Psychosocial considerations of perioperative care in children, with a focus on effective management strategies

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It has long been recognised that hospitalisation can have both short- and long-term negative effects on the psychological, emotional, and physical well-being of a child (Forsyth 1934, Robertson 1955). A committee on the welfare of children in hospital was appointed in 1956, and a seminal report by Platt (1959) urged that there should be a greater focus on the psychological and emotional needs of the child in hospital. Since then, a number of government guidelines in this area have been published focusing on parental involvement in the perioperative care period, the provision of psychosocial support for parents and children in hospital, and improving communication between healthcare practitioners and the families of children in hospital (DH 1984, 1991, 1996).

Despite clear statutory guidance about the responsibilities of NHS organisations in the provision of care to children (DH 2006, 2007), some healthcare practitioners still lack a fundamental understanding of these differing healthcare requirements. This has resulted in the healthcare commission recently reporting that hospitals are making ‘mixed progress on meeting the needs of children’ (Care Quality Commission 2009).

The pre- and post-hospital care provided to children has also been found to differ from hospital to hospital. The increasingly multicultural society that most of us have come to live and work in has raised a greater need to address the trans-cultural issues that may arise in the perioperative care of children (Royalle 1988).

This article briefly summarises the emotional and psychological impact that hospitalisation has on children and describes the main triggers of the anxiety faced. We discuss the benefits of a preoperative preparation programme and the increasing popularity of day case procedures, as well as looking into difficulties that may arise cross-culturally and exploring the methods that may be used to overcome them.

Anxiety and the benefit of preoperative preparation programmes

Since the early twentieth century, there has been a growing recognition of the potentially adverse psychological impact of hospitalisation on children, including the negative effect that anxiety can have on health (Forsyth 1934, Platt 1959). Between 40-60% of paediatric patients report apprehension at being in hospital, regardless of the country, surgical procedure or healthcare system in question (Bortone & Picetti 2002, Brophy & Erickson 1990, Justus et al 2006). Anxiety can be detrimental to procedures in the perioperative period, delay anaesthetic recovery (Bar-Mor 1997, Justus et al 2006, Voepel-Lewis et al 2003).

Five aspects of hospitalisation that pose as potential triggers of distress in the paediatric patient (Visintainer & Wolfer 1975) have been identified as:

1. Physical harm or injury in the form of pain, mutilation or death
2. Fear of the unknown and unfamiliar
3. Uncertainty about acceptable behaviour in a hospital setting
4. Loss of control, autonomy and competence
5. Separation from parents and the absence of trusted adults.

Below we discuss these triggers of distress in paediatric patients and how the perioperative experience of these patients could be improved.

1. Experiencing pain

Differences surrounding the experience, expressions and behaviours of children in pain exist and need to be recognised (Zeltzer et al 1992, McGrath & Frager 1996). Schechter (1989) reported that ‘the management of pain in children is not addressed with the same vigour and enthusiasm as is the management of pain in adults’, a statement that seems to be echoed in more recent times with the lack of experimental and clinical studies exploring...
Preparation programmes for children have been shown to reduce patient distress, improve compliance with treatment and recovery.

this issue (Anderson et al 2009). In 2009 however the Association of Paediatric Anaesthetists published evidence based guidelines (APA 2009a,b) on pain management in children recommending vigilance for any indication of pain, children’s self-report of their pain where possible, use of validated pain assessment tools, and assessments, recordings, and re-evaluation of pain at regular intervals.

Medical staff should be well-trained in pre-emptive and early administration of analgesia appropriate to the level of pain experienced. For minimally invasive procedures the application of EMLA (eutectic mixture of lidocaine and prilocaine) cream one hour prior has been shown to be beneficial, whilst the use of Feldene Melt (piroxicam), for patients who are nil-by-mouth, to reduce preoperative and postoperative pain is favourable to children, given its sherbert-like taste (Woodhead & Wicker 2005). In patients who are not nil-by-mouth, paracetamol and ibuprofen is commonly used.

2. Unfamiliar settings

Anxiety often arises from exposure to unfamiliar locations and uncertainty surrounding medical procedures. LeRoy et al (2003) identified particularly stressful points for children as including venepuncture, separation from parents outside the operating theatre and induction of anaesthesia. Much of this anxiety can be mitigated by consistently providing factual information and emotional support prior to each stress point. A study with intervention consisting of continual supportive care in combination with information rehearsal proved to be ‘significantly superior to the control group on most outcome variables’. Information rehearsal incorporated descriptions of hospital routine, event sequences and staff roles. It also aided parents in successfully communicating all this information to their child (Visintainer & Wolfer 1975).

Additional techniques to improve children’s coping strategies within the hospital setting include familiarising the child with surgical and anaesthetic equipment in ‘medical play’ (Moushey et al 1988) and the use of information films and leaflets (Bar-Mor 1997). Children’s books may be a useful starting point for individual hospital-based programmes, while older children may appreciate computer or web based programs specific to the treatment they are to receive, with a further opportunity of viewing the operating theatre and equipment they are likely to see (Justus et al 2006). Techniques used to reduce anxiety in the anaesthetic room before surgery include distraction using bubbles, books and DVDs, and familiarisation using the child’s own toys or teddy bears. Distress due to unfamiliarity of the hospital setting can be diminished both by ensuring referral to a hospital close to the child’s home (Hatch & Rollin 2000) and by preadmission visits to the ward. Allowing children to bring their own possessions to hospital also strengthens the feeling of familiarity to some extent.

Day case surgery has a role in alleviating some of the stresses associated with the hospital stay and is discussed later.

3. Uncertainty about appropriate behaviour for a hospital setting

The impact of hospitalisation and surgery in children goes beyond the single experience and can influence future interactions with healthcare professionals, trust in the healthcare system and responsibility for their own health (Bar-Mor 1997). Preoperative anxiety behaviour is not solely modelled around present interactions but also in relation to their past experiences and the sensed anxiety levels of the guardian(s) present (Justus et al 2006). Anxiety at anaesthetic induction has been associated with negative behaviour postoperatively such as rebellion against authority, difficulty sleeping and psychological upset (Kain et al 1999, Bortone & Picetti 2002). In a further attempt to minimise anxiety perioperatively, play specialists may be involved early on; an approach that has been shown to be effective for both the child and parent alike (Thorne 1991, Bortone & Picetti 2002).

4. Loss of control

Children should be encouraged to have a sense of control over their healthcare as this has been shown to reduce anxiety and lead to greater compliance with treatment. This can be supported by giving them choices where possible. The healthcare provider should explain procedures to both the guardian(s) and patient in a manner suitable for their developmental age, encouraging a two-way dialogue and thus including them in their care plan.

Preparation programmes for children have been shown to reduce patient distress, improve compliance with treatment and recovery, and increase parental satisfaction of healthcare (Bar-Mor 1997). Specific preparation programmes should be implemented in all hospitals caring for children and use a mixture of factual information in various formats including role play and emotional support to restore some sense of control and independence into the child’s mindset. Familiarity with the ward, anaesthetic induction room and equipment will decrease anxiety, and a preadmission visit will enable parents and children to ask questions in a warm and supportive atmosphere (Woodhead & Wicker 2005).

There are a large number of patient and parent help groups, and a vast amount of information on anaesthesia and other aspects of hospital care is available on the worldwide web. The Royal College of Anaesthetists publishes a number of patient information leaflets on anaesthesia for patients and relatives and these are available from their website.

5. Separation from parents

The adverse effect of parental separation in the hospitalisation of children was elucidated in the early twentieth century, Platt (1959) recommended that parents be allowed to remain with children in hospital with suitable accommodation provisions. Many paediatric wards are able to provide an additional bed for one parent to stay with their child in some bays/siderooms. However, given the practicalities, cost implementation and viability of parental accommodation for all paediatric patients in hospitals nationwide, the step towards increasing the day case surgery load has largely avoided this issue.

Anaesthetic induction is a particularly stressful period for children and parental presence reduces the anxiety of being in an unfamiliar environment as well as decreasing the need for premedication. Studies suggest that most parents wish to be present at induction to assert their role.
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Wolf (2009) comments on a number of randomised controlled trials which indicate that routine parental presence is not beneficial. However, the parent has a right to be present. While older studies promote the use of premedication as superior to parental presence, a more recent study has shown that combined parental presence with cognitive preparation methods is equally as effective as premedication. This intervention system requires considerable funding due to specialist training with psychologists and as a result has not been implemented in any hospital to date. Lack of evidence to support a long-term benefit of parental presence during anaesthetic induction is reiterated elsewhere (reference?), however the combined effects of increasing parental participation and decreasing anxiety suggests the importance of active parental involvement in children’s healthcare in hospital (Thornes et al 1991, Piira et al 2005, Alspow-Shields 2000). This benefit is not universal and does depend on the personality of the parent (Wolf 2009). In the UK the majority of children are accompanied to theatre by one or more parents, and The Association of Anaesthetists of Great Britain and Ireland recommend that this is offered to the parents as a standard of care. Theatre staff can play a pivotal role in supporting the parent allowing them in turn to reduce the child’s anxieties.

Day-case surgery

There has been a continued drive to allocate more procedures to day-case units for a multitude of reasons, including reduction in the chance of any negative outcomes from surgery (Justus et al 2006) and to decrease financial spending. Further advantages of day-case surgery include less child-parent separation and decreased risk of nosocomial infections (Zuckerberg 1994). This increasing trend towards day-case surgery where possible, requires a specific day-case protocol tailored to the paediatric patient. The document ‘Just for the day’ outlines 12 quality standards which serve as a practical guide to caring for paediatric day-cases. It states the necessity of a preadmission visit, of written information for parents to help outline their important role in their child’s care, of separation of children from adults cases and elective day-case from acute cases, and of the importance of staff trained in day-case and paediatric care (Thornes 1991).

Prolongation of day cases into overnight admission usually results from a complaint of nausea or actual vomiting. The subjective symptom of nausea must be explored in the child’s words prior to admission so that optimum relief can be provided. In 2009, the Association of Paediatric Anaesthetists published guidelines on the prevention of postoperative vomiting in children. Optimal control of symptoms can be achieved with a mixture of pharmacological and non-pharmacological management (Keller 1995). Observation of fluid balance, intravenous anaesthetic induction with propofol, avoidance of opioids and use of dexamethasone, ondansetron or droperidol as an antiemetic have also been shown to be effective (Kovac 2007, Patil 2007, Woodhead & Wicker 2005). Routine checks of physical health, weight, age and exploration of psychosocial issues are also important for assessing the suitability of paediatric day-surgery unit admission to ensure that their needs can be sufficiently met.

Emergence agitation

The phenomenon of emergence agitation including thrashing, unsettled behaviour and distress upon recovery from anaesthesia has an impact on both psychological and physical recovery (Voepel-Lewis et al 2003). We recommend that parents be informed of the possible post-anaesthetic behavioural changes and prepare them for how their child will look following surgery, to avoid parental distress. The healthcare team should also be aware of these behaviours and have a plan for dealing with particularly difficult behaviour in the postoperative period. Some of the possible causes include anxiety in the young child, midazolam premedication and sevoflurane anaesthesia. A recent meta-analysis found that propofol, ketamine, fentanyl, and preoperative analgesia had a prophylactic effect on emergence agitation, but that the analgesic properties of these drugs do not seem to have a role in this effect (Dahmani et al 2010).

Postoperative agitation could be due to postoperative pain or emergence agitation. Although differentiating the cause of postoperative agitation may be difficult, it also may be unnecessary as treatment with opioids is recommended as the primary strategy for the safe recovering the child (Manworren et al 2004).

Post-hospital care

It is important that sufficient information is provided to the parents or guardians to support them when the child is at home.

Pain is the most commonly cited problem following the discharge of children from hospital, with 50% of children reported to have clinically significant pain post-discharge (Rawal 2001). A combination of poor communication and misunderstanding between healthcare professionals and parents may be the reason that only 8.3% of these children are receiving the full dose of analgesia prescribed. Inadequate delivery of medication within the home setting may also result from underestimation of pain by the child’s parent (Wolf 1999).

Prescribing analgesia according to weight rather than age, as is common practice (Girgis & Sanders 2004), should overcome any significant episodes of postoperative pain in children if the maximum dose has been prescribed and administered. Simple instructions should be given to the guardians and if appropriate, the child. This should accompany basic education of pain assessment and effective administration of analgesia, where the benefits of simple analgesics such as paracetamol and NSAIDS are often underestimated. Pain assessment tools and pain scores can be used by parents as a more formal means of quantifying pain levels and medicating accordingly.

It is important that for those undergoing more extensive surgery as a day-case, provisions are made to extend their stay in hospital if post-discharge pain management is forecast to be an issue. A pain service operating in a hospital may also be of use in...
managing acute pain with the utilisation of extended duration regional analgesia (Wolf 1999). Discharge plans should be discussed with the carers and be in keeping with hospital and community policy to ensure a smooth transition from secondary to community care. Children under the age of five are attended by a health visitor and those older than five are under the care of the district or school nurse (Woodhead & Wicker 2005).

The socioeconomic impact of a hospital stay on the family is great, including days taken off work to stay with the child and the knock-on effects on other members of the family. Adequate support must be given, either through automatic hospital follow-up appointments or referral to a community practice. Healthcare professionals should be intimately acquainted with the needs of the individual child and their family, ideally with input from social services.

Once a child is discharged from hospital, the responsibilities of care come to lie with the parents and family of that child. In addition to financial and healthcare backing that may be on offer it is also vital that psychosocial support is made available to the family as a whole, not only post-discharge but throughout the medical journey. Counselling services for parents are often a useful means of forming a trusting relationship with the healthcare providers and can be a form of healthcare education (Bar-Mor 1997).

Cultural requirements

The transcultural context of healthcare has been widely documented and the healthcare practitioner should understand that the patient’s view of healthcare may be heavily influenced by their personal beliefs. These accounting factors should be reflected in patient management and hospital protocol as far as is practical (Royaltey 1988). The increasingly multicultural environment of hospitals in the United Kingdom means that staff awareness and sensitivity to cultural needs and constraints are paramount and must be actively promoted. Recognition that cultural and ethnic differences can influence a child’s behaviour is also necessary (Woodhead & Wicker 2005).

A balance between cultural constraints and hospital policy must be sought and individual hospitals are best placed to implement a policy sensitive to their serving community. Culinary differences in a transcultural context can be looked into, exploring the child’s likes and dislikes, so that allowances can be made where possible, further fostering a feeling of familiarity within the hospital. On a further practical note, hospitals should ensure that all forms of preoperative preparation are widely available in a number of languages and formats, with the possibility of interpreters or translators to aid communication when English is not the first language of choice (Justus et al 2006).

Looking more deeply into health belief systems, it must be understood in the UK that ‘healthcare’ in different cultures abroad is often largely based upon traditions with some aspects of modern science. It may be the case that foreign nationals coming to reside in the UK bring these ideas and traditions with them and may be somewhat resistant to western input. Health education in such cases must be approached with care and the realistic expectation made that while these individuals may be responsive to the knowledge on offer, their practices are unlikely to change in the short term, if ever (Royaltey 1988).

Conclusion

The importance of addressing the psychological, social and cultural requirements of children in the perioperative period cannot be emphasised enough. Parental involvement is beneficial to child outcomes and strategies to encourage this must be reflected in hospital policy. Well-structured preoperative preparation programmes can help allay the fears and anxieties of both the child and responsible guardian, improve compliance with treatment and result in a higher service satisfaction rate. Post-hospital care programmes should facilitate a seamless continuum of high quality care after discharge from hospital, with community and outreach services continuing a patient specific care package. A comprehensive hospital protocol for day case surgery in children should also exist, providing the same standard of care as for paediatric inpatients.

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