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REVISIONES

Trauma perineal prevention: an integrative literature review

Prevenção do traumatismo perineal: uma revisão integrativa da literatura

Prevención del trauma perineal: una revisión integradora de la literatura

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ABSTRACT:

This article describes the strategies that can be developed by the midwife in order to maintain the integrity of the maternal perineum and prevent the practice of episiotomy during the active phase of the second period of labor.

Objective: To assess the available scientific evidence about the midwife's interventions in order to prevent perineal trauma.

Method: Identification of articles that incorporate scientific evidence on preventing perineal trauma, using the following databases: Medline, Elsevier, Nursing Reference, Cochrane Database of Systematic Reviews, which resulted in 14 articles.

Results/Discussion: The performance of the midwife in the prevention of perineal trauma must follow a sequential set of interventions: to encourage moderate exercise three times a week during pregnancy; to encourage women to perform the perineal massage from the 30th week of pregnancy; to promote the restriction of perineal manipulation during labor, doing only a gentle massage, encouraging spontaneous pushing, changing the position of the mother, applying hot dressings in the perineum, and preferring a simple perineal support when Ritgen maneuver is applied. During all this process, to promote the empowerment of the mother, by giving support and confidence.

Conclusion: The aforementioned interventions are referred as beneficial to the prevention of perineal trauma and to the practice of episiotomy. However, their application requires more evidence, as well as an effective divulgation of the results by the multidisciplinary teams and community with the presentation of the benefits to the health of women, family and society.

Keywords: Pregnancy; Delivery; Perineum; Nurse Midwives

RESUMO:

Este artigo descreve as estratégias que podem ser desenvolvidas pela parteira na preservação do trauma perineal, durante o segundo período do trabalho de parto.

Objetivo: Determinar a evidência científica disponível sobre as intervenções da parteira para prevenir o trauma perineal.
Método: Identificação de artigos incorporando as evidências científicas sobre a prevenção do trauma perineal utilizando as bases de dados: Medline, Elsevier, Nursing Reference, Cochrane Database of Systematic Reviews, resultando numa amostra de 14 artigos.
Resultados/Discussão: A intervenção da parteira na prevenção do trauma perineal deve atender a um conjunto sequencial de intervenções: Incentivar o exercício físico moderado, no mínimo três vezes por semana, desde que constatada a gravidez; Educar e incentivar a mulher à realização da massagem perineal, desde a 30ª semana de gestação; Promover a mudança postural ao longo do trabalho de parto, com possibilidade de deambulação; Incentivar e apoiar a mulher ao puxo espontâneo, ao longo da fase ativa do segundo período do trabalho de parto; Promover a restrição da manipulação perineal, permitindo a adaptação, lenta e gradual, dos tecidos à apresentação fetal; Proceder à aplicação de compressas quentes no períneo, durante o segundo período do trabalho de parto; Efetuar massagem perineal suave, usando um lubrificante; Preferir o apoio perineal simples aquando da aplicação da manobra de Ritgen, em prol da sua versão modificada, sendo esta mais interventiva.
Conclusões: As intervenções são apontadas como contributos na prevenção do trauma perineal. Contudo, a sua aplicação exige a disponibilidade de mais evidência, bem como uma efetiva divulgação dos seus resultados junto das equipas multidisciplinares e da comunidade, com apresentação dos ganhos em saúde para a mulher família e sociedade.

Palavras chave: Gravidez; Parto; Períneo; Parteira

RESUMEN:
Este artículo describe las estrategias que pueden ser desarrolladas por la matrona con el objetivo de mantener la integridad del perineo materno, durante la fase activa del segundo periodo del trabajo de parto.
Objetivo: Determinar la evidencia disponible sobre las intervenciones de la matrona para la prevención del trauma perineal.
Método*:* Identificación de artículos incorporando las evidencias científicas sobre la prevención del trauma perineal, recurriendo a un conjunto de bases de datos de la salud: Medline, Elsevier, Nursing Reference, Cochrane Database of Systematic Reviews, resultante en 14 artículos.
Resultados/Discusión: La actuación de la matrona en la prevención del trauma perineal debe seguir un conjunto secuencial de intervenciones: incentivar el ejercicio físico moderado, tres veces por semana, durante el embarazo; incentivar a la mujer para la realización del masaje perineal, desde la 30ª semana de gestación; promover la restricción de la manipulación perineal durante el trabajo de parto, haciendo solamente masaje suave, alentando el tirón espontáneo y el cambio de posición de la madre y, además, proceder a la aplicación de gasas calientes en el perineo, y preferir el apoyo perineal simple cuando se aplica la maniobra de Ritgen. En todo el proceso, promover el empoderamiento de la mujer mediante el apoyo y la confianza.
Conclusión: Las intervenciones son señaladas como beneficiosas en la prevención del trauma perineal. No obstante, su aplicación exige más evidencia, así como una efectiva divulgación de sus resultados por parte de los equipos multidisciplinares y de la comunidad con la presentación de los beneficios para la salud de la mujer, la familia y la sociedad.

Palabras clave: Embarazo; Parto; Perineo; Matrona

INTRODUCTION

Labor and birth represent the end of the pregnancy, the beginning of extrauterine life for the newborn and a major change in family life.

Childbirth is the most expected moment of transition and, at the same time, the most feared by the couple. This is a process experienced with much anxiety that must be recognized by the midwife, with the aim of providing the necessary support in overcoming the feelings of anxiety and fear, allowing the couple to live a natural moment of their life - the birth of their child.

In this context, it emerges the concept of Natural Labor[1], as well as the classification of common practices in natural labor assistance, including the liberal or routine practice

of the episiotomy in the category “practices which are frequently used inappropriately"[2-3]

Recommended when certain criteria are met, the practice of episiotomy consists in a surgical incision in the perineal region, with obstetric indication to be performed in the following situations: signs of fetal distress, insufficient progression of labor and the threat of third-degree laceration, because of the usual justification of professionals that it contributes for the severe perineal trauma prevention, uterine prolapse and urinary incontinence. Episiotomy is mainly executed in cases of: perineal rigidity, primiparity, macrosomic fetus, prematurity, pelvic presentation and eminence of perineal rupture.[4] However, the preventive/routine use of this practice still continues to be executed despite the absence of scientific evidence to support its benefit, as well as the existence of clear evidence that it may carry some consequences for women, especially the increased rate of infection, the risk of severe perineal injury, the increased blood loss, the discomfort and longer postpartum recovery time, with implications for the establishment of the breastfeeding process.[3] This, along with the recommendations of WHO, lead us to a reflexion about midwife interventions. Therefore, health professionals should seek alternative practices to prevent perineal trauma[4].

The limited use of the practice of episiotomy contributes greatly in obtaining a positive experience of labor and in humanizing the care provided, so it should be encouraged to the detriment of its routine use. Therefore, it is estimated that the ideal frequency for this practice should vary between 10 and 30% of vaginal deliveries[1-3].

Thus, the objective of this work is to determine the available scientific evidence on the interventions of the midwife for the prevention of perineal trauma, understanding the labor as a positive, natural and human experience for the woman, the newborn and the family. Therefore, it is considered that there is a long way to go towards a more humanized practice, centered on the individuality of each couple, as childbirth assistance needs to be further explored, taking into account a greater proximity between the health professionals, the woman and the family, being the midwife a facilitator in this process.

METHOD

The approach to this problem is qualitative in nature, and it is based on the identification of articles about the interventions of the midwife in order to prevent the perineal trauma, focusing on evidence-based practice, as it promotes the development and/or use of searches results in clinical practice. It was used a methodology of literature integrative review, which allowed the search, the critical reflection and synthesis of the available evidence on the subject, aiming to determine the current state of knowledge, the implementation of interventions in practice and also the identification of limitations likely to be developed in future searches[5].

Therefore, it is intended to contribute to the clarification of knowledge in the area of Gynecology and Obstetrics, since it is believed that knowledge provides the necessary power for change, which may result in obtaining greater autonomy.

The data collection from the selected articles was based on the methodology of the literature integrative review that includes the following steps: selection of the research question; establishment of inclusion and exclusion criteria; identification of pre-

selected and selected studies; categorization of selected studies; analysis and interpretation of results; presentation of the revision/synthesis of knowledge.[5]

Therefore, the following research question was considered, which was a starting point for the construction of the integrative literature review: *Which interventions can be developed by the midwife in terms of prevention of perineal trauma?*

The access to evidence was obtained through the search of publications cataloged in the databases: Medline, Elsevier, Nursing Reference, Cochrane Database of Systematic Reviews and through the platform EBSCOhost and PUBmed.

We defined as an inclusion criterion the availability of original articles using the following keywords: Pregnancy; Birth; Perineum; Midwife, with full text available in Portuguese, English and Spanish, published between December 2007 and July 2015, referring to clinical trials or systematic reviews of the literature alluding to parturients regardless of parity and resulting from the search based on the descriptors and their combinations. Exclusion criteria include studies that do not meet the above inclusion criteria. This research allowed the identification and analysis of 14 articles that are represented in table 1, which documents the data of the selected studies.

For the analysis and interpretation of the results it was considered the title; the objectives of the article, the author; the method; the level of evidence, the year and the country in order to incorporate the object of study.

RESULTS AND DISCUSSION

After the analysis of the results of the search carried out, the interpretation and consequent synthesis of the main data were made. The detailed analysis of each article resulted in the suggestion of strategies, in them identified, that were considered capable of answering the starting question, which were compared and organized according to their similarity in content and in eight empirical categories, presented in Table 1.

Table 1 – Description of the selected articles

N.	*Title/Objective*	Author	Method	Level	Year/Country
1	***Fortalecimiento del suelo pelvico y gestacion*** To analyze the state of knowledge about the subject from the literature and to determine the effect of muscle strengthening of the pelvic floor on incontinence and labor.	Rodrígues RM Peláez M Barakat R	Systematic review	I	2012/Spain
2	***Exercise during pregnancy reduces the rate of cesarean and instrumental deliveries: results of a randomized controlled trial*** To evaluate the effects of a structured program of moderate intensity physical exercise throughout the pregnancy on the type of delivery of a woman.	Barakat R [et al.]	Randomized Study	II	2012/Spain
3	***Antenatal perineal massage for reducing perineal trauma*** To evaluate the effect of perineal massage during the prenatal period on the incidence of perineal trauma at birth.	Beckmann MM Stock OM	Systematic review	I	2013/Australia
4	***Multicentre, open label study to evaluate the efficacy and tolerability of a gel (Elastolabo®) for the reduction of the incidence of perineal traumas during labour and related complications in the postpartum period*** To evaluate the efficacy and tolerability of Elastolabo ® in reducing the incidence of perineal trauma during delivery and related complications in the postpartum period.	Reggiardo G. Fasani R. Mignini F.	Randomized Study	II	2012/ Italy
5	***Perineal techniques during the second stage of labour for reducing perineal trauma*** To evaluate the effect of perineal management techniques during the second stage of labor on the incidence of perineal trauma.	Aasheim V [et al.]	Systematic review	I	2012/Norway
6	***Alternative model of birth to reduce the risk of assisted vaginal delivery and perineal trauma*** To evaluate the effects of an alternative birth model on the incidence of assisted vaginal delivery and perineal trauma.	Walker C [et al.]	Randomized Study	II	2012/Spain
7	***Effects of Pushing Techniques in Birth on Mother and Fetus: A Randomized Study*** To determine the effects of pushing techniques during labor on the mother and the fetus.	Yildirim G Beji NK	Randomized Study	II	2008/ Turkey
8	***The effects of perineal management techniques on labor complications*** To compare the effects of perineal management techniques (hands-off technique, Ritgen's maneuver and perineal massage using a lubricant during labor) on labor complications.	Fahami F Shokoohi Z Kianpour M	Randomized Study	II	2012/Iran
9	***Perineal Outrcomes and Maternal Comfort Related to the Application of Perineal Warm Packs in the Second Stage of Labor: A Randomized Controlled Trial*** To determine the effects of applying hot compresses to the perineum on perineal trauma and maternal comfort during the second stage of labor.	Dahlen H [et al.]	Randomized Study	II	2007/Australia
10	***Reducing perineal trauma through perineal massage with Vaseline in second stage of labor*** To examine the effects of perineal massage with vaseline on perineal trauma - rate of episiotomy and / or other procedures, rate of perineal laceration.	Geranmayeh M [et al.]	Randomized Study	II	2011/Iran
11	***Modified Ritgen's Maneuver for Anal Sphincter Injury at Delivery: A Randomized Controlled Trial*** To investigate whether the modified Ritgen's maneuver decreases the risk of third and fourth degree perineal lacerations compared to simple perineal support.	Jönsson E [et al.]	Randomized Study	II	2008/USA
12	***Ocorrência de episiotomia em partos acompanhados por Enfermeiros Obstetras em ambiente hospitalar*** To analyze the occurrence of episiotomy and its relation with the parity of women assisted by midwives of a public maternity hospital in Rio de Janeiro.	Figueiredo GS [et al.]	Retrospective Comparative Study	III	2011/Brazil
13	***Risk factors and midwife-reported reasons for episiotomy in women undergoing normal vaginal delivery*** To evaluate the risk factors and the reasons pointed out by the midwife for the episiotomy and the association between this technique and the degree of laceration.	Wu LC [et al.]	Retrospective Comparative Study	III	2013/ Singapore
14	***Promoting normality in the management of the perineum during the second stage of labour*** To analyze current evidence to explore what is known as contributing to the reduction of perineal trauma rates.	Moore and Moorhead	Systematic review	I	2013/ England

Physical exercise in pregnancy

Physiological responses to moderate exercise in pregnancy are generally improved compared to pregnancy without exercise. Therefore, levels of oxygen uptake, heart rate, systolic volume and cardiac output, among others, are improved, being beneficial for the mother and the fetus. Healthy pregnant women, without contraindications to exercise, should be encouraged to practice physical exercise regularly, with specific professional support to guide the exercise prescription in pregnancy and postpartum[6].

The regular practice of physical exercise in pregnancy may reduce abdominal discomfort and constipation, as well as help the woman to sleep better and to maintain weight control, avoiding excess weight, gestational diabetes and depression. Exercises such as Pilates allow the maintenance of abdominal muscle tone, which helps to support the abdominal distension throughout pregnancy and also to increase the ability to push in the expulsive period[7]. The confirmation of these data suggests important benefits, not only for the evolution of pregnancy, but also for the evolution and results of labor. Recently, physical exercise in pregnancy has been associated

with positive effects on strengthening the pelvic muscles and, consequently, with positive results in pregnancy and labor progression. Several studies have concluded that there is a lower incidence of prolonged expulsive periods, practice of episiotomy and presentation of buttocks in women who performed exercises to strengthen the pelvic muscles in pregnancy[8].

These data are consistent with previous comparative studies on the effects of pelvic muscle strengthening exercises in three groups: a group of women who exercised less than once a week; another group that did it once or twice a week, and another group that did it at least three times a week. The results showed a lower incidence of laceration, episiotomy, instrumented delivery and cesarean section in the group of women who underwent pelvic strengthening exercises at least three times a week, thus confirming the importance of regular exercise [9].

Also noteworthy are studies that seek to relate the effects of physical exercise in pregnancy to the type of delivery, which show a lower percentage of cesareans and instrumented deliveries in pregnant women who performed physical exercise. Based on these results, a moderate-intensity supervised exercise program performed throughout pregnancy may be recommended in healthy women[10].

Perineal massage in pregnancy

Perineal trauma following vaginal delivery has been associated with significant morbidity in the short and long term. So, the perineal massage in the prenatal period has been suggested as a method to reduce its incidence. Therefore, the use of this technique in the prenatal period has been associated with an overall reduction in the incidence of perineal trauma requiring suture, concluding that women who were practicing this massage were less prone to episiotomy, especially primiparous women[11].

The perineal massage allows the preparation of the perineal tissues for delivery, increasing its elasticity and decreasing its resistance in distension. In its implementation, the use of lubricating gel, composed of ingredients with relaxing properties, allows the improvement of the elasticity and extensibility of the skin and the perineal muscles of pregnant women, resulting in the reduction of the risk for perineal trauma. Accordingly, there is a reduction in the percentage of episiotomies and lacerations in labor and its subsequent complications, mainly postpartum perineal pain, so it should be included in the preparation for delivery, providing information to the woman about its benefits and the technique of realization[12].

Maternal position

The maternal position emerges as an aid to the success of labor. It is important its evaluation by health professionals, as well as the comfort of the parturient since it interferes with anatomical and physiological adaptations in labor. Frequent changes in position relieve fatigue, increase comfort and improve circulation, so women in labor should be encouraged to adopt the positions they consider most comfortable[13].

We easily understand that changing position in labor contributes to an increased maternal comfort. However, and regarding labor outcomes, can the maternal position influence the maintenance of perineal integrity?

In comparative studies that included women who were encouraged to follow a protocol of postural changes while performing spontaneous expulsive efforts and adopted lateral decubitus position in fetal expulsion, it was observed a significant reduction in instrumented delivery and in the rate of practice of the episiotomy, which significantly increased the rate of intact perineum. Therefore, it was concluded that a combination of postural changes in the passive phase in second-stage labor and the use of the lateral decubitus position in the active phase of the expulsive period (just stimulating spontaneous pushing) are associated with the reduction of instrumented delivery rates and perineal trauma[14].

Spontaneous pushing

In a randomized study that compared groups of women encouraged to spontaneous pushing (keeping the glottis open) with groups of women encouraged to perform the Valsalva maneuver (keeping the glottis closed and pushing for the maximum time), it was concluded that second-stage labor and duration of the expulsive period were significantly longer in the group encouraged to perform the Valsalva maneuver. Regarding the incidence of episiotomy, perineal lacerations or postpartum haemorrhage, the differences were not significant. Neonatal outcomes were more favorable in the spontaneous pushing group, with better Apgar scores at the first and fifth minutes and with better pH and partial pressure of oxygen levels in the umbilical artery. Therefore, it is concluded that spontaneous pushing contributes to better neonatal outcomes, so it is beneficial to educate women about the spontaneous pushing technique and to support them in its implementation[15].

Ritgen's maneuver

Ritgen's maneuver is an obstetric procedure that helps the fetal extraction (it favors the flexion of the head and facilitates its removal) and avoids violent expulsion that can lead to perineal injuries[16]. It is also a preventive maneuver of anal sphincter lacerations and it is performed between uterine contractions. However, in the studies of Jönsson et al.[16] it was used its modified version, which consists of its realization in uterine contraction rather than between contractions. Their objective was to investigate whether the modified Ritgen's maneuver reduced the risk of third and fourth degree perineal lacerations compared to simple perineal support. The results showed that the rate of third and fourth degree lacerations was 5.5% (n = 38) in women who underwent the Ritgen's maneuver and 4.4% (n = 32) in women who were subjected to simple perineal support. Therefore, it is concluded that the modified Ritgen's maneuver does not reduce the risk of anal sphincter injury in the expulsive period, at least not when performed in contraction[16].

Hands off technique

In randomized trials that compared groups of women submitted to the Ritgen's maneuver, to the restriction of perineal manipulation or to the perineal massage, it was concluded that the prevalence of lacerations in the Ritgen's maneuver group was higher and that this is associated with an increase in the degree of severity of the lacerations. There were no significant differences in the frequency of lacerations in groups submitted to the Hands off technique or to the perineal massage with lubricant. It was also concluded that the frequency of perineal pain after delivery was higher in the Ritgen's maneuver group compared to the other two groups, between which, again, no significant differences were found. Therefore, the restriction of the perineal

manipulation was associated with a lower rate of perineal trauma and contributed to a greater satisfaction in the experience of physiological vaginal delivery[17].

More recently, in order to prevent perineal injuries in the delivery, a perineal protection device was developed and its efficacy was investigated through a randomized controlled trial, which goal was to evaluate the incidence of perineal lacerations and its side effects for the woman in labor and the newborn.

The results showed that the incidence of first and second degree lacerations was significantly lower in the treatment group compared to the control group, in which the device was not used. Moreover, in the intervention group, the number of women with the intact perineum was higher (34.9% vs. 26.6%) and there were no negative effects on the mother or the newborn, so this device could be a contribution in what concerns the prevention of perineal injury in delivery[18].

Heat application (hot gauze compress)

According to randomized studies which had the goal to determinate the effects of the application of hot gauze compress on the perineum on perineal trauma and maternal comfort in the second stage labor, it was concluded that, despite its negligible effect in the first and second degree lacerations and in the probability of need for perineal suture, the women in the hot gauze compress application group had significantly less third and fourth grade lacerations and had significantly lower perineal pain in the first and second postpartum days. In addition, at three months, they were significantly less likely to have urinary incontinence compared to women included in the standard care group. Therefore, this simple and inexpensive practice should be associated to the assistance in the second stage labor[19].

Perineal massage in labor

The perineal massage has been associated with benefits such as the reduction of stress, the increase of blood circulation and the relief of pain. Moreover, when the perineal muscles surrounding the vaginal introitus are strongly distended, the woman undergoing perineal massage with vaseline is less likely to suffer a perineal injury, since this practice contributes to a greater elasticity and softness of the tissues, helping the woman to get used to pressure sensations that are caused by the fetal presentation at the delivery.

Studies conducted with the objective of verifying the effects of perineal massage with vaseline on perineal trauma, in what concerns the rate of episiotomy practice and the rate of perineal laceration, showed a significantly lower duration of the second stage labor and a higher rate of intact perineum. There were no cases of third or fourth degree lacerations. Regarding perineal trauma, the massage has been associated with a decrease in the rate of episiotomy and an increase in the rate of first and second degree lacerations. In addition, in a follow-up study up to 10 days postpartum, the group of women submitted to the massage did not reveal any side effects of the use of vaseline. Therefore, it is concluded, that perineal massage with vaseline in the second stage labor increases perineal integrity and reduces perineal trauma (episiotomy and lacerations). Thus, it is recommended as an effective way to maintain the perineal integrity in delivery[20].

Empowerment, support and trust

The well-being of the newborn depends on the mother's ability to care for her child, which can be influenced by the pain due to perineal trauma, a factor that can prevent the woman from carrying out her daily activities, interfere with returning home and with her independence, affecting her self-esteem and confidence as a mother and also can have an impact on the relationship, bonding and breastfeeding. Thus, the midwife must promote effective interventions, avoiding the occurrence of negative experiences [21]. Therefore, it is midwife's responsibility to plan appropriate interventions for each woman and to promote their participation in decision-making related to childbirth experience (empowerment), which is not always the case.

Thompson and Miller [22] examined the participation of women in the decision-making process in pregnancy and labor. The results showed that 60% of the women proposed for vaginal delivery had not been informed about the risks and benefits of the procedures they had undergone and that 34% of the women submitted to the episiotomy were not consulted in the decision making, which shows the urgent need for intervention and provision of information.

Thus, empowering women is a process that should be approached in the preparatory sessions for labor, ensuring that women are proactive in this process [21].

Therefore, the midwife has the responsibility of empowering women, motivating the confidence in their body and their ability to undergo labor, which is a natural and physiological process and a unique experience in women's lives. Women should also be prepared to rely on the midwife as a competent professional to assist in the progression of labor [21].

FINAL CONSIDERATIONS

Interventions of the midwife in the prevention of perineal trauma, in particular the practice of episiotomy, have to start from the beginning of pregnancy, in the prenatal surveillance visit. Thus, the woman should be encouraged to maintain or to initiate the regular practice of moderate intensity physical exercise, with the accompaniment of a professional, in the sense of the prescription of the physical exercises, taking into account the symptoms, the discomforts and the physical capacity inherent to pregnancy. The exercise program for the pregnant woman should be dynamic and regular, at least three times a week and ideally every day for at least 15 minutes, which should gradually increase to 30 minutes, up to a minimum of 150 minutes of weekly physical activity[6].

The importance of physical exercise is reflected in health during pregnancy and labor, contributing to increase abdominal muscle tone and consequent ability to pull effectively, and to strengthen the pelvic muscles, contributing to the reduction of the time of the expulsive period and the practice of episiotomy, as well as instrumentalized delivery and caesarean section[6-10].

During pregnancy and during the preparation for delivery, usually from the 28-30 weeks of gestation, there are midwife interventions that can prevent the practice of episiotomy. These include the promotion and teaching of perineal massage, providing information on its benefits and technique, as it was associated with the reduction of perineal trauma, mainly to the practice of episiotomy, and the reduction of perineal

pain after childbirth. In its implementation, the use of lubricating gel, whose lubricating properties benefit the elasticity and the perineal extensibility, is relevant[11-12].

During labor, the postural change of the parturient in the latent phase of the expulsive period and the use of the lateral decubitus position in the active phase of the second period were associated with reduced rates of instrumentalized childbirth and perineal trauma and so, they should be promoted and encouraged[14]. To these interventions, it can be added the benefit of educating/empowering women on spontaneous pushing and their support in its implementation, since this technique has contributed to the shortening of the second stage of labor and to the reduction of instrumentation, as well as to better neonatal outcomes[15].

The restriction of the perineal manipulation was associated with a lower rate of complications, such as perineal lacerations and postpartum pain[17].

The application of hot gauze compress to the perineum significantly reduces third and fourth degree lacerations and pain during labor, as well as on the first and second postpartum days and also has benefits in what concerns urinary incontinence and so, it should be used in assistance in this stage of labor[19].

The perineal massage with vaseline during the second stage of labor not only reduces the its duration, but also increases the possibility of preservation of the perineum, mainly by reducing the frequency of episiotomy and is therefore a pertinent intervention in the practice of the midwife[20].

As for the Ritgen's maneuver, it is concluded that its modified version does not reduce the risk of third and fourth degree lacerations, at least not when performed during uterine contractions, which does not mean that its original version, performed between contractions cannot do so. This means that there is still needed more evidence on this issue[16].

We note that the studies involved in the integrative review advocate, in accordance with the guidelines of the World Health Organization, the most natural possible labor, as well as a reduction of intervention and a limitation of the instrumentation since it is considered to promote possibilities of occurrence of perineal trauma.

Thus, considering the research done and answering to the initial question, we consider that the intervention of the midwife on the prevention of perineal trauma should attend a sequential set of interventions: (1) To encourage the initiation or maintenance of moderate intensity physical exercise, at least three times a week, as soon as the pregnancy is confirmed; (2) To educate and to encourage the woman to perform the perineal massage, from the 30th gestational week; (3) To promote postural changes throughout labor, with the possibility of ambulation; (4) To encourage and to support the woman to spontaneous pushing during the expulsive period; (5) To promote the restriction of perineal manipulation, allowing the slow and gradual adaptation of the tissues to the fetal presentation; (6) To apply hot gauze compress to the perineum during the second stage of labor; (7) To perform gentle perineal massage using a lubricant; (8) To prefer the simple perineal support when applying the Ritgen's maneuver, in favor of its modified, more interventional version; (9) To promote the empowerment of women and the capacities needed to make decisions about their labor, providing support and confidence.

These interventions are pointed out by the current evidence as a contribution to the prevention of perineal trauma during labor, especially in the practice of episiotomy. However, its application in the practice of the midwife requires the availability of more evidence, as well as an effective dissemination of its results to the multidisciplinary and community teams, presenting the health gains for women and the humanization of care, represented by them.

The present results reveal concerns about humanizing the experience of birth experienced by the woman, encouraging her to self-knowledge and self-control of her body and her capacities, through more naturalistic techniques, and thus contribute to a happier postpartum life[3].

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