Conscious sedation is as essential to dentistry as are windscreen wipers to a motorcar, both in their own way wiping away the tears and making things clear. It is interesting to learn of different approaches to pain and anxiety management which may be well accepted in other cultures and societies but which are completely unacceptable within UK dentistry.

1. Jenkins K, Baker A B. Consent and anaesthetic risk *Anaesthesia* 2003; **58 :** 962-984.

A commentary on the legal issues

C. D. N. Morris[1]

A starting point to this discussion must be the recognition within this paper (and confirmed in the accompanying commentary *'A UK Perspective'* by Graham Manley) that the use of restraint combined with conscious sedation would not be acceptable practice in the United Kingdom. The authors justify the use of this technique primarily on the grounds that they say it is a preferable alternative to general anaesthetic which carries a higher risk of mortality/morbidity.

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The legal issues this paper throws up include:

CONSENT

This is not the place for a detailed review of the law of consent as it impacts upon children. However, put briefly, a practitioner is not entitled to treat a patient without the consent of somebody authorised to give that consent.

If he does so, he will be liable in civil law for trespass to the person and may also be guilty of a criminal assault *(Re R (A Minor) (Wardship: Medical Treatment) [1992])*.

A child over 16 is presumed by law to be competent to give consent to treatment under the Family Law Reform Act 1969, Section 8 (ie unless proved otherwise).

A child under 16 who is considered to be 'Gillick competent' can give consent to treatment on his or her own behalf.

The question of competence is a matter of fact in each case and requires the demonstration of sufficient maturity and intelligence to understand the nature and implications of the proposed treatment.

The general position is that anyone with 'parental responsibility' (defined in the Children Act 1989) for a child can give valid consent to the treatment of that child.

In practice, a dentist considering the use of this technique is likely to encounter a number of potentially difficult problems in relation to consent issues. These are likely to include facing a situation in which the child's consent is not forthcoming and the practitioner will need to consider whether that refusal can be overruled by parental consent. Further complications may arise if two parents

disagree between themselves. These types of issues would require consultation with the practitioner's defence organisation to seek appropriate advice, before treatment is provided.

In order to give valid consent a patient (or perhaps parent in the relevant circumstances) needs to understand, in broad terms, the nature and purpose of the procedure being proposed *(Chatterton–v- Gerson (1981))*. If the person giving their consent has this broad understanding and is both acting voluntarily and is competent, then their consent will be real.

Compliance with professional guidelines relating to consent issues is also mandatory (see further below). The GMC, for example, now offers specific guidelines on *'Seeking Patient's Consent: The Ethical Considerations'*.[1] The General Dental Council's guidance on professional and personal conduct *'Maintaining Standards'*[2] has this to say about obtaining consent:

> *'3.7 A dentist must explain to the patient the treatment proposed, the risks involved and alternative treatment to ensure that appropriate consent is obtained.*
>
> *If a general anaesthetic or sedation is to be given, all procedures must be explained to the patient. The onus is on the dentist to ensure that all necessary information and explanations have been given either personally or by the Anaesthetist/ Sedationist. In this situation written consent must be obtained'.*

There is also further reference to consent issues elsewhere in the Guidance.

Applying the above principles to the use of restraint with conscious sedation in children, it is essential to understand and emphasise that such treatment could only be provided once valid (or real) consent had been obtained (and subject to other considerations set out below). If such consent has not been obtained, or has been refused, then for a practitioner to proceed with such treatment would render him potentially liable to both *a civil claim* and *a criminal charge*.

THE PROFESSIONAL REGULATORY POSITION

Even if valid consent is obtained, a practitioner providing treatment of this type would have to recognise that according to the commentary *'A UK Perspective'* this form of treatment would not be acceptable in the United Kingdom. The General Dental Council's *'Maintaining Standards'* needs to be considered in light of this background.

'Maintaining Standards' includes a requirement that a dentist must act to protect patients when there is reason to believe that they are threatened by a colleague's conduct, performance or health and notes that the safety of patients must come first at all times and should override personal and professional loyalties. Arguably, if a colleague became aware that a practitioner was pursuing a type of practice which was unacceptable in the UK, they would need to take steps under this Guidance.

Secondly, *'Maintaining Standards'* notes that a dentist has a responsibility to put the interests of patients first and the assumption must be that a dentist will act in the best interests of their patient. It could be argued that by adopting practice techniques that are not acceptable in the UK, this duty is being disregarded.

Thirdly, and perhaps most importantly, *'Maintaining Standards'* states that:

> *'3.10 There can be no justification for intimidation or, other than in the most exceptional circumstances, for the use of physical restraint in dealing with a difficult patient. When faced with a child who is uncontrollable for whatever reason, the dentist should consider ceasing treatment, making an appropriate explanation to the parent or representative and arranging necessary future treatment for the child, rather than continuing in the circumstances'.*

Thus the GDC's own guidance on professional conduct specifically states that only in the most exceptional circumstances could the use of physical restraint be justified. This appears to mirror the commentary *'A UK Perspective'* in relation to the use of restraint and in the writer's view would make any practitioner adopting this technique in the UK vulnerable to both inquiry and potential sanction by the GDC.

FURTHER POINTS

The above commentary is intended only to highlight some of the relevant issues and is not exhaustive. It does not, for example, include reference to potential NHS complaints, NHS disciplinary procedures or Human Rights issues that could arise from the use of this treatment technique.

SUMMARY

In summary it is suggested that any practitioner considering the use of this technique in the UK should seek advice from their defence organisation in the first instance.

1. The General Medical Council. *Seeking Patient's Consent: The Ethical Considerations.* November, 1998. http://www.gmc-uk.org/standards/consent.htm
2. The General Dental Council. *Maintaining Standards — Guidance to Dentists on Professional and Personal Conduct.* General Dental Council, 1997.