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Breast Engorgement

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Abstract: ***Breast engorgement is a common issue during the early postnatal period, resulting from the synthesis and storage of breast milk, which causes swelling and pressure in the mammary glands. This condition can make breastfeeding challenging due to changes in nipple shape and breast rigidity. Inadequate breastfeeding practices and missed nursing sessions can exacerbate engorgement, leading to potential complications such as clogged milk ducts and mastitis. The National Family Health Survey highlights that breast engorgement is a prevalent cause of early breastfeeding cessation. It is crucial to adopt proper breastfeeding techniques to prevent engorgement, ensuring the well - being of both mothers and newborns. This article explores the etiology, clinical manifestations, prevention, and treatment of breast engorgement, emphasizing the importance of early intervention to promote successful breastfeeding.***

Keywords: Breast engorgement, postnatal period, breastfeeding, mammary glands, lactation

1. Introduction

A wealthy nation is the one which has a healthy population, so to achieve that, all the physical, social and emotional need of a postnatal mother should be met properly. To become mother is the greatest joy and pride for a woman. Becoming a mother is an experience which every woman cherishes. The bondage between them is not severed even after the life comes out from her womb for she nourishes that life with a food which has found no substitute yet despite advances in science and technology, that pristine food is called "Mother's Milk". The duration of postnatal period is six weeks. Even though as breastfeeding is practiced universally according to WHO in 2013 exclusive breastfeeding rate is 37%. In India within an hour of birth 96% of new - borns are breast fed of that urban population is 29% and rural population is 21 %. In India 4.9% of postnatal women face breast engorgement, flat or inverted nipple or mastitis. According to lactation literature breast engorgement means increase in pain level and swelling of the breast with increased milk production. When this occurs, it increases the capacity of alveoli to store the milk in it. And this leads to over distension of the alveoli which causes the cells which produce the milk to become flat and sometimes rupture.

Definition

Engorgement has been defined as ''the swelling and distension of the breasts, usually in the early days of initiation of lactation, caused by vascular dilation as well as the arrival of the early milk. ''

Incidence

The incidence of breast engorgement all over the world is 1: 8000 and in India it is 1: 6500. Engorgement symptoms occur most commonly once lactation is established generally between post - natal days 3 and 5, with more than two - third of women with tenderness on day 5 but some as late as days 9−10.

Etiology

1) According to Newton and Newton, [2] engorgement begins with retention of milk in the alveoli. The alveoli become distended and compress surrounding milk ducts. This lead to obstruction of the outflow of milk, further distention of the alveoli, and increased obstruction. If the distention is not relieved, secondary vascular and lymphatic stasis may result. The increased pressure in the obstructed breast causes decreased milk production and milk reabsorption.
2) A second theory of engorgement proposes that the increase in blood and lymph circulation when the milk "comes in" causes swelling and tenderness. Breast swelling can make proper infant latch on the areola difficult and sucking quite painful for the mother. Thus, the collecting ductules are not emptied, milk excretion is reduced and breast engorgement increases.

The most common reasons for breast engorgement are:

a) Schedule changes - when milk that is normally expressed at a certain time isn't, it sits in the breasts and causes them to fill, which can quickly lead to breast engorgement if not managed.
b) Overabundant milk supply -
   - **Genetics:** A biological predisposition to make a lot of breast milk.
   - **How you breastfeed:** Excess milk production is often the result of not adequately draining both breasts, which can happen if breastfeed more on one side or the other.
   - **Over pumping:** If pump too frequently, this prompts more milk at that session as well as future session.
   - **Hormone level:** An increase level of prolactin hormone, which is responsible for stimulating milk production.
   - **Baby strike:** An overabundant supply can also happen temporarily if baby is refusing the breast.
   - **Baby growth spurt:** Baby may suddenly start nursing much more, which can stimulate an increase production of milk that results in engorgement.
   - **Medication:** Galactagogues, drugs that may be taken to treat other conditions or specifically to boost milk production, may lead to an oversupply.
   - **Breast implants:** Breast implants may block the flow of breast milk from breasts. In this case, baby's suckling keeps stimulating more milk, but it sits in breast instead of being expressed.

c) Weaning or Supplementing: Breast engorgement also can happen when you make adjustments to baby's diet, such as adding first food, supplementing with formula, or switching to formula or milk. s.
d) Inadequate transfer, tight bra, breast shells and nipple shields (unless helping with transfer) also can caused engorgement.

Diagnosis:
No exams or tests are needed to diagnose breast engorgement. Sometimes a sample of breast milk is tested (cultured) to diagnose the type of bacterial infection.

Differential Diagnosis –
Differentiating engorgement from these other causes of breast swelling is key.
1) Mastitis. Engorgement may be associated with slight elevation of temperature, but significant fever, especially when associated with breast erythema and systemic symptoms such as myalgias, suggests the diagnosis of mastitis. It affects only one breast with a segmental pattern of redness. Engorgement is usually diffuse, bilateral, and not associated with breast erythema.
2) Gigantomastia. It is a diffuse bilateral process that occurs very rarely and does not typically present in the postpartum period. The reported incidence is 1: 100, 000, but some feel that it is more common with a rate as high as 1: 8, 000. It is usually regarded as bilateral, benign but progressive massive breast enlargement to an extent that respiratory depression or tissue necrosis may occur. Infection and sepsis may result. Histologic findings suggest marked lobular hypertrophy and ductal proliferation. No clear etiology for this condition has been elicited, although hormonal changes may be involved.

Clinical Manifestation:
1) Engorged breasts are swollen, firm, and painful.
2) May have flattened - out nipples. The dark area around the nipple, called the areola, may be very hard. This makes it difficult for baby to latch on.
3) Slightly fever of around 100^{o}F (37.8^{o}C).
4) Swollen and tender lymph nodes in armpits.
5) Mother who suffer from breast engorgement may experience gradually raising body temperature
6) Tenderness in one of both breast
7) General malaise
8) Engorged breast feels tense and heavy
9) Acutely painful on movement.

In more severe cases, the affected breast becomes very swollen, hard, shiny, warm, and slightly lumpy when touched
- Breast engorgement also causes slightly swollen and tender lymph nodes in the armpits
- Flushed nipples. In cases when the breast is greatly engorged, the nipple is likely to retract.

2. Prevention and Treatment

Prevention:
1) Begin breastfeeding as soon as possible after birth and frequently thereafter to prevent painful engorgement.
2) Avoid early use of bottles and pacifiers while baby is learning to breastfeed.
3) Avoid unnecessary supplements, as this can lower milk supply.
4) Breastfeeding at least 8 - 12 times in 24 hours is the most important thing to prevent engorgement.
5) Be sure that baby is latching well. Improper latch can reduce the amount of milk removes from breasts which can lead to engorgement.
6) Let baby nurse until finishes each breast. Do not limit baby's time at the breast.
7) Gently massage and compress the breast when baby pauses between sucks. This can help drain the milk from the breast.
8) Ask for help from nurse, lactation consultant or healthcare professional so that latch problems are resolved as soon as possible.
9) If miss a feeding or if baby is not nursing well, use hand expression or a breastpump to remove the milk.

Seek help if:
- Engorgement becomes severe or in pain.
- If develop a temperature over 100.4 ºF or 38 ºC.
- Baby has trouble latching on.

Treatment:
1) Acupuncture resulted in significantly fewer women having engorgement symptoms on day 4 and 5, but not day 6 postpartum.
2) Application of cold packs found a reduction in pain intensity.
3) Enzyme therapy using a protease complex enteric - coated tablet containing 20, 000U of bromelain and 2, 500U of crystalline trypsin, another anti - inflammatory agent taking orally.
4) Treatments such as cabbage leaves may be soothing, are inexpensive, and are unlikely to be harmful.

Other treatment considerations

Treatment for Engorgement
- Use relaxation techniques and gentle breast massage to help improve milk flow and reduce engorgement.
- To start milk flow, use warm moist heat on the breasts for a few minutes, or take a brief warm shower before breastfeeding.
  Note: Using heat for extended periods of time (over 5 minutes) may make swelling worse.
- Hand expression or brief use of a breastpump will soften the nipple and areolar tissue, making it easier for baby to latch well and deeply.
- Pumping once to completely drain the breasts after baby nurses can resolve engorgement for some women. Then return to frequent breastfeeding to manage breast fullness.
- Gently massage and compress the breast when baby pauses between sucks. This helps drain the breast, leaving less milk behind.
- Cabbage leaf compresses have been used for generations to reduce pain and swelling from breast engorgement. Apply clean, whole leaves of cabbage to breasts for approximately 20 minutes between feedings 3 to 4 times a day until engorgement subsides.

- A bag of frozen vegetables wrapped in a thin towel works well as a cold compress. Some women find a cold compress before nursing reduces swelling and helps relieve pain.
- If breasts are uncomfortably full, express a little milk by either hand expressing or pumping with a quality breastpump on a low setting. Express just enough until comfortable; avoid over stimulating. Use manual expression or a quality breastpump on a low setting. A hospital - grade rental pump can manage engorgement in cases where the baby is unable to breastfeed.
- Medications such as ibuprofen to reduce pain and inflammation.
- A well - fitted, supportive nursing bra makes some women feel better. Others prefer to go braless during engorgement.
- Fever higher than 100.4 ºF or severe pain may signal a breast infection. Call healthcare professional if this occurs.
- Breast shells worn inside the bra for 30 minutes before feeding to soften areola and help nipple to protrude.

Complication

Breast engorgement can also lead to complications like clogged milk ducts and mastitis.

3. Summary

Breast engorgement occurs in the mammary glands due to expansion and pressure exerted by the synthesis and storage of breast milk. Engorgement usually happens when the breasts switch from colostrums to mature milk (often referred to as when the milk "comes in"). However, engorgement can also happen later if lactating women miss several nursing and not enough milk is expressed from the breasts. It can be exacerbated by insufficient breastfeeding and/or blocked milk ducts. When engorged the breasts may swell, throb, and cause mild to extreme pain. Engorgement may lead to mastitis (inflammation of the breast) and untreated engorgement puts pressure on the milk ducts, often causing a plugged duct. The woman will often feel a lump inone part of the breast, and the skin in that area may be red and/or warm. If it continues unchecked, the plugged duct can become a breast infection, at which point she may have fever or flu - like symptoms.

4. Conclusion

Breast engorgement is the commonest problem encountered during the early post natal periods. It occurs due to expansion and pressure exerted by synthesis and storage of breast milk in the collecting ducts. Engorgement changes the shape and curvature of the nipple region and making breast inflexible, flat, hard and swollen, this makes latching difficult. It can be exacerbated by insufficient breast feeding. The National Family Health Survey conducted in 2015−2016 reports that the painful breast is the most common reason for giving up breast feeding in first two weeks after the birth. One factor that leads to such pain can be “breast engorgement”. It is reported that 72%−85% of mothers are affected by breast engorgement. It occurs within three - six days after delivery. Breast engorgement can occur any time during lactation when milk is not transferred from the breast. Not all babies are able to feed at the breast due to prematurity, illness, abnormalities, separation from their mothers, which can lead to breast engorgement. So, it is important to follow proper breast feeding techniques to prevent breast engorgement, the commonest problem in the early postnatal period.

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