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Treatment for breast engorgement (overfull, hard, painful breasts) in breastfeeding women

Authors: Zakarija-Grkovic I, Stewart F

What is the issue?

Breast engorgement is the overfilling of breasts with milk, leading to swollen, hard, painful breasts. Engorgement is more common when feeding is scheduled, when women have difficulty breastfeeding or are separated from their babies. This leads to breasts not being emptied sufficiently.

Why is this important?

Breast engorgement is distressing and leads to complications such as inflammation of the breast, sore/cracked nipples and reduced milk supply. Consequently, women may stop breastfeeding. Consistent evidence on effective forms of treatment is lacking.

What evidence did we find?

For this update, we searched for trials (on 2 October 2019) exploring any treatments for breast engorgement in breastfeeding women. We found 21 studies involving 2170 women and 17 different interventions.

For breast pain, cold cabbage leaves may be better than routine care or cold gel packs. We are uncertain whether cold cabbage leaves are better than room temperature cabbage leaves, or room temperature cabbage leaves than hot water bag, or cabbage leaf extract cream than placebo cream because the certainty of evidence was low. For breast hardness, cold cabbage leaves may be better than routine care but we are uncertain if they are better than cold gel packs. For breast engorgement, room temperature cabbage leaves may be better than a hot water bag. We are uncertain if cabbage leaf extract cream is better than placebo cream because the certainty of evidence was low.

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For breast pain, herbal compress may be better than hot compress and massage therapy plus cactus/aloe compress may be better than massage therapy alone. We are uncertain if cactus/aloe compress is better than massage therapy because the certainty of evidence was low. Cactus/aloe compress may be better for breast hardness compared to massage therapy. Massage plus cactus/aloe cold compress may be better for breast hardness compared to massage alone. We are uncertain about the effects of compress treatments on breast engorgement and stopping breastfeeding because the certainty of evidence was very low.
Protease may be better for breast pain and breast swelling, whereas serrapeptase may be better for engorgement compared to placebo. We are uncertain if serrapeptase reduces breast pain or swelling, or if oxytocin reduces breast engorgement compared to placebo, because the certainty of evidence was low.
For breast pain, we are uncertain about the effectiveness of cold gel packs compared to control treatments because the certainty of evidence was low. For breast hardness, cold gel packs may be better than routine care. We are uncertain if more women stop breastfeeding following cold gel pack treatment compared to routine care because the certainty of evidence was low.
In terms of women's opinion of treatment, the certainty of evidence was low. More women were satisfied with cold cabbage leaves than with routine care, or with cold gel packs. There may be little difference in women's satisfaction between cold gel packs and routine care.
Three studies reported adverse events. No women experienced adverse events in any of the groups receiving medication (low-certainty evidence) and 2/250 women receiving herbal compress treatment experienced skin irritation compared to 0/250 in the hot compress group (moderate-certainty evidence).

What does this mean?

There is some evidence to suggest that some treatments may be promising for the treatment of breast engorgement, such as cabbage leaves, cold gel packs, herbal compresses and massage, but more studies are needed for the true effect of these interventions to be known.

Cervical stitch (cerclage) in combination with other treatments for preventing premature or early birth of single babies

Authors: Eleje GU, Eke AC, Ikechebelu JI, Ezebialu IU, Okam PC, Ilika CP

We assessed randomised controlled trial evidence on the effects of cervical stitch in combination with other treatments for prolonging pregnancy in women who were at high risk of pregnancy loss and were carrying a single baby. Additional treatments were used in the same time period as when the cervical stitch was surgically inserted.

What is the issue?

The cervix is a cylinder-shaped neck of tissue connecting the vagina and uterus (womb). The cervix should stayed closed during pregnancy, but some pregnant women have cervical weakness resulting in pain-free opening of the cervix. This may lead to a late miscarriage or preterm birth before 37 weeks of pregnancy. A cervical stitch is a surgical procedure performed in the second trimester to place a stitch around the cervical neck with the intention of helping the woman carry the pregnancy until around 37 weeks. Other treatments that can be combined with cervical stitch include antibiotics, vaginal support inserts (pessaries), placement of

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a second cervical stitch, uterine relaxants (tocolytics), progesterone (hormonal drugs), omega-3 long chain polyunsaturated fatty acids and bed rest.

Why is this important?

Cervical weakness is diagnosed through a woman's history of pregnancy losses or premature births in the second trimester, ultrasound examination or physical examination. Preventing preterm birth is a healthcare priority because it is the leading cause of infant ill health and death worldwide. A cervical stitch in combination with other treatments could help prevent preterm birth in women carrying a single baby as a single stitch may not be sufficient for pregnant women with prior premature births and short cervical length or weakness.

What was studied in the review?

We wanted to know whether a cervical stitch, in addition to one of a range of treatments (antibiotics administration, a vaginal pessary, reinforcing or second cervical stitch placement, a uterine relaxant or progesterone) can prolong pregnancy for women carrying a single baby who are at high risk of pregnancy loss.

What evidence did we find?

We searched the literature for evidence from randomised controlled trials up until 26 September 2019. We identified two trials involving a total of 73 women. Only one trial with 50 mother-baby pairs had results that could be included in this review. The trial compared cervical cerclage in combination with indomethacin (tocolytic) and the antibiotics cefazolin or clindamycin with cervical cerclage alone. Women were not blinded to the treatment they received.

We are unclear about the effects of the intervention because we identified *very low-certainty evidence* for the main outcomes in this review: serious complications; loss of the baby (data for miscarriage and stillbirth only - data were not available for the numbers of babies who died within 28 days of being born), or preterm birth before 34 completed weeks of pregnancy. There were no stillbirths (death within the womb at 24 or more weeks).

Data for death of the newborn baby at discharge, or the number of babies discharged home healthy were not available.

What does this mean?

We found insufficient evidence to evaluate the effect of combining a tocolytic (indomethacin) and antibiotics (cefazolin/clindamycin) with inserting a cervical stitch compared with inserting a cervical stitch alone for preventing spontaneous preterm labour in women with singleton pregnancies.

We did not identify any studies looking at other treatments in combination with inserting a cervical stitch. Additional research needs to focus on the role of other interventions such as a vaginal support pessary (device), reinforcing or second cervical stitch placement, 17-alpha-hydroxyprogesterone caproate, dydrogesterone or vaginal micronised progesterone, omega-3 long chain polyunsaturated fatty acid supplementation and bed rest.

Future studies should recruit sufficient numbers of women to provide meaningful results and should investigate the risk of death of the baby shortly after birth and the numbers of babies discharged home healthy.

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Interventions for the prevention of mastitis following childbirth

Authors: Crepinsek MA, Taylor EA, Michener K, Stewart F

We set out to look at the effectiveness of interventions used to prevent breastfeeding women developing inflammation of breast tissue known as mastitis.

What is the issue?

Mastitis is a common complication of breastfeeding. It causes considerable pain and suffering for women and may stop some mothers from breastfeeding their babies for as long as they would like. Several factors contribute to the development of mastitis, such as blocked ducts, the breasts being too full with milk, cracked nipples and the baby being unable to latch on correctly. Mastitis can occur in one or both breasts and be associated with a number of symptoms including breast pain, redness and swelling, and flu-like symptoms. The symptoms can last from two to three days up to a couple of weeks or more.

Why is this important?

It is important to investigate treatments to prevent mastitis in order to maximise breastfeeding outcomes and duration. Breastfeeding has major health benefits for both babies and their mothers, and healthcare authorities and the World Health Organization recommend that newborn infants should be fed exclusively on breast milk until they are six months of age. We need to ensure mothers, and the doctors and midwives who care for them, know about the best interventions for preventing mastitis in order to help women breastfeed successfully for as long as they want.

What evidence did we find?

We searched for evidence from randomised controlled trials in October 2019 and identified 10 trials (involving 3034 breastfeeding women). Most trials reported how many women were diagnosed with mastitis but there was almost no information about adverse effects, breast pain, duration of breastfeeding, nipple damage, breast abscess or recurrence of mastitis. Some trials were industry funded.

Three trials (1038 women) compared probiotics to placebo. Results for the biggest of these trials (639 women) are currently unavailable because of a contractual agreement between the probiotics supplier and the trialists. Probiotics may reduce the risk of mastitis compared with placebo (low-certainty evidence). It is uncertain if probiotics reduce the risk of breast pain or nipple damage because the certainty of evidence is very low.

The risk of mastitis may be similar between antibiotics and usual care or placebo (low-certainty evidence). The risk of mastitis may be similar between antibiotics and fusidic acid ointment, antibiotics and mupirocin ointment, fusidic acid ointment and breastfeeding advice, mupirocin ointment and breastfeeding advice, fusidic acid and mupirocin, a single session of specialist breastfeeding education and routine care, anti-secretory factor-inducing cereal and standard cereal, but we are not certain about these results because they come from trials with small numbers of participants and the quality of evidence is low.

Acupoint massage probably reduces the risk of mastitis and breast pain compared with routine care (moderate-certainty evidence).

Breast massage and low frequency pulse treatment may reduce the risk of mastitis compared with routine care (low-certainty evidence).

What does this mean?

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Acupoint massage probably helps to prevent mastitis and breast pain, probiotics may be better than placebo and breast massage and low frequency pulse treatment may be better than routine care. However, in general, we cannot be sure what the most effective treatments are for preventing mastitis because the certainty of evidence is low due to risk of bias, low numbers of women participating in the trials, and large differences between the treatments which make it difficult to make meaningful comparisons. We are also unsure about the true effectiveness of probiotics because we know of at least one probiotics trial whose results are not publicly available.

Local cooling for relieving pain from perineal trauma sustained during childbirth

Authors: East CE, Dorward EDF, Whale RE, Liu J

We looked for evidence from randomised controlled trials on how effective localised cooling treatments are for reducing pain from damage to the area between the vagina and the anus, that is, 'perineal trauma', when giving birth.

What is the issue?

Perineal tears are common during childbirth. In addition, sometimes the person attending the birth cuts the perineum to give extra room for the baby to be born (an episiotomy).

These tears and cuts often cause pain and the mother may have difficulty walking or sitting comfortably, or to feed and care for her baby,

Why is this important?

The pain from perineal tears or cuts can decrease women’s ability to move around and causes discomfort when passing urine or faeces. This can affect her emotional well-being. Persisting perineal pain can have longer-term effects, such as pain during sex and problems with bowel movements and urination. Women are encouraged to use different ways to relieve the pain, including the use of cooling treatments such as ice packs or cold gel pads. It is important to know if cooling works and whether it can slow healing of the cut or tear.

This is an update of a review that was first published in 2007 and updated in 2012.

What evidence did we find?

We updated the search for evidence in October 2019. We have now found 10 randomised controlled trials to include. Nine of these studies had information from 998 women that we could use in the review.

Ice packs or cold gel pads were placed on the perineum for 10 to 20 minutes at a time in the first two days following childbirth. They were compared to no treatment (5 studies, 612 women) or placebo treatment of a gel pad (1 study) or a water bag (1 study), both at room temperature. Ice packs were compared with cold gel pads in three studies (338 women).

The trials were largely of very low quality due to concerns about how valid the findings were, with small numbers of women for each comparison, wide variations in treatment effects, and women knowing which treatment (or if no treatment) they had used. Few trials looked at the same comparisons or trials used different assessment tools or outcomes. Most of the findings come from single studies.

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Women's self-rated perineal pain following the use of the cold pad within six hours of giving birth may be less than for women who had no treatment (1 study, 100 women). There were no clear differences in self-reported pain within 24 hours or up to 48 hours after giving birth (1 study, 316 women) or in perineal healing.
A cold gel pad with compression in comparison to a placebo may result in a very small reduction in pain 24 to 48 hours after giving birth (1 study, 250 women). Perineal wound healing may not be adversely affected by cooling. None of the women with an ice pack or a water pack at room temperature reported pain in the first 24 hours after giving birth (1 study, 63 women). No adverse effects on wound healing were reported.
Comparing ice packs with cold gel pads, there may be no difference in self-rated perineal pain at any of the measurement times (3 studies, 338 women). One trial reported that fewer women using ice packs had gaping wound edges at day five but not at day 10 (215 women). In single studies, women rated their opinion of treatment less favourably with ice packs than with cold gel pads five days after giving birth (49 women) and when assessed on day 10 (208 women).

What does this mean?

There is only a small amount of low or very low-quality evidence from small trials suggesting that cooling treatments may help relieve perineal pain after having a baby. Further research is needed to see if cooling affects how well the tears or cuts heal. Ice is readily available in high-income countries but this may not be the case in low-middle income countries. Gel pads that need to be placed in a freezer for cooling may also not be readily available in low-middle income areas.

If you have any questions or comments with regard to the above document please feel free to contact me.

Kind regards

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