Manual Milk Drainage Therapy for Early-Stage Acute Mastitis: A Nursing Case Report

Authors: Chen Hong, Sun Pengcheng

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Abstract

This article summarizes the clinical efficacy of manual lactation therapy in one case of early-stage acute mastitis. Under the guidance of Traditional Chinese Medicine syndrome differentiation theory, manual lactation therapy was administered in combination with Five Elements music therapy and Traditional Chinese medicinal dietary therapy, which effectively alleviated breast pain, expelled accumulated milk, reduced local pressure on mammary ducts, diminished the size of breast masses and cutaneous erythema, promoted lactation, relieved clinical symptoms and signs, and improved the success rate of breastfeeding.

Full Text

Manual Milk Expression for Early-Stage Acute Mastitis: A Nursing Case Report

Hong Chen, Pengcheng Sun*
(Department of Breast Surgery, Dongfang Hospital, Beijing University of Chinese Medicine, Beijing, China)

Acute mastitis during lactation typically presents with symptoms such as breast pain, swelling, and redness [1]. Antibiotic therapy constitutes the foundational treatment for lactation-associated acute mastitis; however, some patients express concerns regarding its impact on breastfeeding and infant nutrition, complicating clinical management [2]. Traditional Chinese Medicine (TCM) external therapies represent a characteristic approach for treating early-stage acute mastitis, acting directly on the affected area without requiring oral medication during lactation, thereby avoiding potential adverse effects of antibiotics on breast milk that could disrupt feeding [3-4]. This report summarizes the clinical efficacy of manual milk expression in one patient with early-stage acute mastitis.

1. Case Report

The patient was a 37-year-old Beijing woman who presented to our hospital' s breast clinic at 9:20 on May 23, 2024, during the Xiaoman solar term, complaining of a painful mass in the outer quadrant of her right breast for one day. A diagnosis of right acute mastitis was considered. Presenting symptoms included bilateral lactating breasts with right breast distension and pain. The mass in the outer right breast measured approximately 15.5 cm^2, with localized skin redness and swelling covering about 22.5 cm^2. The skin temperature was elevated, with a body temperature of 36.1°C. The patient reported poor appetite and sleep, normal urination and bowel movements, a red tongue with thin coating, and a rapid pulse. Obstetric history: married at appropriate age, gravida 2 para 2, with a full-term vaginal delivery of a male infant in December 2023, currently breastfeeding for over five months with normally smooth milk expression. Menstrual history: menarche at age 12, 5/30-day cycle, regular with normal flow, color, and consistency. Physical examination revealed asymmetrical breasts, with a tender, well-defined, firm mass measuring approximately 15.5 cm^2 in the outer right breast without fluctuation. Localized skin redness and swelling covered about 22.5 cm^2 with elevated temperature. The nipple showed no ulceration, and milk appeared light yellow. Ultrasound examination demonstrated glandular thickness of approximately 2.17 cm at the marked lesion site in the right breast. Western medicine diagnosis: acute mastitis. TCM diagnosis: mammary abscess (qi stagnation and heat congestion pattern). Treatment principle: soothe the liver, relieve depression, promote milk flow, and reduce swelling. Manual milk expression was administered once daily for two consecutive days.

Nursing assessment revealed a right outer breast mass of approximately 15.5 cm^2 and skin redness/swelling of about 22.5 cm^2 prior to treatment. Milk expression was scored at 3 points. The Visual Analogue Scale (VAS) pain score was 5, indicating moderate pain. The Insomnia Severity Index (ISI) score was 15, indicating moderate insomnia. The Self-Rating Anxiety Scale (SAS) total score was 62, indicating moderate anxiety. Nursing diagnoses included: inadequate milk flow related to right-sided milk stasis and obstruction; acute pain related to breast inflammation and swelling; disturbed sleep pattern related to chest pain; and anxiety related to persistent pain and lack of knowledge about lactation breast care. Nursing goals were to evacuate accumulated milk, reduce localized breast redness and pain, improve sleep quality, and alleviate anxiety symptoms, while strengthening health education to enhance disease prevention awareness.

Nursing interventions comprised three components. First, manual milk expression: (1) The patient assumed a supine position with both breasts cleansed. (2) Breast relaxation: Using milk as lubricant, the breast was massaged spirally from base to nipple with finger pads ten times to induce relaxation. (3) Acupressure: Points including Jianjing (GB21), Danzhong (CV17), Ruzhong (ST17), Ruge (ST18), Qimen (LR14), Lingxu (KI24), Wuyi (ST15), and Neiguan (PC6) were stimulated using pressing and kneading techniques for three minutes each.

(4) Areolar compression and expression: The thumb and index finger were placed opposite each other in a 'C' shape at the areolar margin, with remaining fingers supporting the breast. The breast was compressed toward the chest wall to a depth of 1 cm, then thumb and index fingers were approximated while performing a simultaneous expression motion. This was repeated until milk flowed, using expressed milk to continuously lubricate the breast. (5) Milk evacuation: Milk was uniformly guided along the ductal pathways from breast base toward the nipple, pushing it to the areola before repeating the compression and expression sequence. (6) Management of right breast mass: Ductal clearance was initiated by massaging from the mass toward the nipple. The left hand supported the breast while the right hypothenar eminence performed gentle circular kneading on the mass for five minutes, with careful attention to gentle pressure to prevent breast tissue injury [5]. Treatment time per breast was less than 15 minutes, administered once daily for two consecutive days. Second, dietary care: Daylily root and pig' s trotter soup was prepared using 60g fresh daylily root and one pig' s trotter, simmered in a clay pot without seasonings; the patient consumed both broth and meat once daily. Third, emotional care: The patient was instructed to listen to the musical piece 'Jiang Nan Hao' once daily for 20 minutes per session.

Following two treatment sessions, the right outer breast mass had reduced to approximately 0.55 cm^2, skin redness and swelling to about 4.2 cm^2, with normal skin temperature. Milk expression score was 0, with milk appearing milky white. VAS pain score was 0. Body temperature was 36.5°C. ISI score was 6, and SAS score was 45. Breast ultrasound showed glandular thickness at the marked lesion site of 1.83 cm (see Table 1). Figure 1 [Figure 1: see original paper] shows pre-treatment mass size and redness area, Figure 2 [Figure 2: see original paper] shows measurements after the first treatment, and Figure 3 [Figure 3: see original paper] shows measurements after the second treatment.

Table 1 Efficacy Evaluation Before and After Manual Milk Expression Treatment

Quantitative Assessment Items	After Day 1 Treatment	After Day 2 Treatment
Mass size (cm^2)		
Skin redness (cm^2)		
Milk expression status (points)		
VAS (points)		
ISI (points)		
SAS (points)		
Glandular thickness at marked lesion (cm)		

Figure 1 Pre-treatment | Figure 2 After Day 1 | Figure 3 After Day 2

Discussion

Acute mastitis falls under the TCM category of 'mammary abscess'(rú yōng). Its pathogenesis involves three factors: milk stasis, liver depression with stomach heat, and external pathogenic invasion, with milk stasis considered the initiating factor [6]. According to the 'Complete Good Prescriptions for Women' (Fù Rén Dà Quán Liáng Fāng), treatment of mammary abscess should be based on the principle of 'unblocking' (tōng), which can eliminate stagnant milk and heat-toxins. This patient, a multiparous woman five months postpartum via vaginal delivery, developed the condition during lactation. At presentation, both breasts were engorged and painful, with a painful mass in the outer right breast and visible localized redness and swelling, consistent with the TCM diagnosis of mammary abscess. Lactating women are prone to tension and anxiety due to emotional stress causing liver qi stagnation that transforms into heat over time, compounded by postpartum consumption of rich foods leading to stomach heat accumulation. This results in combined liver-stomach heat, qi and blood stagnation, and blocked mammary collaterals that form an abscess. The principle of 'no free flow, then pain' explains the breast swelling, pain, and mass formation. Manual milk expression was administered to evacuate accumulated milk, reduce local ductal pressure, and improve lactation, combined with five-element music therapy to regulate emotions and a TCM medicinal diet to enhance immunity and promote recovery.

Following two treatment sessions, the patient' s right outer breast mass and localized skin redness/swelling were significantly reduced, skin temperature normalized, milk flow became smooth and milky white, and she could continue breastfeeding without pain. Appetite and sleep improved, and no adverse events occurred during treatment. Telephone follow-ups were conducted on days 7, 14, and 28 post-treatment, with the patient reporting smooth milk flow, no pain, and normal breastfeeding at each contact. Guidance was provided on maintaining a light diet, proper breastfeeding posture, and ensuring adequate sleep quality. The patient demonstrated high compliance and expressed satisfaction with treatment outcomes.

Manual milk expression follows the 'unblocking' treatment principle. Selected acupoints—including Jianjing (GB21), Danzhong (CV17), Ruzhong (ST17), Ruge (ST18), Qimen (LR14), Lingxu (KI24), Wuyi (ST15), and Neiguan (PC6)—were chosen according to the principles of selecting points along affected meridians and nearby points, emphasizing breast meridian pathways [7]. Timely breast emptying reduces ductal pressure, thereby alleviating breast pain and distension while resolving milk stasis [8]. Combined with five-element music therapy and TCM dietary therapy, this approach addresses the TCM understanding that breast diseases closely relate to the liver, spleen, and stomach organs. The jue-mode musical piece 'Jiang Nan Hao' was selected for its bright, pleasant melody embodying the 'wood' element, which enters the liver and can harmonize liver-gallbladder discharge, promoting the ascending and dispersing of qi flow to soothe liver depression and relieve anxiety [9].

Daylily root and pig' s trotter soup clears heat, cools blood, resolves toxins, harmonizes ying-level qi, unblocks mammary ducts, and disperses nodules, thereby enhancing overall treatment efficacy and quality of life.

Conclusion

In summary, manual milk expression demonstrates significant efficacy in treating early-stage acute mastitis, effectively relieving breast pain, reducing mass size and skin redness, promoting lactation, alleviating clinical symptoms and signs, and improving breastfeeding success rates.

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Conflict of Interest Statement

All authors···

Note: Figure translations are in progress. See original paper for figures.