**The effects of perineal trauma on immediate self-reported birth experience in first-time mothers**

Childbirth is an important life event, and yet for some women birth can be experienced as traumatic and stressful. Previous research suggests that a negative birth experience can increase the risk of developing symptoms of postpartum depression, post-traumatic stress disorder and can adversely affect the mother–infant relationship. Experiencing birth negatively can also have an economic or societal impact, as it may result in increased requests for a cesarean section for future births, or an avoidance of future pregnancies. It is important to understand how different birth events can influence women’s experiences of birth, the ways in which to prevent or help alleviate any adverse effects that experiencing birth negatively may have can be considered.

Perineal trauma is one of the most frequent complications of childbirth with around 90% of primiparous women experiencing some degree of perineal tear and up to 6% sustaining an obstetric anal sphincter injury. Across Europe, rates of perineal trauma can vary widely with some countries showing rates of severe perineal trauma at 4.9% and rates of episiotomy at 75%.

The data suggest that those who experience a 1st/2nd degree tear may experience birth more positively, experience greater perceived control and self-efficacy surrounding their birth than those with an OASI or episiotomy.

If women who experience an OASI or episiotomy experience low self-efficacy during their birth, i.e. they feel like they are less capable of giving birth, potentially due to what has happened to their body during the birth itself, this may negatively affect their emotional wellbeing in the postpartum period. Those with a 1st/2nd degree tear also reported a greater perceived ability to influence their birth than those with an episiotomy. These results may suggest that experiencing an episiotomy could be associated with women feeling less involved in decision making during labor and birth.

**The effect of cold application on episiotomy pain: A systematic review and meta-analysis**

Perineal pain can be caused by surgical (episiotomy) and spontaneous trauma and lacerations after vaginal birth. Episiotomies represent one form of trauma and are equivalent to a second-degree laceration that affects the mucosa and perineal muscles. First- and second-degree lacerations cause pain and unrest, which puts extra stress on mothers who are trying to adapt to their new conditions and thus negatively affects their daily activities such as movement, urination, defecation and lactation, especially during the first 3 days postpartum.

Among these non-pharmacological methods, cold application is important in reducing perineal pain. Cold application methods have been used for years to treat local tissue traumas to reduce short-term pain and it comes in different forms, such as ice packs, cold gel pads or cold/ice baths, to treat perineal lacerations. Cold application constitutes a non-pharmacological, non-invasive, low-cost and simple method to reduce local tissue temperature and also help reduce pain after an episiotomy.

Although the physiopathology of the cold application employed in reducing post-episiotomy pain is not clearly known, research has found that it causes vasoconstriction. It also reduces capillary permeability and prevents oedema from occurring in the region by preventing blood from damaged vessels from leaking into tissue. As a result, cellular metabolism decreases and muscles loosen, which together reduce pain. Additionally, cold application methods can reduce skin temperature by 10–15°C in 15 min, thus slowing down bacterial growth, numbing the area, slowing pain stimuli and reducing inflammation and pain by increasing the pain threshold.

**Implementação de práticas baseadas em evidências no manejo da dor perineal no período pós-parto**

A dor pode causar mobilidade reduzida e desconforto, interferir no estabelecimento da amamentação e no desenvolvimento de atividades de cuidados com o recém-nascido e autocuidado, como sono, repouso, micção e evacuação. Pode ainda impactar na relação sexual e vida familiar, causando problemas psicológicos e emocionais durante o puerpério. Assim, é necessário o manejo adequado da dor perineal, incluindo as melhores práticas baseadas em evidências, para uma assistência de qualidade à mulher no período pós-parto.

* As mulheres devem ser informadas sobre a importância da higiene perineal, incluindo a mudança frequente de absorventes, lavar as mãos antes e depois de fazer isso e, diariamente, tomar banho para manter seu períneo limpo (Grau de evidência A);

• As mulheres que experimentam dor perineal após o parto devem receber anti-inflamatórios orais não esteroidais (AINE) para alívio da dor, a menos que haja uma contraindicação específica. Paracetamol ou acetaminofeno também podem ser considerados (Grau de evidência A);

• As compressas de gelo ou gel frio podem ser recomendadas para reduzir a dor perineal após o parto e devem ser oferecidas às mulheres para melhorar o nível de dor (Grau de evidência B);

• A analgesia oral e retal demonstra ser eficaz na diminuição da dor perineal, mas a aceitação do uso de analgesia retal por algumas mulheres pode afetar seu uso (Grau de evidência B);

• Os analgésicos opiáceos só devem ser prescritos se a mulher não tiver alcançado o alívio adequado da dor com os tratamentos não opioides (Grau de evidência B).

**PERINEAL CARE AND OUTCOMES IN A BIRTH CENTER**

It is estimated that more than 85% of women had some kind of perineal trauma during childbirth, caused by episiotomy or by the spontaneous rupture (tear or laceration) of tissues during the baby’s passage through out the vagina. Spontaneous perineal tears are classified in degrees according to the tissue layers affected. First-degree tears only reach the skin and mucosa, second-degree tears also reach the musculature, third-degree tears affected the anal sphincter and fourth-degree tears harm the rectal mucosa. Complications associated with perineal trauma may harm women’s health both in the immediate and long term post-partum period, affecting their mobility, vesical and intestinal elimination, general care towards the newborn and other daily activities. When the trauma is minor, suture and post-partum perineal care are performed properly, the chance of complications are lower. Episiotomy, on the other hand, may cause more severe pelvic floor damages, just as third- and fourth-degree tears.

In this study, maternal age was associated to perineal trauma; each year increased the chance of perineal tear. As the literature shows, higher maternal age is associated with spontaneous second-degree tears. Many studies showed multiparity as a protective factor against perineal tears and a higher incidence of intact perineum.13–15 Women in this study were mainly in their first pregnancy; however, after the multiple analysis, the chance of spontaneous perineal tear decreased for each previous vaginal childbirth. A prolonged second stage of labour is clearly stated in the literature as an associated factor to the occurrence of perineal trauma. It is described that the longer is the second stage of labour, the higher is the chance of severe spontaneous degree tear, involving the anal sphincter.

It is worth mentioning that in the place of this study, women have freedom to adopt any position

during childbirth; therefore, there was a lot of positions and places chosen by the women for having the birth: squatting, seated, four supports, lateral, standing and kneeling. Only one woman gave birth in supine position.

Supine position may be associated with abnormalities in fetal heart beats, higher rates of episiotomy and lower prevalence of spontaneous vaginal childbirth. Vertical positions, in its turn, may reduce episiotomy rates, duration of the second stage of labour and occurrence of instrumental birth. However, when woman adopts vertical positions during the second stage of labour, it may increase the occurrence of spontaneous second-degree tears, but there is no proven association with the occurrence of third- and forth- degrees tears.

Regarding lateral position, it can increase perineal integrity rates, reduce the occurrence of episiotomy, labia lacerations and local edema; besides, when compared to other positions, it contributes to the reduction of spontaneous second-degree tears. The same outcome was shown in a controlled randomized trial regarding four support position.

After childbirth, it is possible to reduce discomforts caused by perineal trauma with pharmacological and non-pharmacological methods. Pharmacological methods like anti-inflammatory medicines and painkillers are prescribed by health professionals for pain relief, but these medications has side effects, such as gastrointestinal, bleeding and allergic reactions. However, even though these side effects may occur, medicines are predominant for pain relief. On the other hand, the medicine overuse can be managed with the use of non-pharmacological methods for pain relief. In this study, natural perineal care methods were used in a little more than half of women. Local icepack compress is the most used practice and demonstrates effectiveness to relieve perineal pain. Other methods used, such as calendula tincture and chamomile tea compress, appear in the literature as capable of greatly increasing the speed of perineal wounds’ healing.

**Perineal Management Techniques to Reduce Perineal Trauma During The Second Stage of Labor**

Several risk factors have been established for the development of severe perineal injuries such as midline episiotomy, fundal pressure, upright delivery postures, prolonged second stage of labor, vaginal operative procedures, and fetal macrosomia. However, nulliparity has been identified as the main risk factor. The extent of perineal trauma is related to parity and factors such as; birth weight of the infant, ethnicity and maternal body mass index (BMI).

Trauma of the genital tract at birth can cause short term and long term problems. The degree of postnatal morbidity is directly related to the extent and complexity of the genital tract trauma. Short term problems (immediately after birth) include blood loss, need for suturing and pain. While long term problems include dyspareunia, weakness of the pelvic floor muscle as well as bowel, urinary or sexual problems. These problems are less likely in women whose perineum remains intact, the achievement of which has long been highly regarded.

Both childbearing women and health professionals place a high value on minimizing perineal trauma and reducing potential associated morbidity. Perineal trauma, particularly from routine episiotomy, is painful, often considered unnecessary, and impacts on a woman's sexuality and self-esteem. The aim of this study was to assess the effect of perineal management techniques (warm compress and perineal massage) in reducing the incidence of perineal trauma during the second stage of labor.

The application of perineal warm compresses and lubricated perineal massage during the second stage of labor can reduce the occurrence and the degree of perineal laceration, and postpartum perineal pain. Women's age, body mass index and history of previous perineal trauma influence the occurrence of perineal trauma.

**Spontaneous Perineal Trauma during Non-Operative Childbirth—Retrospective Analysis of Perineal Laceration Risk Factors**

There are four degrees of a perineal laceration that can be distinguished. The first degree involves damage to the skin of the perineum and vaginal mucosa. The second degree involves damage to the perineal muscles, but without the anal sphincter. The third degree involves damage to the perineum and the sphincter complex. The fourth degree involves the anal sphincter complex and anal epithelium. The factors that increase the risk of perineal trauma include several maternal, neonatal, and intrapartum determinants. Trauma of the perineum during childbirth may be associated with numerous health consequences of varying duration and, at the same time, on women’s quality of life. These consequences include, inter alia, perineal pain, wound dehiscence, infections, dyspareunia and sexual dysfunctions, and urinary and fecal incontinence.