ORIGINAL ARTICLE

Care of children in pain admitted to a pediatric emergency and urgency unit*

O cuidado da criança com dor internada em uma unidade de emergência e urgência pediátrica

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ABSTRACT

BACKGROUND AND OBJECTIVES: Pain affects children of all ages and may lead to emergency or urgency assistance. Considering that children have unique ways of manifesting pain, this study aimed at understanding criteria used by the multiprofessional team to evaluate and control pain in children admitted to a Pediatric Emergency and Urgency Unit.
METHODS: This is a qualitative and descriptive study in urgency and emergency unit assisting children from zero to 12 years of age. Research subjects were physicians and nursing team of the unit located in the Southern region of Rio Grande do Sul. Semi-structured interviews were carried out and participants were observed. The research had a core question: "Which are the criteria used by the multiprofessional team to evaluate and control pain in children admitted to a pediatric urgency and emergency unit?"
RESULTS: Participated in the study two nurses, two pediatricians and three nursing technicians. Experience of respondents with pediatric emergency and urgency has varied from two to 20 years. Two themes have emerged from data analysis: criteria to evaluate pain in children, and; pain management and control in a pediatric unit.
CONCLUSION: Results infer that the health team values pain in children, but have to enhance its evaluation and handling.

Keywords: Children, Emergency medical services, Pain, Pain evaluation.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A dor é um sintoma que acomete crianças em todas as idades e pode levar ao atendimento de emergência ou urgência. Visto que as crianças têm maneiras peculiares de manifestarem sua dor, o estudo objetivou conhecer os critérios utilizados pela equipe multiprofissional para avaliar e controlar a dor na criança internada em uma Unidade de Emergência e Urgência Pediátrica.
MÉTODOS: Foi realizado um estudo qualitativo e descritivo em uma unidade, de urgência e emergência que atende crianças de zero a 12 anos. Os sujeitos da pesquisa foram médicos e equipe de enfermagem da referida unidade localizada na região sul do Rio Grande do Sul. Foram realizadas entrevistas semiestruturadas e a observação participante. A pesquisa teve uma questão norteadora: "Quais os critérios utilizados pela equipe multiprofissional para avaliar e controlar a dor na criança internada em uma unidade de urgência e emergência pediátrica?".
RESULTADOS: Fizeram parte do estudo dois enfermeiros, dois pediatras e três técnicos em enfermagem. O tempo de atuação dos entrevistados em emergência e urgência pediátrica variou de dois a 20 anos. Dois temas emergiram da análise dos dados: critérios utilizados para avaliar um quadro de dor na criança; o tratamento e o controle da dor em uma emergência pediátrica.
CONCLUSÃO: Os resultados inferem que a equipe de saúde valoriza a dor na criança, mas necessita aprimorar sua avaliação e manuseio.

Descritores: Criança, Dor, Medição da dor, Serviços médicos de emergência.

INTRODUCTION

Pain may affect children of all ages and, depending on its severity and association with diseases or trauma, may lead children to emergency or urgency units. Children are unique in the way they manifest pain, so to evaluate and quantify pain it is necessary to understand development stages and behaviors inherent to childhood and different among different age groups[1].
Health teams are not prepared to cope with situations involving distress and aggressiveness, so pain in children may be potentiated[2]. To control children´s pain, health professionals must be able to understand its process and complexity[2,3] and to trust patients' complaints, preserving common sense and sensitivity to understand stress and anguish involving patients and their families.
It is critical to adequately identify, evaluate and, moreover, treat children´s pain, which is still a complex task for the health team. However, professionals have to be prepared to better treat, assist and understand children because, after all, they have a unique way of perceiving and showing such experience.
The International Association for the Study of Pain defines pain as an unpleasant sensory and emotional experience associated to some real or potential tissue injury[4]. Pain is subjective and is

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expressed differently by different people who may communicate it verbally or non-verbally. To interpret non-verbal pain communication, it is necessary to systematically use objective methods, such as pain evaluation scales designed for specific age groups[5].

In light of the complexity of the pain phenomenon, health teams often resort directly to pharmacological treatment. However, there is the possibility of using non-pharmacological associated to pharmacological assistance[3], where techniques of distraction and relaxation may be used by controlling noise, temperature, light, touch, preparation for painful procedures and even stimulating the participation of relatives in such assistance[6].

Children's pain expression may be affected by multiple aspects, such as environmental conditions, experience-induced feelings and parents' emotional behavior, which may bring anxiety, sadness, fear and anguish[2] which may lead to pain. Family context influences children's pain expression.

Physiological parameters seem useful to evaluate pain in the clinical practice, but cannot be used separately to decide whether the neonate is in pain and whether analgesics are needed[7].

As a function of limitations inherent to children's development, studies have identified resources which may help children inform their pain, namely, scales developed as from 1988[8]. Another way to evaluate pain in this group is by means of family information, especially from parents[9].

Due to the high demand of children looking for pediatric emergency or urgency care due to pain associated to trauma, burning, fractures or different pathologies, this study aimed at understanding multiprofessional team criteria to evaluate and control pain in children admitted to the service.

The discussion of this subject in the scientific arena is needed because there is still diversity in the evaluation of pain in children looking for pediatric emergency and urgency services. Added to this, there is also a gap in the production of knowledge about treating painful children at those services.

METHODS

This is a qualitative, exploratory and descriptive study developed in a first aid unit located in a city to the South of Rio Grande do Sul. The service is active around the clock, and assists a spontaneous and referred demand of approximately 22 cities of the region, exclusively through the Single Health System (SUS).

The core question of the research was: "Which are the criteria used by the multiprofessional team to evaluate and control pain in children admitted to a pediatric urgency and emergency unit?" Participated in the study professionals working in the afternoon shift, being two pediatricians, two nurses and three nursing technicians, assisting children aged from zero to 12 years at the emergency and urgency unit. Respondents were identified by professional category and interview order number.

After favorable opinion, subjects were invited to participate in the research, being explained about the objectives. There has been no refusal and all participants have signed the Free and Informed Consent Term (FICT).

A semistructured guide was used to collect data from April 15 to May 30, 2008. Interviews were audio-recorded with mean duration of 30 minutes. We have also observed participants to identify ways to evaluate and control pain in children adopted by them during care practices. Total observation period was 180 hours.

Data were trustworthily transcribed. Method for data analysis and interpretation was Minayo Thematic Analysis[10]. According to the author, thematic analysis aims at discovering sense cores of a communication. This way, the subject is linked to a statement about some topic and may be graphically presented by a word, sentence or summary.

The objective of this type of analysis is to identify sense core present in subjects' statements. For such, three stages were developed: pre-analysis, exploration of material and treatment and interpretation of results.

In the first stage, data were organized for a deep analysis, with a fluctuating reading of the set of statements. In the second stage, categories were verified, which are significant words or expressions which will organize the content of statements and records. In the last stage, as from data organization, data were interpreted, looking for meanings and inter-relations with theory[10].

This study was approved by the Ethics Committee, Santa Casa de Misericórdia, Pelotas, under n. 006/2008 and complies with Resolution 196/96 of the National Health Council.

RESULTS

Participated in the study six females and one male. From them, two were nurses, two pediatricians and three were nursing technicians. Time working in the area has varied from two to 26 years and time acting in pediatric emergency and urgency has varied from two to 20 years. All professionals with college graduation were also post-graduated.

After data analysis, two subjects have emerged: criteria to evaluate children's pain; pain treatment and control in a pediatric emergency unit.

DISCUSSION

When asked about methods used to evaluate children's pain, respondents have stated that for neonates and infants they would use behavioral changes, such as face expression, posture and weeping, as shown by the following statements:

According to baby's face, here we use changes we know are caused by pain, in neonates weeping, frowning [...] (Pediatrician 1).

For younger children we observe the face … you introduce a needle and already see the change … weeping, child movements (Nurse 1).

Reports have shown that behavioral changes are major and common indicators of pain in children who still cannot verbalize what they feel, in addition to physiological parameter changes[6,11]. It is recommended that facial mimic changes, body movement and especially weeping, although commonly used by professionals and laypeople as reference for pain, should not be used separately because children may also present them for other reasons: hunger, fear or discomfort.

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Although a means to evaluate pain, behavioral changes do not bring information about pain quality or intensity. To better evaluate pain intensity, the ideal is to use pain scales for that age group. Recommended tools for neonatal pain evaluation are *Neonatal Facial Coding System* (NFCS), *Premature Infant Pain Profile* (PIPP) and *Neonatal Infant Pain Scale* (NIPS)[12].

For older children, able to communicate verbally, subjects have pointed children's report as a guide for pain evaluation, as follows:

[...] older will say: "My belly is aching..." (Nursing Techn.1).

[...] if children are older, they will tell, a four-year old child will know how to tell where there is pain, where there is no pain, what is bothering... (Nursing Techn. 3).

[…] by their report (Nurse 2).

Considering that self-reports are based on patients' ability to communicate their symptoms, this is considered a reliable indicator of pain and its intensity[9].

Respondents have taken into consideration patients' pain self-report, which was routinely confirmed by observations, where Nurse 1 interlinked physical evaluation and the report of a boy to see whether he was in pain or not. This made the action positive and correct because it allowed the child to cooperate with his treatment by the valuation of his report, leading to a more precise and undoubtedly more human evaluation.

As from two years of age, children are able to more precisely express their pain, describing to the team its site and intensity. However, self-report may be limited, especially for younger children, being important the participation of parents and/or caregivers in the evaluation of pain[9], together with pain evaluation tools adapted to the age group[11].

It could be observed that subjects used qualitative measures to evaluate pain in all age groups, from neonates to pre-adolescents. In no moment, respondents have mentioned knowledge about scales and the possibility of using them. With this qualitative evaluation it is possible to identify whether children are in pain, but it is not possible to quantify its intensity, which may generate a wrong evaluation and difficulties to decide about the need of timely analgesia.

A study with patients suffering transportation accidents and assisted in a surgical first aid unit has also observed that objective tools to evaluate pain were not used[13].

The American Agency for Public Health Research and Quality and the American Pain Society describe pain as the fifth vital sign, which should always be recorded simultaneously and in the same clinical environment where other vital signs are also evaluated[14].

The visual analog scale (VAS) is a way to evaluate pain in emergency, in conscious patients, both adults and children[15]. Scale for children is represented by five faces, being the first smiling for "no pain" and the last weeping for "worsened pain".

It is believed that scales may help multidisciplinary team evaluation and measurement of pediatric pain because it would bring real information, being a fast, reliable and easy parameter to control pain. However, it is necessary that professionals are willing and available to qualify themselves as to methods, and that they dedicate themselves to apply pain scales and also to develop analgesic protocols for emergency sectors.

Other valuable parameter to evaluate children's pain is information supplied by the mother because in general she is the major caregiver and has a close relationship with the child and, undoubtedly she deserves being inserted in this pain evaluation and relief context[16]. This was observed in the service, as illustrated by Nursing Techn. 3 statement:

[...] to the mother I aske what has happened before her arrival. We always ask the history, how did the baby fall, with whom he was, whether the mother has seen, whether she has not seen [...] (Nursing Techn. 3).

According to Nursing Techn. 3, the family, in most cases represented by the mother, is useful to position the team about what has happened to the child, but not directly to participate in pain evaluation and measurement. The insertion of the mother by explaining why she has taken the child to the emergency service was important, but she could and should have actively participated in pain evaluation.

It was noticed that the team walks at a slow pace with regard to encouraging the family to participate in pain evaluation and measurement. In addition to asking what has happened to the child, professionals should encourage and give parents the opportunity to participate in the process.

In general, pharmacological practices in pediatric emergency were further emphasized to control pain, as illustrated by the following statements:

If the pediatrician has already prescribed I administer, otherwise I ask to prescribe again, because the child is still in pain (Nursing Techn. 1).

You go directly to prescription, see what the pediatrician has prescribed and you see the type of pain. If it is severe, I ask the pediatrician to prescribe another drug (Nursing Techn. 2).

[...] I ask for some measure to prevent pain, before any procedure, for example, in a fracture reduction I always try to combine analgesia and sedation; in other cases one may use analgesia alone (Pediatrician 1).

In this sense, action is still a clinical consequence of the group, of which the physician is the protagonist. The biomedical health attention model is prevalent in health service organizations; assistance is turned to complaint-approach, and nursing actions end up only ratifying medical practices and becoming a complementary work in the medical hegemony[17].

Statements of Nursing Techn. 1 and Nursing Techn. 2 clearly show the preference for drugs at the expenses of non-pharmacological practices because they believe that children's pain may be only or basically relieved with the use of drugs. However, it

is known that the care of painful patients should associate both practices. Reports have also shown the medicocentric model, where all actions to control pain come from the pediatrician and remaining professionals only comply with prescriptions, being limited to a technical work.

From our observations we have concluded that children's pain was almost always relieved with analgesics or opioids showing the concern of the team with not allowing children to have pain, which is desirable, human and ethic. On the other hand, this evidences the preference for the pharmacological approach, remaining the non-pharmacological approach for a second moment, which is confirmed by Nursing Techn. 2 and Nursing Techn. 1 statements:

[...] here we have no time to play or talk to children... (Nursing Techn. 2).

Here you are not so kind because there is no way, the demand is high, there are few professionals, it is not our fault, one practices as possible... (Nursing Techn. 1).

From Nursing Techn. 1 and 2 reports, it is understood that the reasons for not associating comfort practices to children's care was lack of time and high patients demand. It is believed that time is an organization issue, of listing priorities and valuing them, not motivating the lack of interaction with the child.

As opposed to previous Nursing Techn. 1 and 2 statements, Nurse 1 believes that through comfort practices it is possible to create empathy with children and this way help assistance:

We use practices to get empathy with the child, have him/her more on our side (Nurse 1).

Nursing Techn. 3 statement also confirms Nurse 1, when saying that it is possible to apply comfort practices at the emergency unit and that they bring benefits to patients:

Comfort methods are possible [...] even with burned children; before the physician arrives we use saline and sterile gauze to relieve, because saline cools, saline is icy. They say: "You are removing pain with your hand". (Nurse Techn. 3).

Noninvasive techniques may be started even before medical prescription. It is believed that if professionals would use noninvasive practices when assisting children, pain episodes would be less stressing, both for professionals and patients, and thus better managed. Also, the non-dependence on medical prescription for pain management decreases the period in which children remain in pain.

In the perspective of associating pharmacological and non-pharmacological therapies, Nurse 1 says that the service uses both practices, as follows:

We try to decrease the causes of pain. When it is a blow, for example, we look for ice, wet cloth, we get in touch with the physician to prescribe a painkiller (Nurse 1).

The efficacy of non-pharmacological methods to relieve pain is proven and one advantage over pharmacological methods is the uncommon occurrence of adverse effects[18]. It is relevant to stress that non-pharmacological measures associated to pharmacological measures are an alternative to treat and minimize children's pain[2].

According to Nurse 1, no practice is 100% effective if applied alone. Knowing how to evaluate pain and associating pain control measures is the most effective method for its management.

Another way used by Nursing Techn. 3 to control pain was dialog, which calms the child by explaining the situation, as illustrated below:

[...] if the child is lying down with the arm below the body I remove the arm, if possible. If it is not a fracture, I change position. But it is talking, trying to calm down, saying that pain has to improve [..] that we are here to help as much as possible […] (Nursing Techn. 3).

The need to talk to children is a feature that was clear during the observation periods, being apparent the interest of professionals in inserting children in the evaluation of their pain through their reports and body expressions.

Other subjects have brought comfort practices they knew for younger children, that is neonates and infants, such as non-nutritional sucking, taking in one's arms, local heat and cold, according to the following statements:

[...] child is well positioned, on mother's arms, local heat, local cold... (Nursing Tecnh. 1).

Non-nutritional sucking, local heat, you can do it […] (Pediatrician 2).

I know non-nutritional sucking, take in one's arms… I only know for younger, for older children I don't know what it would be (Pediatrician 1).

Such reports show that non-pharmacological measures are highly effective to control pain[2,18].

During observation periods, although respondents have stated that they knew techniques such as non-nutritional sucking and hot and cold compresses, such interventions were not observed. The measure adopted by the team for younger children was mother's arms before and/or after the painful procedure. These data explicit the idea that professionals have to be further qualified to apply comfort practices to children, especially neonates and infants.

Pediatrician 1, when stating that he could not say which would be comfort techniques applicable to older children, represents the reflex of the scarcity of knowledge about treating pain with complementary therapies.

About non-pharmacological practices, Nurse 2 and Nursing Technician 3 have stated that practices were adopted in the unit, however they could be used more often:

I think that I should do more, talk more with patients, understand patients' pain, explain what I am doing, this or that, not simply doing. I don't see this in all situations, there should be more (Nursing Techn. 3).

I think that comfort measures are possible here in the first aid unit... I think that what is lacking is opening people's minds, have more motivated professionals (Nurse 2).

According to reports, to develop comfort therapies it is necessary that professionals are willing to perceive them as something more for children with extreme pain. During observations, few times children were in emergency situation, thus not justifying the lack of dialog, kindness, touch and more qualified and humanized care.

Incorporating pharmacological and non-pharmacological practices is a way to make children's care more human and sensitive, not aimed only at the technical work of preparing analgesic doses, but rather involving team engagement and inviting and opening for parents and relatives to also participate in the care of painful children.

CONCLUSION

To minimize children's pain in a pediatric emergency or urgency unit, the team would preferably use pharmacological practices, being less frequent the association with non-pharmacological practices which would potentiate analgesia, as referred in the literature and respondents reports.

Our study has shown that the multiprofessional team used behavioral changes as criteria to evaluate pain in children: facial mimic, posture and especially weeping in younger children who are unable to verbally communicate. For older children, with cognitive ability to verbalize it, pain is evaluated by their reports. Applied comfort therapies were: parents lap before and after procedures for non-verbal age children, and talking to children and family encouragement, especially the mother, to remain close to children and relax them for those in verbal age.

In general, the multidisciplinary team was concerned with minimizing pediatric patients' pain and knew some evaluation and management methods. Professionals have qualitatively evaluated pain, which is positive, but they could be qualified and encouraged to adopt precise methods to allow its quantification, such as scales, inserting them in their care, together with comfort practices that would potentiate analgesics efficacy.

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