



Neonatal pain relief. Meanings attributed by staff in a Neonatal Unit

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ABSTRACT

Every day neonates are exposed from 0 to 53 procedures. A third does not receive any analgesia even when 12 of the procedures are reported as very painful. We conducted a descriptive study of qualitative approach, using content analysis in the form of thematic analysis. The aim was to discover the meanings of neonatal pain from the health professionals in the Neonatal Unit of regional coverage. Through theoretical sampling, 14 professionals were selected. Results: 1. Causing a necessary pain. 2. Healing pain in the neonate. 3. Mother's participation for pain relief. Conclusions: Neonatal pain is considered inherent in medical treatment and nursing. The ideas of analgesia to newborns admitted in the Neonatal Unit are related to the dominant paradigm in vocational training. It is necessary to educate and sensitize the medical and nursing community regarding the prevention and management of pain in newborns admitted in the Neonatal Unit.

Key words: Pain, neonates, Neonatal Care Units.

RESUMEN

Diariamente los neonatos internados en la Unidad Neonatal son expuestos entre 0 a 53 procedimientos, la tercera parte no reciben analgesia aun cuando 12 de ellos son reportados como muy dolorosos. Se realizó un estudio descriptivo de abordaje cualitativo que tuvo como objetivo aprender los significados para el equipo de salud acerca del dolor neonatal. A través de un muestreo teórico se entrevistaron 14 profesionales que trabajan en una Unidad Neonatal de un hospital general. Mediante análisis de contenido, modalidad de análisis temático se obtuvieron los significados. Resultados (significados): 1. Causar un dolor necesario 2. Aliviar el dolor del neonato 3. Participación de la madre en el alivio del dolor. Se concluye que para los profesionales de la salud, el dolor neonatal es inherente al tratamiento médico y de enfermería. Las ideas se relacionan con el paradigma de su formación profesional. Es necesario sensibilizarlos para la prevención y manejo del dolor de los neonatos que atienden.

Palabras clave: Dolor, recién nacido, Unidades de Cuidado Neonatal.

INTRODUCTION

The extremely sick newborns have the experience of receiving multiple painful procedures, such as punctures in heels, arteries and veins. Intubation, aspiration of oropharyngeal, nasopharyngeal, endotracheal and gastric secretions, placing vein catheters, endotracheal tubes, lumbar punctures,

introduction of thorax tubes, placing nasogastric probes, elimination of adhesive tapes and vaccines. The number of procedures that every neonate is exposed varies from 0 to 53 per day. Approximately 30% of the newborns don't receive analgesia at all, during their stay in the intensive care unit.¹⁻⁴

Although there are not definitive data of long-term consequences on repeated pain experiences on human beings, we could include various; emo-

tional and behavioral types, or difficulties in the learning process in vulnerable newborns.⁵ In neonates, the responsible for preventing, treating and reducing suffering by pain, are health care professionals, so this make us reflect, about the weakness of daily practice, based on our actual knowledge and abilities applied in the pediatric care, and if decisions are based on scientific evidence,⁶ but reality is that for the health professionals, approach is sometimes based, more in feelings obtained in the day to day care of the newborns, than in facts.

MATERIALS AND METHODS

Design of the research. A descriptive qualitative type research was made using the analysis of content in the form of thematic analysis, to discover the nucleus of sense that integrates communication.⁷ The objective was to discover the meanings that the professionals of health of the Neonatal Unit (NU) have about pain in the hospitalized newborn.

Sample and sampling. By theoretical sampling the representative informers were selected, based on their academic studies, we formed two groups; one of professionals with experience range from 15 to 25 years of service in a Neonatal Unit (NU) of regional coverage, and in the second group, doctors with less than three years and nurses with less than 10 years of practice. So, the sample was formed by 14 health professionals, general practitioners, pediatricians, neonatologist, pediatric nurses, bachelor degree in nursing, and nurse students in social service. For the confidentiality of information, each participant was assigned to a reference key with no relation with the order of interviews (Doctor 1 ... D1; Nurse 1 ... N1).

Instrument. The collection of information was made through a semistructured interview with a trigger question: "What is your opinion about pain in a newborn?" And complementary ones: When is pain caused to a newborn? In case of pain in a newborn, what do you do? They were interviewed an average of two times until the saturation of the information was completed.⁸

Ethical considerations. The Committee of Ethical research and Teaching, of the Municipal General Hospital of middle zone of San Luis Potosí, approved

the study. A letter of informed consent was signed, for those who freely participated.

RESULTS

The point of view from physicians and nurses, who work in the NU, proposed that there is no need of pharmacological aid to heal the pain in neonate, and this assertion is made on the basis of apprehended meanings and concepts related to the causes of pain.

1. Causing necessary pain
2. Neonatal pain relief
3. Mother's participation in pain relief

These meanings are detailed as follows:

1. Causing necessary pain

For the health staff, pain is caused due to the invasive interventions whose objective is to diagnose or to offer treatment. As we can view through their testimonies:

... we wish the kids were fine, with no pain, but it is almost impossible because there are many things or procedures that we do to them, and almost all of them provoke some degree of pain ... D2 [...] in some cases the procedures we are doing, are going to be painful for them ... D3 [...] we, as health staff, know that it is for a good reason (healthcare services), but the kid ignores this, he just has pain and feels like a victim ... N2 [...] these procedures are necessary and must be done without forgetting they cause pain...N4.

The procedures that cause serious pain to newborns who are hospitalized in a NU have been reported in different studies, in United States, Canada and other countries, in more than half of the cases the preterm newborns are exposed to multiple therapeutic or diagnostic procedures. They vary from 0 to 53 in a day, 12 of them should be considering very painful.^{1-4,9} Nowadays it is known that the premature baby has neurological capacity of pain feeling, that he is hypersensitive to nociceptive stimulus and even capable of recall painful experience.^{10,11}

2. Neonatal pain relief

The neonatal staff who works at a NU, usually tries to comfort the neonates, when detect they are suffering from pain, but have doubts about handling some drugs for the relief of it, because some of them have a harmful potential in general, due to the physiological immaturity on the process to metabolize and eliminate properly the metabolites of these drugs. The relevance of the above statement can be evident by the following testimonies:

Instead of relieving pain, we will harm him sometimes in intubated babies who are under mechanical ventilation, we prescribe sedatives, but basically it is done to be able to ventilate him properly, this type of drug is not applicable for pain relief, because it is proven depresses the central nervous system, so treat pain results more harmful instead of leave it without any treatment, on the other hand, sometimes the extreme premature babies are the most manipulated ones, and it is even more complicated to control pain, due to immaturity of their organism: for example kidneys or liver; therefore, medicine is not metabolized or eliminated properly and can be very toxic for these neonates...D2[...] observation of pain is subjective so its treatment too, depends of the trained eye and skills of the health staff, this is weird because the patient, cannot tell us he feels pain and needs treatment, so is something that staff has to do, and could be as sutil like calm him down...N2[...] I think only a low percentage of the babies get some medicine for pain relief...N6, [...] almost never they are given treatment (analgesic) but there are some cases, in which they are given something for pain relief, when staff believe it is necessary...N9.

According to conducted studies it has been shown, that analgesia is used in newborns, and even may have protective effects in other pathologies, such as ventricular hemorrhage of prematures under mechanical ventilation.¹² There are information about the efficiency of other therapeutic options given, like sucrose and glucose during procedures like: venipuncture and vaccination among others.¹³ The literature also reports the professionals doubt about the uses of analgesia in newborns, because of

clinical considerations and physiology. And for the difficulties clinicians have to identify levels of pain and the reactions to analgesia.¹⁴⁻¹⁶

Parallel to this, no pharmacological strategies are implemented to mitigate neonatal pain after an intervention they consider cause pain. This implies the professionals position *in relation to* the underlying idea regarding the clinic's responsibility to provide comfort to the patient. Besides this, the nonpharmacologic measures that are considered acceptable or being implemented are related to the studies and knowledge of the informer. The above mentioned is found in representative testimonies of the majority, related to the nonpharmacologic treatment or the pain relief actions for the baby:

... of course we gave him something to eat, when it was possible. Also we wrapped him, to help him calming down, I think this made them feel secure... it depends on each one, for example, if in a baby it is necessary to start an IV line, and you think talking will calm him down, then you must do it, if you believe that hugging or lulling will help him sleep, and relieve him from pain, you should do it...D1[...] our greatest commitment, within our means, will always be to keep the baby comfortable, to contribute to their welfare...D2[...] to mitigate his pain, not only give him some analgesic...there are other forms to reduce the baby's pain, as for example, support and affection, the use of dextrose solution some minutes before the procedure, or the milk given to them after any procedure, comforts them a lot... D4 [...] I talk to him when he is anxious, then I change his position and I try to make him feel better; I pet him trying to relax him. Sometimes, they were lulled to soothe and sleep ...N1 [...] what we must do is to check his diaper; move him to a different position, talk to him, then hold him for a while or pet him, we try to relax him... N2 [...] the responsibility to provide him comfort is on the nurses staff... N3 [...] a massage on his feet, we talk to him, cuddle him, and above all, to make him feel that the procedures we are making are for his safety, suddenly he perceives us, when we give him the sense of security, tranquility... N4 [...] I have observed that there are many babies who get calm by only touching or talking to them, I have noticed that sometimes the pharmacological treatment is not necessary, the

only contact is enough... N6 [...]we know this, as early stimulation which is somehow very helpful for them, doing so, we help them to reduce the pain, you hold him, hug him, for example: those we can't hold, we touch his head, his hand, his face, we pet him or cover him with a blanket or a sheet, we cradle him with our hands to make him feel secure, that will keep them relaxed and comfortable...N8 [...]we cuddle him, talk to him, give him a massage to relax, because many times we talk to them and pet them softly, to get them feel fine and calm... so to calm him, that's what the nurse does...N9.

The literature refers to general measures in the treatment of pain in the neonate and the ones that try mainly to prevent or limit the painful stimulus are, among others, the gentle handling, nonnutritive suction, talking to him with soft words, cuddling him, or sweet oral solutions before the procedure, since its analgesic effect has already been demonstrated to reduce the total amount of the painful stimulus, decreasing fear, anxiety and negative effects. Multimodal stimulation or several interventions at the same time, such as contact, massages, voice, smell and sight which involve more the brain areas, it saturates and to the sensory channels, in this form it produces reduction of the painful stimulus.^{9,17-19} It is advised that these measures, besides the kangaroo care and the developmental care, should be used as minimum as routine procedures.⁵

In counterpart, the skepticism is also manifested regarding the nonpharmacologic measures:

... in my opinion, this is not possible (treatment with nonpharmacologic measures) and sometimes the staff "nurses" mainly, is overworked for cuddling babies all time, in my perception I don't think the situation is very likely to happen, it is not very helpful, what is more, it is not useful at all, I mean. If what is pretended is to decrease pain...D1 [...] the baby is calm (with the contact, talking to him or holding him), but being relieved from pain? I don't think so, he rather feels protected and in a certain way the degree of stress is reduced ...N4.

It is also reported the difficulty to achieve the above mentioned measures. Since the overwork

doesn't allow the nurses to use the nonpharmacologic methods for pain relief in the baby. It is a limitation that is present in our working reality, because of various reasons, including the double workday, which turns in tired and unmotivated staff avoiding being able to implement innovations for the baby care.^{20,21}

3. Mother's participation in pain relief

The health staff considers that the mother's stay in the Neonatal Unit is favorable to decrease the response to the painful stimulus, because that generally keeps him quieter, reinforces the bond and stabilizes the vital signs. It is considered that the emotional bond contributes to a faster baby's recovery from a painful event and strengthens the relationship, makes the baby feel secure and evolves clinically better.

The importance of the above is manifested through the professionals' testimonies:

...When the mother stays around, and has the opportunity to touch the neonate, he relaxes easier. This could be an alternative in the psychological field reducing stress, stay calm and reduce pain, since the relation mother-son exist as early as in the womb...D2 [...]When the mother talks or touches the baby, he has a sensation of pleasure which diminishes discomfort and pain ...D3[...] For sure, is clear that the mother should be oriented and trained about the general care of her baby, and we know there is no one else, capable of understand and comfort better than is. So we always must encourage the bond mother-son, especially if we do a procedure; is convenient that the mother stays nearby and when possible, talks and touches her son, (telling that she is there to take care of him), these simple words, can be like blessing for the baby, so he will become more tolerant of pain or perceiving it in a different way, so he feels well...D4[...] When we aspirate a newborn, oxygen saturation lowers and baby becomes tired, so when the mother cuddle him and talks, he recovers faster and oxygen saturation increases and he is more relax and weeping stops. That is the reason I promote such conducts ...N1[...] it is very important after making a procedure that causes pain, if it is possible, give the baby to her mother so she can

cuddle him and give love, because babies in the NU feel they are physically attacked...N2[...] the mother must always be by his bedside; the unit is so small that it is a pity that the mother can't stay all time, but in general they are given the opportunity to be with the baby... even after seeing him cry or being very irritable, when the mother is with her baby he is more relaxed and it is possible to see them smile ...N3 [...] If The babies that are in contact with his parents, start to move. So I believe this is a demonstration of what they are feeling because of their presence. So the babies stay more calm, when they are petting and feel loved by their parents... N9.

It is recommended to support the inclusion of the parents in their baby care, and particularly, to raise parents awareness regarding the signs of pain in the baby. The mothers have cultural strategies to relief pain in their children that can help the patients in a Neonatal Unit.^{22,23}

The importance that represents involving the parents in the newborn care is reflected in the increasing of his physical and emotional well-being of the newborn in the Intensive Care Unit. Several studies show the effects in pain relief, weight gain, more activity and capacity to face the effects of stress, for this reason, the constant interaction between the newborn and his parents is recommended, even the kangaroo method. It has also been proven that offering breast-feeding to the premature newborn favors him in two aspects, the first one is that both suction and carbohydrates contained in the breast milk favor the painful stimulus reduction, the maternal heartbeat provides the sensations of security and peace, and, on the other hand, this is a great moment to reinforce the mother-son bonding.^{9,17,24} In case of maternal separation, the newborn's psychophysiological response is presented by means of sequential phases of protest and desperation.¹⁴

The medical personnel are skeptical about the presence of the mother for child pain relief:

... I believe, even if the mother keeps telling her baby "oh my poor baby" is useless, the baby only perceives the stimulus, but as he feels, it passes. What I think is, when the mother talks to her son probably stimulates him affectively but nothing else. So it is necessary to evaluate what happen at the psychological level...D.

CONCLUSIONS

For health professionals, pain in neonates is inherent to his medical and nursing treatment; also consider that physiological and clinical conditions don't allow giving him pharmacological treatment.

That clinical position regarding analgesia, in neonates who are hospitalized in the Neonatal Units, is related to the predominant paradigm in his professional training, and the amount of time and experience obtained in neonatal care.

These results lead to the idea, that medical and nursing community need to be educated and sensitized, about the prevention and management of pain in newborns hospitalized in the neonatal care units.

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