

PERSONAL PRACTICE

Teaching parents how to comfort their children during common medical procedures

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Parents who bring their children to emergency departments often find that the visit is a stressful experience.¹ Not only are parents anxious because their children are ill, but most are also aware that their children may undergo painful medical procedures.¹ In a study of 223 children and adolescents, Humphrey *et al* reported that venepuncture performed on an inpatient service produced high levels of distress among parents and their children.²

Children may undergo many different kinds of procedures in the emergency department, including laceration repair, bladder catheterisation, venepuncture, intravenous cannulation, fracture reduction, chest tube insertion, lumbar puncture, and intubation. Some of these procedures are fairly common, such as venepuncture, and are usually performed when a child is ill, but medically stable. Unlike children with chronic disease, most acutely ill children have little previous experience with painful medical procedures. Neither the child nor his or her parents will be familiar enough with the techniques to help during the procedure. The purpose of this paper is to describe how to teach parents to comfort their children during common invasive procedures. Although our research was conducted in an emergency department, the techniques that we use are also applicable to the inpatient setting and a doctor's office.

Parental preference

Most parents prefer to be present when their child undergoes a painful medical procedure. In a study of 250 parents, conducted in our emergency department, 78% reported that they would want to be present if their child needed to have blood drawn, or an intravenous drip started.³ Of this group, 80% said it would make them feel better, 91% believed the child would feel better, and 73% replied that it would help the doctor. Of the 54 (22%) parents who did not want to observe, 29 (54%) said they would be scared, 22 (41%) thought it would hurt their child, and only two (4%) believed that an explanation of the procedure would help them.

In a second study we observed the doctor-parent-child encounter of 50 children, median age 12 months, undergoing venepuncture or intravenous cannulation in our emergency department.⁴ Only 60% of parents remained

with their children during the procedures. Parents were more likely to stay if they had previously stayed when the child or a sibling had undergone a procedure. Only 44% of parents who did stay were given that option by the doctor, and of those who did not stay 38% reported that doctors asked them to leave. Non-verbal cues by the doctors, such as pulling the curtain closed or turning their back towards parents, were noted in 58% of the encounters in which parents did not stay. The results of this study indicate that the parental decision to stay or leave is often made without discussion with the doctor.

In a third study parents were randomised to three groups: (1) present and taught a specific intervention to help their child during a procedure; (2) present, but with no instructions given; and (3) not present.⁵ The objective of this study was to determine if parents could be taught how to comfort their children (less than 3 years of age) during invasive medical procedures (venepuncture, intravenous cannulation, or urethral catheterisation) and would report that the intervention was helpful and beneficial for the child, the doctor, and themselves. The intervention was based on our clinical experience and published information about pain.⁶ Parents were instructed to sit or stand near the head of the bed, and to talk to and touch their child during the procedure, but not help in restraining their child. They were told that their child might cry but that was 'OK'. They were told not to tell their child that the procedure would not hurt, as 'it is always important to be honest with children'.

The three groups of parents and children (intervention (101 children), present (101 children), and not present (98 children)) were equivalent with respect to all measured sociodemographic variables. Eighty nine per cent of the parents in the intervention group were effective at following the instructions and 93% stated that the instructions were helpful. Only 46% ($p < 0.001$) of parents who were present, but had not been taught the intervention, used similar techniques to comfort their children. Ninety three per cent of the intervention group and 95% of the parent present group reported that they would prefer to be present in the future compared with 53% who were not present ($p < 0.001$). Ninety five per cent of parents assigned to the intervention group reported that they were very or extremely

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satisfied with the care their child received, compared with 81% in the present but not taught group and 90% in the not present group. The lack of any difference between the present and not present groups may indicate that being present, but unaccustomed to the situation and unprepared to help their child, reduces parental satisfaction with care.

The data from this study suggest that parents can successfully be taught how to comfort their children during procedures. Parents report that the information is helpful. Simply asking parents if they want to be present may not be sufficient. Our research shows that most parents do not instinctively know how to help their children cope with painful procedures in emergency departments.

Information about how older children and adolescents cope with painful procedures is limited. We interviewed 91 school age children (mean age 10.2 years) and 111 adolescents (mean age 14.4 years).⁷ They were asked a series of questions about what would be helpful if they needed to have blood drawn. More school age children (21%) than adolescents (8%) indicated that a physical response to the procedure, such as screaming or crying, would be helpful. More adolescents than school age children indicated that they would passively accept the procedure (26% *v* 6%). The adolescents were also more likely to use cognitive approaches, such as positive self talk ('this would hurt, I can take it') or attention diversion, to reduce the pain. None of the school age children indicated that they would use cognitive approaches. Eighty three per cent of the school age children and 47% of the adolescents indicated that they would want their parent present, but only the school age children had specific suggestions for their parents, such as holding their hand. In contrast, most adolescents only required that their parents be present. Finally, the two groups indicated that explaining the procedure to them would be helpful.

The studies that we have conducted indicate that most parents want to be present, though they are often excluded. Parents of young children can be taught how to follow a simple set of instructions that may comfort their children. For older children, and even adolescents, parental presence remains important, though they use many different techniques to cope with painful procedures.

Physician preference

Previous work by our group and other workers indicates that for many procedures, doctors encourage parents to be present. For example, Merritt *et al* reported that of 115 doctors responding to a questionnaire about parental presence during procedures, 58% reported that they encourage parents to stay, 18% encourage parents to leave, and 24% leave the decision to the parents.⁸ Among those doctors who encourage parents to stay, as the perceived degree of invasiveness of the procedure increases, more doctors exclude the parent.

Our work confirms the report by Merritt *et al*.⁸ We found that most physicians and nurses believe parents should always or often be present for venepuncture, laceration repair, intravenous cannulation, and arterial blood sampling, but not lumbar puncture or suprapubic aspiration.⁴ Unfortunately, our observational work (cited above) suggests that fewer parents are present than the responses to these surveys indicate.

Comforting techniques

The techniques used to comfort children and adolescents during procedures should be based on the cognitive and developmental age of the child. Regardless of the age of the child, parents should be encouraged to be present.

For infants, stroking and soothing may be helpful. There are data indicating that the vital signs of infants return to baseline quicker after stimulation if the infants are stroked and rocked.⁹ In addition, the use of a pacifier and swaddling has been found to reduce the pain elicited distress of heel sticks in 2 week old infants and the pain associated with immunisations in 2 month old infants.¹⁰ For preverbal children, stroking and soothing again may be helpful, but diversion can also be tried. Many young children can be distracted by a song, story, or jewellery.^{6 11} School age children and adolescents should be asked what would be helpful. They use a myriad of coping strategies, including physical response (crying or screaming), passive acceptance (grin and bear it), cognitive processes (positive self talk, imagery), avoidance (close eyes and don't look), and active control (squeeze a hand). These children should be encouraged to use a technique that they indicate would be helpful with the procedure.

Teaching parents how to use comforting techniques

Many parents are anxious when their children undergo a medical procedure.¹ They need to be encouraged to stay during the procedure.¹² Even though some parents instinctively use good coping strategies, many seem overwhelmed. Teaching them how to help their children cope with invasive procedures will reduce their anxiety and enhance parenting skills.

Parents have been able to follow a brief set of instructions encouraging them to sit at the head of the bed and to talk to and touch their child. Parents should not be involved in restraining their own child. We believe that if parents help to restrain their child during a procedure, the child may become confused about the parental role. We prefer that the parents function as an emotional resource for their children, rather than assisting in procedures which may be painful. Finally, it is important that the parents are honest with their children. Parents should not tell their child that a particular procedure won't hurt. If asked by their child, we instruct parents to tell them the truth – the procedure may hurt.

Balancing cognitive/behavioural strategies with pharmacological approaches

Even when parents are taught how to help their children during painful procedures, cognitive and behavioural approaches often need to be combined with pharmacological treatment. Cognitive and behavioural approaches alone are appropriate for common procedures such as venepuncture or intravenous cannulation when there is little time to allow a topical drug such as Emla to work. For patients who are undergoing more invasive and complicated medical procedures, however, such as lumbar puncture or a fracture reduction, drugs should also be used. When caring for a 3 year old child with a femur fracture, for example, a comforting parent should be present during the insertion of an intravenous cannula before the administration of drugs which produce conscious sedation. We are concerned that the approach to pain during common procedures is often either cognitive/behavioural or pharmacological, rather than a combined and balanced approach.

Conclusions

The interaction between parents, their children, and staff in paediatric emergency departments is complex. Some parents appear to be relaxed and know how to help their children whereas others appear to be anxious and less helpful. Some children appear calm, whereas others seem to resist all attempts at being helped.

Parents can be taught how to comfort young children when they undergo invasive medical procedures. They need to be encouraged to be present and then taught how to help their infants. For older children and adolescents, once again, parental presence should be encouraged, but it is also important that the approach is individualised. Older children and

adolescents use many different techniques to cope with pain.

Although there has been a great deal of interest in the role of new drugs, such as fentanyl, midazolam, ketamine, nitrous oxide, and combinations of amethocaine, adrenaline, and cocaine, to assist in relieving pain during procedures, none of these drugs are appropriate for more common procedures such as venepuncture and intravenous cannulation. In addition, behavioural interventions may generalise to other medical and non-medical situations during which children need help from their parents.

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