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CARE OF NURSING TEAM TO CHILDREN WITH PERIPHERAL VENOUS PUNCTURE: A DESCRIPTIVE STUDY

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ABSTRACT

Object The objective is to identify the care of nursing team to children before the peripheral venous puncture and describe the feelings of the child punctured by nursing professionals. **Method** Exploratory-descriptive study carried out with 59 children, through a form, between October 2010 and January 2011 in a pediatric hospital in Fortaleza, Brazil. **Results** Fear and pain were the most reported feelings of children when they were punctured (69.4%) by the nursing team. **Conclusion** It was concluded that fear is still a very clear feeling among the infant clientele, thus demonstrating the need for greater attention in preparing children for venous puncture. Therefore, it shows the importance of further discussions, training and awareness of the nursing team that works in pediatrics on the care for children with peripheral venous puncture.

keywords: Child Health Services, Nursing Care, Punctures, Nursing.

INTRODUCTION

The peripheral venous puncture is one of the proceedings performed during a child hospitalization for the administration of hydro electrolytic solutions and medication, normally done by the nursing team⁽¹⁾. During the pediatric practice, it is highlighted as a challenge, because the technique must be performed with dexterity and ability so to not expose the child to other unnecessary punctures. It is important to mention that the puncture itself is not only confined to the act of inserting the nail into the venous bed; this is a much more complex proceeding, which involves a certain context around the child and immediate relatives.

This proceeding can cause suffering and distress to the child, and when it is necessary to be executed, the repulsiveness degree related to the proceeding in relation to the child patient accentuates due to the lack of understanding and the incomplete cognitive development of the reality, and also the aspects related to the parents that even showing enough discernment about the necessity of the proceeding and its benefits, the protective feelings show, motivating the expressions to their pupils, many times through a look, symbolizing their affliction, which enables a certain discomfort to themselves, to the child and to the nursing team⁽²⁾.

The child can perceive the venous puncture as an aggression or adapt him/herself. Despite the suffering, it is the best way to keep the treatment. It can be affirmed that for a child to have a positive perception in relation to the venous puncture, it is necessary that the responsible professional for the proceeding work looking forward, through the dialogue, demonstrating to the child what will be performed, how and which are the instruments involved⁽²⁾.

Within this context, the study manifest that the venous puncture is maybe the most stressing experience as perceived by the child patients throughout their hospitalization⁽¹⁾.

Based on this statement, nursing professionals need to reflect constantly on the improvement of care, the implementation of actions that aim to transform moments of conflict and losses to a more serene and hospitable moment of hospitalized children. Scientific studies in Brazil and around the world have disclaimed forms to alleviate children's pain. Just as an example, there is the therapeutic toy⁽³⁾, music, coziness, kangaroo care technique, the reduction of stimulus in the environment, massage therapy, among others⁽⁴⁾.

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Therefore, this article aims to identify the care procedures taken by the nursing team towards the child during the peripheral venous puncture, characterizing the children that participated in this study according to their social-demographic and clinical data and describing the punctured child by the nursing professional.

METHOD

This is a descriptive-exploratory study, with a quantitative approach, performed from October 2010 to January 2011 in a tertiary attention state hospital, a local reference for the attention to children and adolescents in the North and Northeast of the city of Fortaleza, Brazil.

All the infant patients hospitalized during the period of data collection compose the study population. The criteria for inclusion within the sample were: children in school age, between 7 and 11 years old, submitted to peripheral venous puncture for the administration of electrolytic or drug solutions, indifferently from the clinical diagnose, time of hospitalization and/or number of venous punctures the child may have been submitted during the hospitalization period.

Thus, the sample was obtained from 59 children, selected by convenience and in accordance to the inclusion criteria. The data was collected through a form with the information related to the child's identification and the venous puncture. Furthermore, based on analysis of patients' records, it was included the health status of the children, their age and the medical hypothetical diagnose.

After being punctured by the nursing professional, beside the bed, a semi-structured questionnaire was used as the instrument of exploration of the conditions, experiences and opinions of the child based on the proceeding. It is worth to mention that this instrument was tested before the data collection, but these children were not part of the sample. The researcher, who used the following questions, asked the child: why did they puncture your venous access? What have you felt while being punctured? Which vase was punctured? Was it the first time you had a puncture or have you had other experiences? Some other descriptors of the previous phase, which is, preparing the child and the family for the proceeding, were also mentioned⁽⁵⁾. It is needed to highlight that the aim was to safeguard the children, and then this collection was done individually and while they were in bed, after a free and clear consent of the parents or legal responsible people. As a consequence, this study was analyzed and approved by the Research Ethics Committee of the institution, according to Resolution

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Based on the given information about objectives, relevance and development mode of this study, parents or legal responsible people signed the Free and Clear Consent Agreement.

The data obtained was organized in a *Microsoft Excel* spreadsheet and related according to the objectives of this study. The answers were grouped in similar categories, treated based on absolute and percentage numbers and presented in a descriptive format and in tables, grounded by relevant literature.

RESULTS

Characterization of the subjects of the study

The age variation of the children involved in this study was between 7 and 11 years old, which from these, 35 (59,3%) were males and 24 (40,7%) females. According to education level, 57 (96,6%) were in Elementary school and two (3,4%) in Kindergarten. The most mentioned medical diagnose was appendectomy, 21 (35,6%), followed by osteo articular and clinical, 11 (18,6%), renal, 7 (11,9%), genitalia alterations, 4 (6,8%), and others, 5 (8,5%).

Based on the description about the proceeding of venous puncture in children of the Pediatric Unit (table.1), 79,7% of the children did not know how to inform who performed the puncture, 47,5% were punctured in the back of their hands and 42,38% were being punctured for the first time.

Table 1 – Description about the performance of venous puncture in children of the Pediatric Unit. Fortaleza, Brazil, 2011.

Hospitalization	n = 59	%
Who performed		
Unable to tell	47	79,7
Nurse	10	16,9
Nurse Technician	2	3,4
Punctured Vein		
Back of the hand	28	47,5

Forearm	27	45,8
Radial Vein	3	5,1
Back of the feet	1	1,7
Justification for the puncture		
Unable to tell	26	44,1
Inserting medication	16	27,1
Taking saline solution	6	10,2
Feeling "better", and painless	4	11,9
Taking blood out	2	3,4
Knowing if it is swollen	1	1,7
To not puncture again	1	1,7
First Puncture		
Yes	25	42, 38
No	34	57,62

To the feelings reported by the children who were punctured, it was mentioned fear and pain, 41 (69,4%). About the sensations, it was mentioned: not having any perception, 9 (15,3%), an ant bite, 6(10,2%) and others, 3 (5,1%).

During the step of preparing the child and the family for the venous puncture (table.2), according to the intervention information adapted from the book of pediatric nursing procedures⁵, seven interventions were found, as the following table describes.

Table 2 – Description of the step of child and family preparation for venous puncture*. Fortaleza, Brazil, 2011

Intervention	n = 59	%
1. Evaluate family and child as to comprehension of the procedure	4	6,8%

2. Give information about the procedure	22	37.2%
3. Elicit about the normal or the abnormal sensation that the child can have, as the chill because of the use of antiseptic or the sensation of being pushed	24	41,0%
4. Interval before proceeding starts	2	3,3%
5. Explain about the necessity of contention or immobilization	2	17,0%
6. Explain that parents can be together with the child during the procedure	10	17,0%
7. Perform the proceeding in an adequate location, with proper equipment	22	37,2%
8. Lack of preparation of the child for the procedure	36	61,0%
9. Inadequate information about the pain	5	8,5%

*Data adapted from Bowden & Greenberg, 2005.

Each item of table 2 was adapted⁽⁵⁾. The items 1 and 2 are related to the information of the proceedings to the venous puncture to the child and family and the comprehension of both towards these proceedings. The researcher of this study observed these items cautiously. The fact is justified because of the capacity of the abovementioned subjects, as the moment of the procedure is compromised by their stress and anxiety⁽⁵⁾. In the item number three, it was explained to the child/family the adverse reactions into the administration of the fluid, as to allow them to detect any of these possible adverse symptoms from the drug in infusion⁽⁵⁾. Item four pictures a timeframe before the beginning of the proceeding, as it avoids that products like alcohol, anesthetic ointments, among others, come out from the skin⁽⁵⁾. The items five and six demonstrate the necessity of family stay beside the child, as well as an explanation of the use of contention after the venous access. The permanence of the family is extremely important during the whole process⁽⁵⁾, as the contention was

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used to avoid the loss of access and with it, the repetition of unnecessary proceedings⁽⁵⁾. The item seven suggests the rigorous observation of the conditions of the venous network of the child so the appropriated location can be chosen according to the nature of the liquid to be infused⁽⁵⁾, the author in vogue indicates an appropriate location for this sort of access. It is worth remembering that was not the reality found during this study, as the proceeding happened beside of a bed. Items eight and nine highlight the importance of the information to the child and the family member about the pain to the child. The reality of this study showed that a great majority is not informed about what will happen to them.

DISCUSSION

It is understood that there is a significant necessity in comprehend the particularities related to the childhood, as well as the needs placed by the hospitalized child, forcing the nursing professional to spend an extra time during the preparation step for the routine and peculiar proceedings of the hospitalization, in particular the venous puncture, so the child feels safe and comfort.

On Table 1, which refers to who executed the procedure, the majority of the children (79,7%) was not able to inform, as this can be attributed to the lack of communication between the professional responsible for the procedure and the child, a fact that is normally attributed to the inability of the nurse to work in pediatric care. A study about the communication of the professional with the child signals the necessity that the nurse needs to communicate in an effective way, breaking apart the barriers of information⁽⁶⁾.

Another study that dealt with the approach of nursing professionals highlighted that in the area named "communication" when explaining certain procedures to the client, the nursing professional presented a compromised evaluation⁽⁷⁾. It is important to say that the result of this study was similar to the previously mentioned, as the majority of the children could not identify the person who carried out the procedure.

Besides the mentioned studies, we name the observational study that identified that there was no exchange of words, nor of sights, between the professional that was executing the procedure and the child who was submitted to the treatment, therefore bespeaking a gap of verbal and non-verbal communication^(6;8).

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With regard to the punctured vase, the back of the hand (47,5%) and the forearm (45,8%) were the most mentioned, as the choice of distal and superficial veins of the upper limbs, preferably the non-dominant limb, which is from the hand of lesser ability of the child. From those who had some guidance, they mentioned the venous puncture was for the administration of drugs (27,1%). It is necessary to reveal that the majority of the children, 44,1%, did not know why they have been punctured.

Regarding to the feelings and sensations mentioned by the children, we elucidate that during a hospitalization it is common to the child to have fear, especially because it is a new environment, and as such, an unknown one. Facing the venous puncture, the child feels threaten and many other feelings emerge, as anger and frightening, because they believe the puncture is some sort of invasion and aggression to their bodies. It was registered fear and pain in 69,4% of the children during the proceeding, followed by 15,3% of the children that have not felt a thing. This can be a result from other venous punctures executed in previous hospitalizations.

It is also stressed the preparation of the child for the procedure. In this phase, the information must be transmitted taking into consideration the age of the child, previous experiences with the procedure and the presence of pain and fear during the puncture.

During the daily practice, it was observed that the present recommendations within the respective literature towards the preparation of the child for the proceeding of peripheral venous puncture were not completely followed. In the reports of children, it was not found any citation of the use of pharmacological or non-pharmacological step to relieve the pain.

During the hospitalization, the child must be guided to feel safe and confident throughout the proceeding, because many times their venous network has already been explored by other punctures, making it more difficult to execute the procedure. Children have a more fragile and delicate venous network, and because of that it is important the use of peripheral devices that can minimize the complications related to the venous puncture⁽⁹⁾. Many times they are performed after more than twice attempts of venous punctures to get access, however if the children are oriented and receive an appropriate approach, with an explanation about the procedure, there is a better acceptance and cooperation, reducing the stress⁽¹⁰⁾.

Besides that, we need to clarify that the puncture is necessary to treat the health problem, since the administration of hydro-electrolytic solutions and intravenous medication is necessary. A study

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performed with a child evidenced in a report mentioned that she liked the hospitalization in a general sense, but she did not like the venous puncture and the nasogastric tubing⁽¹¹⁾. This is a fact that reinforces the exceptional meaning this procedure has over the liking perception of the child.

It is important to remember that the orientations must be performed and they cannot be forgotten, since the infant patient and the family have both the right to be informed. By the time of hospitalization, the child is submitted to many consecutive venous punctures, generating anguish, and then the handling of the situation is seen as a complex one for the actors involved (child, nursing professionals and family members), which requires the nursing team a different and peculiar assistance⁽¹²⁾.

It was observed that some children interpreted the reason, which they were punctured to feeding, as the mentioned "orange juice"; other mentioned that the proceeding was to make them "feel better". This demonstrates how much children apprehend the information when they are given by the health professional.

The communication between the child and the nursing professional must occur through an adequate language according to the age of the child. The words must be sincere and truthful before any proceeding. It will not help to mention that the proceeding will not cause pain, because the child will testify the reality of the facts, and soon there is a lost of confidence between the professional and the infant patient, a precious element to the relationship between the professional and the child.

The ambiguous behavior, as lying to the child saying it will not cause any pain and to show a face of fear during the puncture, can be avoided as a psychological preparation of the child⁽²⁾.

Children in school age can manifest their emotions. Fear and pain are usually caused by the constant pressure and by the tension created by the hospital environment they are inserted⁽¹⁾. The results of this study present a consonance with other studies, as children during hospitalization suffer difficulties generated by the fear of the unknown and by unpleasant situations related to painful procedures, but necessary for the diagnose and treatment.

In relation to the use of measures to alleviate the pain, the results show that there were no reports that evidence the use of pharmacological or non-pharmacological measures. It is highlighted that there are some factors that impede the use of non-pharmacological methods, such as insecurity of the nurses, the ability of the child to express pain and the labor processes⁽¹³⁾. As examples, there are

pacifier glucose, cuddling, fondness, reduction of stimulus of the environment, such as lights and noises⁽⁴⁾.

The proceedings cause pain and that leads to fear, because the body lesion is quite feared by the child, and then it is why is necessary to consider the transmission of reliance and an explanation about the proceeding to avoid surprises. The child may probably have an idea of what is about to happen. The infant must be previously warned and guided to minimize the stress and pain levels, as many times they are intensified by the psychological factors.

The capacity of the professional that works in the pediatric unit, as well the humanization, is an important element to perceive the significance of child's preparation that will be submitted to a painful proceeding, since it is easier to accept a proceeding when you know how it will be performed and that it can provoke a painful sensation.

FINAL CONSIDERATIONS

The objectives of this study were not completely fulfilled, since as the care performed by the nursing team to the infant patient when performing a peripheral venous puncture, in 61,0% of the cases, there was a lack of information about the proceeding, to the child.

The study enables the identification of the mode how children are being prepared by the nursing team for the peripheral venous puncture process, as it is well known this is a painful procedure that can generate infant traumas.

This study evidenced that fear and pain were the most mentioned feelings by the children when being punctured. When questioned about who performed the event, the majority of the children were not able to answer. Therefore, this study signals to the necessity to the nursing team to engage based on a more humane assistance in pediatric care, considering simple attitudes, such as a previous orientation, which can minimize the fear caused by the venous puncture procedure.

It is important to say that, besides all failures in communication evidenced here, the results, as a whole, did not detach themselves from the literature, once the most predominant punctured vases were the back of the hand and the forearm vein.

In this study, it was perceived that the first venous puncture matched with the first hospitalization, which demonstrates the fact those experiences were unknown for the child, therefore need more attention by the assisting nursing team.

Such events revealed that it is needed a better study by the nursing team to deal with the pediatric patient, especially those proceedings considered stressful and/or painful ones.

It is inferred that, besides the scientific development is on the rise towards the improvement of general care, the subjects involved in this study mentioned it is needed, above all, a higher attention to prepare the child for a peripheral venous puncture, pointing out the necessity of more debates, study and awareness by the complete nursing team that is located for pediatric care.

It is necessary the possibility of implementation of non-pharmacological measures for the relief of fear and pain of the child, such as a therapeutic toy and music.

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