



Effectiveness of Warm Compression in the Management of Breast Engorgement: A Literature Review

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Abstract

Breast engorgement is a common postpartum complication that affects breastfeeding mothers, particularly in the initial days after delivery. Characterized by pain, swelling, and fullness, breast engorgement can interfere with successful breastfeeding and maternal well-being. This literature review aims to examine and synthesize existing research evidence on the effectiveness of warm compression as a non-pharmacological intervention for managing breast engorgement. Findings across several countries suggest that warm compresses—particularly when applied with or without medicated agents like ginger or lavender—consistently reduce pain, promote milk flow, and alleviate swelling. Compared to cold compresses, warm compression was generally more effective in resolving breast engorgement. This review supports the integration of warm compress therapy into standard postpartum care protocols.

Keywords: Breast Engorgement, Warm Compression, Postpartum Care, Breastfeeding, Pain Management

Introduction

Breast engorgement is a physiological condition commonly experienced by postpartum women, particularly during the early days of lactation. It is caused by increased vascular and lymphatic congestion and insufficient milk removal, resulting in swollen, firm, and painful breasts. If left untreated, engorgement can lead to complications such as mastitis, abscess formation, and premature cessation of breastfeeding.

Non-pharmacological management strategies are widely recommended due to concerns about drug transfer through breast milk. Among these, warm compression has been frequently used for its role in enhancing blood circulation, relaxing muscles, and facilitating milk ejection. This literature review aims to examine studies from different global contexts to assess the efficacy of warm compresses in reducing breast engorgement and supporting lactation.

Methodology

This literature review draws upon studies published between 2021 and 2024 from India, Indonesia, Iran, Egypt, Turkey, Thailand, and other countries. The selected studies utilized quasi-experimental, cross-sectional, and randomized controlled trial designs, and compared warm compression with other methods such as cold compresses, cabbage leaves, gel packs, infrared light, and ginger-infused compresses. Data were collected using tools such as the Visual Analogue Scale (VAS), REEDA scale, and structured questionnaires.

Review of Literature

1. Effectiveness of Warm Compression

Several studies (Chanu, 2024; Kumari & Chouhan, 2024) found that applying warm compresses to the breasts significantly reduced pain and swelling associated with engorgement. These studies emphasized the role of warmth in improving milk flow and enabling better breastfeeding.

2. Comparative Efficacy

Devina Dencik (2024) and Harpreet Kaur (2022) conducted comparative studies and found that warm compresses were more effective than cold compresses in reducing pain and swelling. However, cold compresses showed slightly better performance in reducing pain intensity in certain cases (Manna et al., 2024).

3. Innovative Additions: Ginger, Lavender, and Medicated Compresses

Multiple researchers (Monazzami et al., 2023; Rabab Gad Abd Elkader et al., 2023) introduced medicated compresses, such as hot ginger and lavender, demonstrating enhanced results compared to plain warm compresses. The ginger compress group showed statistically significant reductions in pain ($P < 0.05$), highlighting the value of integrating herbal therapies.

4. Alternating Hot and Cold Compresses

Fatimah H. Alshakhs et al. (2024) conducted studies using alternating applications of hot and cold compresses, which resulted in improved relief from engorgement and prevention of further complications, supporting the idea of combining modalities for optimal benefit.

5. Cultural and Regional Approaches

Research in Southern Thailand (Phumdoung et al., 2022) showed that combining traditional Thai massage with warm compression led to earlier lactation onset and enhanced milk production. This finding underscores the importance of culturally tailored interventions.

6. Knowledge and Compliance

Novita Br Ginting et al. (2024) found that higher levels of maternal knowledge regarding warm compression correlated with lower incidence of breast engorgement, reinforcing the need for antenatal and postnatal education.

Discussion

The reviewed studies provide consistent evidence supporting the effectiveness of warm compression in alleviating breast engorgement and improving maternal comfort. Warm compresses act by increasing circulation, softening breast tissue, and enhancing the milk ejection reflex. The comparative studies largely favor warm compress over cold treatments, though cold compresses may have better results for acute pain.

Herbal compresses such as ginger and lavender further enhance therapeutic effects, offering a natural, low-cost solution with minimal side effects. Furthermore, alternating compresses and integrating traditional practices like Thai massage demonstrate that customized interventions can produce enhanced outcomes.

However, variations in sample sizes, intervention durations, and subjective measures of pain and discomfort present challenges in generalizing findings. Further multi-centered, large-scale randomized controlled trials are recommended to develop standardized protocols.

Conclusion

This literature review highlights that warm compression is a safe, effective, and easily applicable intervention for managing breast engorgement in postnatal mothers. It offers a non-invasive and accessible option for mothers across various healthcare settings and can significantly contribute to successful breastfeeding outcomes. Health professionals should promote its use as part of routine postnatal care and include warm compression education in maternal health programs.



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