

CASE STUDY MIDWIFERY MANAGEMENT FOR POSTPARTUM BREAST MILK CONTAINMENT AT PMB RIMENDA

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ABSTRACT

Background: Based on the third Sustainable Development Goal (SDGs) target and the World Health Organization (WHO) recommendation, exclusive breastfeeding for the first six months is an important intervention to reduce infant mortality, but its success is often hampered by lactation problems such as breast engorgement experienced by approximately 31% of postpartum mothers. Breast engorgement due to suboptimal emptying causes pain, hard breasts, and obstructed milk flow which if not treated immediately can trigger mastitis complications. **Objective:** This case study aims to implement comprehensive midwifery care management for postpartum mothers with breast involvement at PMB Rimenda Br Tarigan in 2026. **Method:** The research method used is a descriptive case study with the Helen Varney 7-Step Midwifery Management approach on Mrs. S, 34 years old, P3A0, fifth day postpartum. Data were collected through assessment, physical lactation examination (inspection and palpation), and clinical observation. **Results:** The assessment showed that the patient complained of right breast engorgement, tension, hardness, tenderness, and low milk flow. Non-pharmacological management included breast care, lactation massage stimulation, education on proper breastfeeding attachment techniques, and the application of a combination of warm and cold compresses. Final evaluation showed significant improvement, with softer breast texture, better milk flow, reduced pain, and resolved maternal anxiety. **Conclusion:** Implementation of evidence-based midwifery care effectively addresses breast involvement, prevents serious complications, and supports successful lactation in postpartum mothers.

Keywords: Breast Involvement, Postpartum Mothers, Breast Care, Midwifery Care

INTRODUCTION

The global health development agenda outlined in Sustainable Development Goal (SDG) 3 emphasizes the importance of ensuring healthy lives and promoting well-being for all at all ages. One key indicator of success in this pillar is optimizing reproductive health and reducing the Maternal Mortality Rate (MMR). The postpartum period is a critical transition phase in a woman's reproductive cycle, beginning immediately after delivery of the placenta and lasting for six weeks (42 days). (Chowdhury and Chakraborty, 2022). During this period, the mother's body undergoes simultaneous physiological, anatomical, and psychological changes. This vulnerable transition requires intensive monitoring and comprehensive obstetric care to prevent postpartum complications. A key determinant of neonatal well-being and a successful postpartum transition is appropriate lactation management.

The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life as a vital long-term intervention to enhance infant immunity, reduce morbidity, lower infant mortality, and support optimal motor-cognitive growth. However, globally, meeting this standard faces significant obstacles, with only about 44% of infants under six months of age being exclusively breastfed worldwide. (Fures *et al.*, 2025) This low achievement is driven by various acute clinical challenges faced by breastfeeding mothers in the early postpartum period, including delayed onset of lactation, improper attachment techniques, and pathological breast engorgement. In Indonesia, data from the Ministry of Health shows a fluctuating trend in exclusive breastfeeding coverage, which has not yet reached the national target. (Ribur Sinaga and Simanjuntak, 2025)

According to the latest health report, the national exclusive breastfeeding coverage is at 52.5%, far below the government's target of 80%. This gap hampers prevention efforts to reduce the prevalence of stunting and improve children's nutritional status. Epidemiological studies indicate that a key determinant behind the low success of exclusive breastfeeding is breast engorgement during the first week postpartum. Breast engorgement is a common acute lactation complication in postpartum mothers, particularly on the third to fifth day after delivery. This pathological condition is triggered by narrowing or blockage of the lactiferous ducts, which prevents effective milk removal. Clinically, this lactation restriction is caused by an imbalance between high milk production and frequent breast emptying, delayed breastfeeding, limited breastfeeding duration, and a lack of bonding between mother and infant. This condition is further exacerbated if the mother has anatomical abnormalities, such as flat, inverted, or inverted nipples, which make it difficult for the baby to suckle actively. (Nopiana, Komariah and Setiawati, 2025a)

Pathophysiologically, milk stasis in the alveoli triggers increased local hydrostatic pressure, stimulating secondary swelling of the blood vessels and lymphatic channels. As a result, the breasts become edematous, hard, tense, shiny, and very painful, often accompanied by postpartum fever. Beyond anatomical and mechanical factors, psychological stress, postpartum fatigue, and anxiety play a significant role by inhibiting oxytocin secretion, which regulates the milk-let-down reflex. (Hwang and Jung, 2026)

If left untreated, milk stasis poses a high risk of pathogenic bacterial invasion (such as *Staphylococcus aureus*) through cracked nipples, which quickly progresses to mastitis or breast abscesses requiring surgical intervention. (Gea *et al.*, 2024)

To support exclusive breastfeeding programs and prevent postpartum morbidity, midwives play a crucial role in early detection and evidence-based obstetric management. Although many studies have focused on postpartum care in general, detailed management using a structured framework for early breast engorgement on postpartum day 5 is still limited in clinical reports. Therefore, this study aimed to examine the comprehensive midwifery care management for a 34-year-old postpartum mother on day 5 with breast engorgement at PMB Rimenda Br Tarigan in 2026, using Helen Varney's 7-step approach and SOAP documentation. The findings are expected to provide clinical insights into non-pharmacological management for acute lactation disorders and serve as an operational reference for primary health care midwives to improve the quality of postpartum care.(Boyles *et al.*, 2025)

METHODS

This study used a qualitative descriptive research design with a comprehensive clinical case study approach to evaluate midwifery care management. This case study focused on the provision and documentation of evidence-based midwifery care for a single subject, specifically a 34-year-old postpartum mother (Parity: P2A0) on day 5 postpartum who experienced acute bilateral breast engorgement. Clinical management and data collection were conducted in March 2026 at PMB Rimenda Br Tarigan, a private primary obstetric clinic located in Medan, North Sumatra, Indonesia.(Wu, Wang and Zhu, 2025)

Data collection was conducted using primary and secondary sources through triangulation methods, including a comprehensive history taking (subjective data), a thorough physical and obstetric examination (objective data), direct clinical observation, and a review of the patient's medical records. The instruments used for data collection consisted of a structured obstetric assessment checklist, a digital sphygmomanometer, a thermometer, and a breast examination protocol to monitor physiological changes, local edema, and tenderness.(Fures *et al.*, 2025)

The framework for clinical management and analysis was developed based on Helen Varney's 7-Step Midwifery Management, which systematically includes: (1) comprehensive data collection, (2) formulation of a nursing/midwifery diagnosis and identification of patient needs, (3) anticipation of potential problems or complications—such as mastitis and breast abscesses, (4) identification of immediate or collaborative care needs, (5) development of a comprehensive, evidence-based care plan, (6) implementation of clinical interventions, and (7) evaluation of care outcomes. The intervention plan specifically integrated non-pharmacological therapies, including correct breastfeeding technique, appropriate breast care, and the application of warm/cold compresses to reduce hydrostatic pressure and enhance the oxytocin reflex.(He *et al.*, 2025)

To ensure professional and standardized clinical reporting, ongoing progress, daily management, and clinical evaluation were systematically documented using the SOAP (Subjective, Objective, Assessment, and Plan) note format. Ethical considerations were strictly adhered to throughout the study. Explicit informed consent was obtained from the patient prior to any intervention and data utilization . Patient confidentiality and privacy were protected by anonymizing personal identities in this report, ensuring that this study adheres to the ethical principles of autonomy, beneficence, and non-harm in clinical obstetric research.(Pasaribu, 2022)

RESULT

A clinical assessment of a 34-year-old postpartum mother (Mrs. S, P2A0) on day 5 postpartum at PMB Rimenda Br Tarigan revealed that the patient had experienced severe bilateral breast pain, a feeling of tightness, and a lack of milk flow for the past 24 hours. The patient reported that she rarely emptied her breasts completely due to severe pain during breastfeeding. Objective examination revealed a body temperature of 37.8°C, a pulse rate of 82 bpm, a respiratory rate of 20 bpm, and a blood pressure of 110/70 mmHg. On local obstetric examination, both breasts appeared enlarged, symmetrical, tense, reddish, and shiny. Palpation revealed marked firmness and swelling, with prominent tenderness on both sides. No lumps, nodules, or pus were found, but milk flowed only in small increments during manual expression. The nipples were anatomically normal (not flat or inverted), but they appeared slightly reddened from friction at the base. (Nopiana, Komariah and Setiawati, 2025b)

Based on the interpretation of these subjective and objective data, a clinical diagnosis of P2A0, 5 days postpartum with bilateral breast engorgement, was established. The patient's primary needs identified were reduction of local breast edema, pain management, and restoration of effective milk ejection. Anticipated potential problems included acute mastitis and breast abscess formation due to prolonged milk stasis and invasion by pathogenic bacteria. Therefore, immediate independent obstetric intervention was required without the need for secondary medical collaboration. The implemented evidence-based care plan focused on non-pharmacological management delivered over three consecutive days. (Pipit Febriani *et al.*, 2025)

Interventions included: (1) educating the patient about the anatomy and physiology of lactation to reduce anxiety, (2) demonstrating and guiding proper breastfeeding technique, ensuring a deep and proper latch to prevent nipple trauma, (3) providing proper breast care by applying a warm compress for 3–5 minutes before breastfeeding to stimulate the milk ejection reflex and oxytocin secretion, followed by gentle, non-traumatic breast massage from the chest wall toward the nipple, and (4) applying a cold compress after breastfeeding or expressing breast milk to reduce local hydrostatic pressure, vascular congestion, and tissue edema. The patient was also encouraged to breastfeed on demand (every 2–3 hours) and to ensure complete emptying of both breasts. (ASilaban *et al.*, 2025)

Evaluation using daily SOAP records showed significant clinical improvement. On the third day of intensive care, the patient reported that breast pain and tightness had completely resolved. Objective evaluation revealed normal physiological parameters (temperature: 36.6°C). On palpation, both breasts were soft, non-tender, and the skin appeared normal without redness or swelling. The milk supply has changed from a few drops to a steady, abundant, and continuous flow. The baby is able to latch correctly, and the mother demonstrates high confidence in performing breast care independently and breastfeeding on demand. (Manurung *et al.*, 2025)

DISCUSSION

The findings of this case study confirm that breast engorgement on postpartum day 5 is a highly manageable condition if addressed with timely non-pharmacological obstetric care. Pathophysiologically, the breast engorgement observed in Mrs. S was primarily caused by milk stasis, which occurs due to an imbalance between milk production and insufficient breast emptying. This stasis increases intra-alveolar pressure, leading to compression of local blood vessels and lymphatic channels, resulting in the classic clinical presentation of edema, firm breast tissue, redness, and a localized low-grade fever (37.8°C). This physiological response aligns with established lactation literature, which states that breast engorgement typically peaks between days 3 and 5 postpartum as mature milk replaces colostrum. (Indrayani, Damanik and Nainggolan, 2024)

The application of local warm compresses before breastfeeding successfully triggers the release of oxytocin from the posterior pituitary gland. Oxytocin stimulates contraction of the myoepithelial cells surrounding the alveoli, forcing milk into the ductal system (the let-down reflex). This intervention, combined with gentle therapeutic massage, reduces the viscosity of stagnant breast milk, allowing it to flow more freely and reducing the hard texture of the breast. Simultaneously, applying a cold compress after breastfeeding serves as an effective cryotherapy mechanism. The cold temperature induces local vasoconstriction, which successfully minimizes fluid extravasation into the interstitial tissue, thereby reducing edema and relieving the patient's severe pain. (Nurmawan, Simanullang and Purba, 2024)

Furthermore, improving breastfeeding technique and implementing an on-demand breastfeeding schedule has proven crucial in preventing the recurrence of milk stasis. Ensuring a deep latch minimizes nipple friction, preventing cracks that can act as entry points for pathogens such as *Staphylococcus aureus*. By empowering mothers with the skills to effectively empty their breasts, the risk of engaging in progressing to inflammatory mastitis or a localized breast abscess can be significantly reduced. The successful outcome in this case study underscores the crucial role of primary care midwives in using Helen Varney's structured framework to provide appropriate, evidence-based, and compassionate lactation support, ultimately protecting the sustainability of exclusive breastfeeding. (Mei Tri Janti Silalahi and Sri Rezeki, 2023)

CONCLUSION AND SUGGESTION

The implementation of comprehensive midwifery care management using Helen Varney's 7-Step framework and SOAP documentation successfully resolved a case of bilateral breast involvement in a mother on day 5 of postpartum at PMB Rimenda Br Tarigan. The non-pharmacological intervention—specifically integrating proper breastfeeding techniques, structured breast care, warm compresses before breastfeeding to stimulate the oxytocin ejection reflex, and cold compresses after breastfeeding to reduce local vascular congestion and edema—demonstrated high clinical efficacy. Within three days of intensive management, the patient experienced complete resolution of breast pain, engorgement, and localized low-grade fever. (Li *et al.*, 2026)

The restoration of optimal and painless milk flow increased maternal confidence and ensured continued exclusive breastfeeding, while successfully reducing the potential risk of secondary complications such as mastitis or breast abscess. Based on these successful outcomes, several recommendations are proposed to improve the quality of healthcare and academic references. Midwives in primary healthcare facilities and private obstetric clinics

(PMBs) should routinely adopt evidence-based and standardized non-pharmacological lactation management protocols as the primary line of treatment for early-stage breast engorgement. Furthermore, midwifery educational institutions, particularly STIKes Mitra Husada Medan, can utilize this documented case study as a current clinical reference for students to strengthen their clinical reasoning and competency in managing acute postpartum lactation disorders. Finally, future clinical researchers are encouraged to expand on this study by conducting robust trials to evaluate and compare the quantitative effectiveness of combining physical interventions with psychological support in accelerating the resolution of postpartum milk stasis.(Manurung *et al.*, 2021)

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to Sekolah Tinggi Ilmu Kesehatan Mitra Husada Medan for the academic guidance and support throughout this study. The authors also extend their appreciation to PMB Rimenda Tarigan for granting permission to conduct the case study and for providing valuable assistance during the implementation of midwifery care. Finally, heartfelt thanks are addressed to the patient and her family for their willingness, cooperation, and trust during the entire process of this study.

CONFLICT OF INTEREST AND FUNDING DISCLOSURE

Conflict of Interest The author declares that there is no potential conflict of interest regarding the research, authorship, and publication of this article. There are no financial or personal relationships that could inappropriately influence or bias the content presented in this literature review. **Funding Disclosure** This study did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. All work was completed independently without external financial support.

AUTHOR CONTRIBUTIONS

The authors declare that there is no conflict of interest related to the publication of this article. This study did not receive any financial support or specific funding from government agencies, commercial organizations.

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