

The effect of parental presence to perioperative anxiety of Chinese children and their parents.

Yuhang Sun, Shujing Qi, Ruixia Qi, Xiaohui Dong, Jing An*, Haojun Yuan

Affiliated Hospital of Hebei University of Engineering, PR China

Abstract

Object: Research the effect of parental presence to perioperative anxiety of Chinese children and their parents.

Method: 172 four to six years old children who suffered facial trauma and accepted debridement and soft tissue reconstruction with local anesthesia and their parents were randomly divided into two groups. There were 88 children and their parents in research group and the patents in this group were allowed to present in operating room and to use their conventional methods of psychological intervention to relax their children. There were 84 children and their parents in control group and the parents in this group were not allowed presence in operating room. Visual analogue scale for anxiety was adopted to quantify the perioperative anxiety level of the children and their parents.

Result: The preoperative and postoperative anxiety of children in research group was statistically lower than that of control group. There was not statistical significance in preoperative anxiety of parents between the research group and the control group. The postoperative anxiety of parents in research group was statistically lower than that of control group.

Conclusion: Children can be benefit from allowing parental presence in operating room and allowing parents to adopt their conventional method of psychological intervention to relax their children. Parental presence can reduce postoperative anxiety of parents.

Keywords: Parental presence, Anxiety, Perioperative period, Psychological intervention.

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Introduction

Anxiety is common in children patients. Kain et al. found that forty to sixty percent children anxiety is associated with operative experience [1]. The effect of parental presence to perioperative anxiety has been studied by researchers in field such as anesthesia induction and dental clinic without a unified conclusion [2-6]. There are controversies in whether children will benefit from parental presence during anesthesia induction. Kristi et al. [7] proved that parental presence could significantly reduce children anxiety while some researchers found that there were no significant difference between parental presence group and control group [8-11]. One of series studies of Kain et al. [12] found that parental presence could increase the children anxiety. The children mental difference between different age stages is very significant. We think this difference is the reason why different studies got different and even contradictory results. In this background above introduced, we selected four to six years old children patient as research object to study the effect of parental presence to perioperative anxiety of both children and their parents.

Research Object and Method

Research object

Children including criteria: The estimated time of operation is less than one hour, have no trauma or operative history, have no invasive examination experience, American Society of Anesthesiologists physical status classification (score) I or II, without mental or psychological problems.

Parental including criteria: Voluntary participation, American Society of Anesthesiologists Physical status classification (score) I or II, without mental or psychological problems, have no operative present experience.

According above standards, we selected continuous 84 four to six years old children who suffered facial trauma and accepted facial debridement and soft tissue reconstruction with local anesthesia during May 1st, 2016 to July 31st, 2016 in our hospital as Control Group (CG). The children in this group did not have parental presence during perioperative period and were psychologically intervened by surgeons and nurses.

In the same way, we selected continuous 88 four to six years old children who suffered facial trauma and accepted facial debridement and soft tissue reconstruction with local

anesthesia during August 1st, 2016 to October 30th, 2016 in our hospital as Research Group (RG). Children in this group designated one of his parents to be present during the whole perioperative period and the designated parent was permitted going into the operating room and using their conventional method to relax their children under the guidance of surgeons and nurses after written informed consent signing.

Research method

We made use of Visual Analogue Scale for Anxiety (VAS-A) to quantify the perioperative anxiety of both children and their parents. VAS-A had been proved that it could be used to assess the anxiety level instantly and reliably and had been used broadly in children anxiety assessment [13-16]. VAS-A is a line segment with scale from 0 to 100.0 means none anxiety absolutely and 100 means extreme anxiety. The number of subject pointed according their inner feeling supplied statistics to researchers as their anxiety level. In this research, the assessment points are the time points the children going into the operating room and the time point the children going out of the operating room. All the surgeons and nurses were trained about the VAS-A adequately before the study starting.

The children and their parents who fit the including criteria were immediately told whether the parent can be present during operation, and children of research group should designate one of his parents who would go into the operating room with them. The second stage is perioperative education to parents of research group which is mainly about negative emotion of parents will increase the anxiety of their child, the aseptic principles which they should abide, the correct and effective communication methods with their child, the method of transferring attention of their child, the chief operating process, and so on. The parents should answer the questions which are selected about the content of the perioperative education to help the nurse exam the effect of their education. The part has not been understood should be reiterate once more time before they are permitted go into the operating room. The

surgeons and nurses should give parents some help during operation if necessary.

The perioperative education to parents of control group is mainly about the chief operating process without the other content of that of research group. Children in this group should also designate one of his parents who they would like to be present if this is permitted. The ones being designated should accept VAS-A investigation and give their scale according their real inner feeling.

First, the general conditions of both groups should be examined by SPSS 13.0 through contingency table analysis and independent t test to ensure whether they will not disturb the veracity of this study. Then the preoperative and postoperative anxiety of the both groups should be analysed by SPSS 13.0 though independent t test to find out that whether parental presence will affect children's perioperative anxiety. Last, make use of SPSS 13.0 through independent t test to analyse the preoperative and postoperative anxiety of the parents to find out that whether parental presence will affect parents' perioperative anxiety.

Results

The general conditions of the children and parents of the two groups have no significant statistical difference and will not disturb the veracity of this study. The gender of children and parents of two groups is examined through contingency table analysis and the Ps are bigger than 0.05. After examination of ages of the children through independent t test, the average age of control group is 4.83 y old with a 0.674 standard deviation, the average age of research group is 4.97 y old with a 0.718 standard deviation, the P is bigger than 0.05. In same method, the average age of control group is 39.65 y old with a 6.435 standard deviation, the average age of research group is 37.77 y old with a 7.017 standard deviation, the P is bigger than 0.05 (Table 1).

Table 1. Contrast of general condition.

	Gender of children		Age of children	Gender of parent		Age of parent
	Male	Female	Male	Female		
CG (n=84)	39	45	4.83 ± 0.674	29	55	39.65 ± 6.435
RG (n=88)	46	42	4.97 ± 0.718	43	55	37.77 ± 7.017
	P>0.05		P>0.05	P>0.05		P>0.05

There is significant statistical difference in postoperative anxiety between the groups. The average anxiety of research group is 67.13 ± 11.320 which is lower than that of control group which is 76.33 ± 14.227, the P is smaller than 0.05 (Table 2).

The postoperative anxiety of research group is significant statistical different with that of the control group. The average

anxiety of research group is 56.96 ± 11.35 which is lower than that of control group which is 69.03 ± 7.14, the P is smaller than 0.05 (Table 3).

There is not significant statistical difference in preoperative anxiety of both children and parents between the groups.

Table 2. Preoperative and postoperative anxiety of children.

	Preoperative	Postoperative	
RG	54.05 ± 9.327	67.13 ± 11.320	P<0.05
CG	55.25 ± 8.548	76.33 ± 14.227	P<0.05
	P>0.05	P<0.05	

Table 3. Preoperative and postoperative anxiety of parents.

	Preoperative	Postoperative	
RG	52.73 ± 7.83	56.96 ± 11.35	P>0.05
CG	53.97 ± 9.77	69.03 ± 7.14	P<0.05
	P>0.05	P<0.05	

Discussion

The object of this study is to find out the effect of parental presence to both children's and parents' perioperative anxiety. We excluded children who experienced debridement or invasive manipulation to avoid disturbing of previous negative experience to children's mental or psychological condition. Children or parents with hearing or speech disabilities were excluded because there might be communication disorders between children and parents in the special condition of an operating room. Likewise, children and parents with express difficulty should also be excluded.

The children mental difference between different age stages is very significant. The anxiety and afraid of young children is based on unreal image while elder children become more mature because of their direct or indirect experience [17]. So we narrowed the age range of the children being researched to reduce the negative effect of different mental and psychological development stage to the result of this study.

The most important difference of this study to the others is that parents are permitted to relax their children using their conventional methods such as attention transfer by telling a favourite story. Previous studies such as Patel et al. [18] asked present parents do nothing intervention measures except presence. First, the methods of the parent adopted might be more individual and more acceptant by their children. Second, it is normal if there are communication between children and parents in cases of parental presence and only parental presence without communication is abnormal condition from which children cannot get benefit.

The postoperative anxiety of the children of the research group is lower than that of the control group. The postoperative anxiety is the continuation of intra-operative anxiety which is mainly because of fear of separation and strange environment. Parental presence can avoid fear of separation and can reduce the anxiety because of strange environment. This is the first reason why parental presence can reduce postoperative anxiety of their children. Second, the psychological intervention is mainly lies on communication with the children and it is easier and more effective for parents than for doctors or nurses. Third, the methods which parents adopt are more individual

and acceptant than those surgeons or nurses adopt. Fourth, the children can benefit from lower anxiety parents [12].

The postoperative anxiety of parents of the research group is lower than that of the control group. This might be related to the more understand about the operation, the more satisfaction after participant of the operations, the less anxiety of their children.

The methods which can be chosen by parents are limited in language communication and attention transfer. How to abundant those methods should be the next key point we should pay attention to.

Conclusion

Present parents who permitted to relax their children using their conventional methods during perioperative period can significantly reduce the postoperative anxiety of children and their parents.

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***Correspondence to**

Jing An

Affiliated Hospital of Hebei University of Engineering

PR China