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PERINEAL PAIN RELIEF THERAPIES AFTER POSTPARTUM¹

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ABSTRACT

Objective: identifying therapies for treating perineal pain after vaginal birth and to verify indication, technique and duration of local cooling.

Method: an exploratory study (survey) conducted in 32 public maternity hospitals in the city of São Paulo (Brazil). A nurse or midwife who provided direct care to the woman was interviewed in each maternity ward. We investigated: institutional characterization, professional qualification, pain relief method, criterion for administration of therapies, indication, contraindication, method, local cooling technique and interval. A descriptive analysis was also carried out.

Results: pharmacological and non-pharmacological methods were used for perineal pain relief, despite the use of non-pharmacological therapies not having protocols in these institutions. Among the pharmacological-based methods, analgesics and anti-inflammatories were the most common. Local cooling was the most used non-pharmacological method, and its main indication was perineal edema. Application time and local cooling interval ranged from 10-30 min and 3-8 h, respectively. Ice cubes in latex gloves were the main cooling technique.

Conclusion: drug therapies predominated for control of perineal pain. Considering the advantages of non-pharmacological therapies, it is necessary to develop protocols to ensure their safe and effective use in maternity care.

DESCRIPTORS: Cryotherapy. Perineum. Postpartum period. Pain. Maternal-child nursing.

TERAPIAS DE ALÍVIO DA DOR PERINEAL NO PÓS-PARTO

RESUMO

Objetivo: identificar as terapias para tratamento da dor perineal pós-parto normal e verificar indicação, técnica e duração da crioterapia.

Método: estudo exploratório (survey) conduzido em 32 maternidades públicas do município de São Paulo (Brasil). Em cada maternidade, entrevistou-se uma enfermeira ou obstetrix que prestasse assistência direta à puérpera. Investigaram-se: caracterização institucional, qualificação profissional, método de alívio da dor, critério de administração das terapias, indicação, contraindicação, modalidade, técnica e intervalo da crioterapia. Realizou-se análise descritiva.

Resultados: métodos medicamentosos e não medicamentosos foram utilizados no alívio da dor perineal, apesar do uso das terapias não medicamentosas não estar protocolado nessas instituições. Entre os métodos medicamentosos destacaram-se os analgésicos e anti-inflamatórios. A crioterapia foi o método não medicamentoso mais utilizado, sendo sua principal indicação o edema perineal. Tempo de aplicação e intervalo da crioterapia variaram 10-30min e 3-8h, respectivamente. Cubos de gelo em luva de látex foi a principal técnica de resfriamento.

Conclusão: as terapias medicamentosas predominaram no controle da dor perineal. Considerando as vantagens das terapias não medicamentosas, faz-se necessário desenvolver protocolos para garantir seu emprego seguro e eficaz na assistência obstétrica.

DESCRIPTORIOS: Crioterapia. Períneo. Período pós-parto. Dor. Enfermagem materno-infantil.

TERAPIAS DE ALIVIO DEL DOLOR PERINEAL EN EL POSTPARTO

RESUMEN

Objetivo: identificar las terapias para el tratamiento del dolor perineal en el post-parto normal y verificar indicación técnica y duración de la crioterapia.

Método: estudio exploratorio (*survey*) conducido en 32 maternidades públicas del Municipio de São Paulo (Brasil). En cada maternidad, se entrevistó una enfermera u obstetra que prestase asistencia directa a la puérpera. Se investigaron: caracterización institucional, calificación profesional, método de alivio del dolor, criterio de administración de las terapias, indicación, contraindicación, modalidad de la técnica e intervalo de la crioterapia. Se realizó análisis descriptivo.

Resultados: métodos medicamentosos y no medicamentosos fueron utilizados en el alivio del dolor perineal, a pesar del uso de las terapias no medicamentosas no estar protocolado en estas instituciones. Entre los métodos medicamentosos se destacaron los analgésicos y anti-inflamatorios. La crioterapia fue el método no medicamentoso más utilizado, siendo su principal indicación el edema perineal. Tiempo de aplicación e intervalo de la crioterapia varió 10-30 minutos y 3-8 horas, respectivamente. Cubos de hielo en guante de latex fue la principal técnica de resfrío.

Conclusión: las terapias medicamentosas predominaron en el control del dolor perineal. Considerando las ventajas de las terapias no medicamentosas, se hace necesario desarrollar protocolos para garantizar su empleo seguro y eficaz en la asistencia obstétrica.

DESCRITORES: Crioterapia. Perineo. Periodo posparto. Dolor. Enfermería maternoinfantil.

INTRODUCTION

Humanized obstetric care advocates offering different relief therapies for perineal pain after vaginal delivery.¹ Although the administration of analgesics and anti-inflammatories is the conventional treatment for this discomfort, it can be supplemented by localized pharmacological and non-pharmacological therapies such as ice, anesthetic sprays, sitz baths, suppositories, laser, and transcutaneous electrical nerve stimulation (TENS), among others.²⁻³

A study in the 1980s carried out with 50 English maternity hospitals mapped the therapies offered for perineal pain relief, identifying that oral analgesia was prescribed as the first treatment option in 78% of these services, and ice application was the most frequently mentioned non-pharmacological method by the midwives (84%).⁴ Another exploratory study with 215 Australian postpartum women 72 hours after vaginal delivery showed that oral analgesia was offered to 75% of these women, and 69% of them also received the application of an ice pack, and 25% received anti-inflammatory medication. Although a variety of methods have been used to control perineal pain, 90% of women still report perineal pain, of which 37% reported moderate to severe pain.⁵

Evidence regarding the use of pharmacological measures for perineal pain relief after delivery is based on studies of poor methodological quality.⁶⁻⁸ The evidence is also limited for non-pharmacological therapies.² Thus, even though there are numerous forms of therapies available, perineal pain relief is not always adequate; consequently, the pain can worsen, generating more discomfort and

suffering to the woman. Therefore, we questioned how perineal pain management is being performed by midwives and nurse-midwives in our country.

Thus, the objectives of this study were to identify the types of therapies used in treating perineal pain after vaginal delivery and to verify the indication, technique and duration of local cooling.

METHOD

This is an exploratory study (survey) conducted between December 2013 and September 2014, in public obstetrical services in the city of São Paulo which operate within the Unified Health System (SUS), identified in the National Registry of Health Establishments (CNES) of the Municipal Health Department of São Paulo.

The study population consisted of 32 nurses: 26 nurse-midwives, three midwives, and three nurses who did not have a specialization or qualification in obstetrics. The inclusion criterion was that this professional provided direct assistance to the woman who had recently given birth. Only one professional was interviewed in each institution, thus, the total number of hospitals corresponded to 32.

Data collection was carried out after initial telephone contact with the technician responsible of each maternity hospital in order to request completion of the study and receive indication of a professional who could answer the form. After this procedure, the professional was contacted to schedule the interview. The data collection instrument consisted of a form designed for this study, composed of items related to the characterization of the institution, the professional, the use of perineal

pain relief therapies (method, indication, contraindication of the therapies and barriers or difficulties to using them).

The collected data are presented in descriptive form as absolute and relative frequencies for the categorical variables, and central tendency and dispersion measurements for quantitative variables.

The study was approved by the Research Ethics Committee of the University of São Paulo Nursing School (ID: 657.088). Authorization was requested from the Office of the Municipal Health Secretariat (SMS), as the SMS units correspond to more than one Regional Health Coordination. Moreover, the study was submitted for approval by the Research Ethics Committee of some institutions. Participation of the professionals was voluntary after the signing of the Clear and Informed Consent Form which was printed two ways, with one copy for the nurses and another for the researcher.

RESULTS

Thirty-two (94.1%) of the total 34 obstetrical services initially planned to compose the study sample authorized it. In 15.6% (5/32) of them, deliveries were performed at the Birth Center (BC), 71.9% (23/32) in the Obstetric Center (OC) and 12.5% (4/32) in the BC or the OC. The monthly vaginal delivery average exceeded those of cesarean section and forceps for all services, being 186.8 (SD=149.1) (minimum=19 and maximum=650); 85.1 (SD=65.9) (minimum=90 and maximum=350) and 7.7 (SD=16.9) (minimum=0 and maximum=70), respectively.

The interviewed nursing professionals were female and had a mean age of 37.3 years (SD=10.2), 13.3 years (SD=8.6) since finishing their undergraduate, 9.6 years (SD=8.4) of obstetric care, and 7.1 years (SD=8.2) working at the institution. Approximately 81% of them were specialized in midwifery, and 19% worked in this area without specific training.

Pharmacological and non-pharmacological methods for perineal pain management were used, despite none of the institutions having specific protocols for the use of non-pharmacological therapies. Among the medications used were non-steroidal anti-inflammatory drugs (NSAIDs) and oral analgesics. A single professional reported using anesthetic spray (Andolba®) for topical application and suppositories. Among the non-medicated methods, the most cited was local cooling (Table 1).

Table 1 - Methods used for perineal pain relief in the postpartum period. São Paulo, SP, Brazil 2013-2014

Methods*	Used			
	Yes		No	
	n	%	n	%
Analgesic	30	93.8	2	6.2
Anti-inflammatory	23	71.9	9	28.1
Local cooling	19	59.4	13	40.6
Local heating	3	9.4	29	90.6
Andolba®	1	3.1	31	96.9
Suppositories	1	3.1	31	96.9

* Nurses reported indicating one or more analgesic methods.

Criteria for administering drug therapies were woman's complaint of perineal pain (40.6%, 13/32), timely medical prescription (31.3%, 10/32), and a combination of medical prescription and complaints from postpartum women (25%, 8/32). Only one institution (3.1%) did not administer medication for perineal pain relief.

Indications for local cooling differed among the professionals; the main criterion for the use of this therapy was edema, followed by hematoma and perineal pain. The occurrence of episiotomy or 2nd, 3rd or 4th degree lacerations were also criteria for implementing local cooling, regardless of the presence of edema, hematoma or pain (Table 2). No professional reported any obstetric condition or diagnosis that contraindicated local cooling.

Table 2 - Main indications for the use of local cooling reported by the 32 nurses. São Paulo, SP, Brazil, 2013-2014

Indications*	Frequency	
	n	%
Perineal edema	31	96.9
Perineal hematoma	20	62.5
Perineal pain	19	59.4
Episiotomy/2 nd , 3 rd or 4 th degree lacerations	1	3.1

* Nurses reported one or more indication for local cooling.

The most commonly reported cooling modalities were ice cubes, ice pack and cold compress among the 19 (56.4%) professionals who prescribed local cooling for perineal pain relief. The category "others" encompassed three different methods: Gelox®, ice water inside a latex glove, and a combination of water and alcohol frozen inside latex glove (Table 3).

Table 3 - Local cooling methods used for perineal pain relief. São Paulo, SP, Brazil, 2013-2014

Local cooling methods*	Frequency	
	n	%
Ice cubes	9	28.1
Ice pack	6	18.8
Cold compress	4	12.5
Frozen gel bag	2	6.3
Sitz baths	1	3.1
Others	4	12.5

* Nurses reported one or more local cooling methods.

Regarding the local cooling techniques, all professionals who applied ice or frozen gel reported using a compressed cloth to wrap it in during the application in order to avoid direct contact with the perineum region. The cooling time ranged from 10 to 30 minutes, where the percentages found were: 20 minutes (52.7%, 10/19); 15 minutes (26.3%, 5/19); 10 minutes (10.5%, 2/19) and 30 minutes (10.5%, 2/19). Local cooling application time was not standardized in one of the institutions, varying according to the professional who indicated it. Application repetition interval was determined at the professional's discretion (26.3%, 5/19) or by prescription: every 8 hours (36.8%, 7/19); every 4 hours (21%, 4/19); every 3 hours (10.5%, 2/19) and every 6 hours (5.3%, 1/19). The main barriers mentioned for the use of local cooling were the lack of protocol, and equipment or materials such as refrigerator, ice packs, and compresses, among others.

DISCUSSION

It has been observed that pharmacological and non-pharmacological methods are used in treating perineal pain; however, drug treatments correspond to the first option in most institutions studied.

These results resemble that of an Australian study aimed at promoting changes in managing perineal pain within the first 48 hours after vaginal birth with perineal trauma. The authors identified that the main forms of pain relief included oral administration of anti-inflammatories and analgesics, as well as ice and warm water compresses. However, they found that the diclofenac sodium and paracetamol, either associated or not with codeine, were administered to 66% of puerperal women, while only 33% used an ice pack.⁹

In the current study, oral administration of analgesics and non-steroidal anti-inflammatory drugs were the main treatment for perineal pain

relief, while the topical route represented by applying anesthetic aerosols and rectal pain relief with suppository use were little used.

The choice of type of treatment for pain is determined by factors that include pain intensity, side effects, cost, administration route, and patient satisfaction.¹⁰ In the case of postpartum women, it is also important to consider drugs being passed on through breast milk. Traditionally, acute pain has been treated by oral therapies, however these agents have potential dose-limiting adverse effects such as gastric irritation, nausea, vomiting, and constipation. Thus, topical and rectal agents¹² are important alternatives to oral administration.

The effectiveness of rectal analgesia for perineal trauma was also assessed through a systematic review that included three randomized controlled clinical trials with 249 postpartum women. It was concluded that the use of nonsteroidal anti-inflammatory suppositories is associated with less perineal pain and less need for additional analgesia compared to placebo.⁶

Topical drugs can effectively alleviate acute pain representing an alternative to the oral administration route, with less systemic absorption and consequently a lower risk of toxicity.¹¹ However, a systematic review that included eight randomized controlled clinical trials with 976 participants assessing the effects of topical anesthetics on perineal pain relief after delivery found that there is still insufficient evidence to prove the efficacy of these agents in perineal pain relief.⁷

Regarding the effectiveness of the treatment routes for perineal pain, after the interview with 215 postpartum women and 72 hours after vaginal birth, it was identified that oral analgesia was the main relief method, and was used by 75% of the women; where 52.5% of whom considered it as quite effective, and 10.8% as extremely effective. Suppositories were used by 24.7%; the majority within 48 hours after delivery with sutured lacerations or episiotomy, where 54.9% evaluated the method as quite effective, and 27.5% as extremely effective. Injectable drugs were used by 3.7% of the women, of whom 25% reported this method as being quite effective, and 75% as extremely effective.⁵

Regarding the criteria for drug administration, our results indicate that the patient's pain complaint and timely prescription were the most cited. Access to pain treatment is more appropriate when relief methods are offered by the health team compared to

when postpartum women need to request them,⁹ as they do not want to disturb the health team. Thus, caregivers should identify women's pain complaints by frequently asking them about perineal pain or discomfort, and offering treatment based on the best evidence available.¹³

One study that evaluated the satisfaction of women who had recently given birth with the care received in the shared wards identified that good communication with the nursing team and providing medications at the correct times are indicators of the quality of care in the postpartum period.¹⁴

Non-pharmacological methods have been pointed out as the second option for perineal pain relief, among which local cooling followed by local heat were highlighted. Using local heat for painful complaint relief is a common obstetric practice, although in this study it was referred by only two professionals. The justification for using heat in acute trauma is that it provides an increase in the rate of local metabolism, resulting in dilation of the arterioles. Showers, sitz baths and hot water bags are reported after the first 24 hours among the different strategies for applying heat.¹⁴

Local cooling is a low-cost, easy-to-use, non-contraindicated and non-damaging to breastfeeding method for perineal pain relief, and can be used with or without medication. Thus, this method is often used by patients and professionals who provide obstetric care.

In this study, the main indication of local cooling was for cases of edema, followed by hematoma and perineal pain. Some textbooks in the obstetrics area indicate local cooling as a prophylactic measure to reduce edema, hematoma and perineal discomfort occurrence within the first 24 hours after delivery; however, they fail to specify the frequency and application time.¹⁴⁻¹⁵ In the guidelines of the Technical Area of Women's Health of the Ministry of Health, the use of an ice pack in the first 24 hours postpartum is recommended for edema, ecchymosis or hematoma occurrence.¹ However, cooling is weakly effective in reducing bruising and edema.¹⁶

As an analgesic method, one study showed that 42 (84%) midwives and English nurses applied ice as their primary topical therapy for treating perineal pain.⁴ Another study showed that among 69% of postpartum women who used ice within 48 hours of delivery, 32.8% considered it to be less effective, 43% quite effective, and 15.6% considered it extremely effective.⁵

In the current study, the most commonly reported cooling techniques were ice cubes inside latex gloves and ice packs. Cooling application techniques reported in the literature are sitz baths, ice packs, and cold-gel pads.² However, the choice of the local cooling technique should consider its effectiveness and the woman's preference, since some cooling techniques may be refused for being uncomfortable.¹⁷

Sitz baths seem to be a quite acceptable practice for postpartum women.¹⁸ Compact ice packs have also been considered uncomfortable due to stiffness, sharp corners and the sensation of humidity, which make them unpleasant.¹⁷ However, they can be replaced by bags filled with crushed ice that more easily mold to the perineum,¹⁹ or cold-gel pads which have greater acceptance by postpartum women compared to ice packs.²⁰ A clinical trial comparing the application of ice packs, soft ice (a mix prepared with two thirds water and one third 70% alcohol) and cold-gel pads on the thighs of 32 healthy volunteers for 20 minutes found that the gel was more efficient in cooling compared to the other two methods.²¹ However, a systematic review comparing the analgesic efficacy of different modalities of local cooling showed no difference in analgesic efficacy or in the satisfaction of puerperal women comparing ice and cold-gel pads.²

In addition to the cooling techniques, this study also sought to identify the duration time and the interval between local cooling applications. It was found that the application time ranged from 10 to 30 minutes, with 20 minute applications being most frequent. Local cooling was used in more than one session in all institutions, and the repetition interval ranged from 3 to 8 hours or was determined by the professional's evaluation.

Establishing the application time and the interval between the local cooling sessions is important to promote tissue cooling to the temperature required to obtain therapeutic effects and minimize the discomfort and adverse effects that may result from excessive cold exposure. In perineal care, the variability of duration and repetition of local cooling sessions makes it difficult to use it safely and effectively in clinical practice.

Application and repetition times for local cooling depend on the type of implemented technique and the individual response to the cooling. In treating musculoskeletal injuries, it is recommended that if the chosen technique is ice packs or cold packs, the application should last between 15 and 30 minutes,

and that it can be repeated (if necessary) at least every 2 hours due to the long lasting analgesic effect of this therapy.²²

In treating perineal pain, two clinical trials found that ice packs applied for 20 minutes between 2 and 48 hours postpartum were effective in pain control, with effects ranging from 40 minutes to 2 hours after the end of the therapy.²³⁻²⁴

Another controlled clinical trial comparing the efficacy of using an ice pack for 10, 15, and 20 minutes between 2 and 56 hours postpartum found that there was no difference in analgesic efficacy between these three application times, and that analgesia was maintained for up to 40 minutes.²⁵

Yet another clinical trial also found a significant reduction in perineal pain which was maintained for up to 1 hour after therapy by using a plastic bag containing crushed ice in the form of a pad as a cooling technique, applied for 20 minutes between 6 and 24 hours after childbirth.¹⁹

These results show that the analgesic effect duration of local cooling applied to the perineum is still unknown, which makes it unfeasible to safely establish a repetition interval of the session. Therefore, it is recommended that the interval between applications should be at least twice as long as the cooling time, since periods shorter than this can cause adverse effects due to excessive cooling.¹⁶

Other care should be taken to avoid adverse effects caused by cooling, such as using protection between the cooling device and the skin. In this study, in all institutions where ice packs or frozen gel bags were adopted as a cooling technique, a compressed cloth was used during the application in order to avoid direct contact of the ice pack or gel with the perineum. On the other hand, it should be noted that the presence of a barrier between the cooling device and the skin makes it difficult to reach the appropriate cooling temperature for analgesia (10 to 15° C).²

The lack of protocols, equipment and material for preparing and storing the cooling device were the main barriers cited for the use of local cooling. In this sense, although they represent a low cost and easy to apply method, health professionals still find difficulties to implement them in clinical practice.

An absence of care protocols can lead to great diversity in the delivery of care and the fragility of care. However, elaborating assistance protocols depends on the availability of resources,²⁶ which was pointed out in the current study as another barrier to executing local cooling.

One of the limitations of this study is that only one professional from each institution was interviewed, and since none of the maternity hospitals had established protocols for prescribing perineal pain relief methods, the participants' responses may not represent the overall conducts.

CONCLUSION

Pharmacological methods are the main form of treating perineal pain after vaginal birth, with non-pharmacological methods appearing as a second alternative. Oral administration of anti-inflammatories and analgesics is the most commonly used type of treatment for pain management, followed by local cooling (cryotherapy) and local heating.

The main criterion for drug administration is pain complaints after delivery, while for local cooling it is the occurrence of edema, hematoma and perineal pain.

The most used local cooling techniques are ice cubes inside latex gloves and ice packs, wrapped in compressed cloth. Application duration and intervals ranged from 10 to 30 minutes every 3 to 8 hours, respectively. This variation is mainly due to the lack of protocols in the institutions.

Main barriers to the use of local cooling are the lack of protocols, as well as the equipment and materials to produce and store the cooling device.

Effective pain control involves the combined use of non-pharmacological and pharmacological therapies. This study provides an overview of how perineal pain has been managed in public obstetric services in the city of São Paulo, revealing the need to develop evidence-based protocols, thus allowing for safer and more effective perineal pain control.

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