

Holistic Management Of A 35-Year-Old Woman With Breast Abscess Through A Family Medicine Approach

Sofia Tyasni Darma Perbasya¹, Tutik Ernawati²

Program Studi Profesi Dokter, Fakultas Kedokteran, Universitas Lampung, Jl. Prof. Dr. Ir. Sumantri Brojonegoro No.1, Gedong Meneng, Kec. Rajabasa, Kota Bandar Lampung^{1,2}

Article Info	ABSTRACT
<p>Keywords: Family Doctor Holistic Management Mastitis</p>	<p>The aim of this study is to identify risk factors and clinical issues faced by patients, and to evaluate the implementation of family doctor services based on evidence-based medicine with a patient-centered, family-based, and community-oriented approach to improve care quality. This study used a case report design with a holistic approach to analyze the patient's clinical condition and the role of family and environmental factors in recovery. Data collection included autoanamnesis (interviews with the patient), alloanamnesis (interviews with family members), physical examinations, diagnostic tests, and home visits. Data analysis combined qualitative methods to explore the context of health issues and family dynamics, with quantitative analysis to support findings from diagnostic tests. The approach aims to provide effective interventions for both the patient and their family, improving overall health quality. The research findings the mastitis experienced by the patient is closely linked to the patient's hygiene practices and personal habits, such as bathing every two days and frequently scratching areas around the breast folds. Additionally, a significant risk factor contributing to the condition is the frequent use of bras that do not fit properly. These factors combined have likely contributed to the development of mastitis. Furthermore, increasing the knowledge of the family members as a support system for the patient plays a crucial role in preventing the recurrence of the disease. When family members understand the patient's condition and necessary care measures, they can better assist in managing the illness and minimizing the risks.</p>

This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license



Corresponding Author:

Sofia Tyasni Darma Perbasya
Universitas Lampung
Jl. Prof. Dr. Ir. Sumantri Brojonegoro No.1, Gedong Meneng, Kec. Rajabasa, Kota Bandar Lampung
sofiatyasni35@gmail.com

INTRODUCTION

One of the physiological changes during the postpartum period is the transformation of the breasts to prepare for the breastfeeding or lactation process (Reeder., 2011). Breastfeeding is the act of providing food to an infant in the form of breast milk (ASI) directly from the mother's breast (Kementerian Kesehatan Republik Indonesia, 2021). It is an optimal method of providing nutrition to infants, offering protection against various diseases and infections while being more economical than formula milk (Proverawati & Rahmawati, 2010) .

Mastitis is an inflammation of the breast commonly occurring in breastfeeding mothers, though it can also affect non-breastfeeding individuals. In breastfeeding women, mastitis is caused by blocked milk ducts or bacterial infections. In non-breastfeeding women, it may result from breast injuries, nipple piercings, a weakened immune system, or diabetes (Lakunina & Barthelmes, 2021). Symptoms of mastitis include breast pain, itching, swelling or redness, lumps, discharge of pus from the nipple, enlarged lymph nodes in the armpit, fever, and fatigue (Proverawati & Rahmawati, 2010; Sobri, 2020). Breast infections can occur due to various factors, including the entry of bacteria into the nipple or injured skin around the breast, which leads to infection in the breast tissue. While it is more common in breastfeeding mothers, non-breastfeeding women and a small number of men can also develop breast abscesses (Rambe & Savira, 2022).

Mastitis requires attention as it can increase the risk of transmitting diseases from mother to baby and is a common reason mothers stop breastfeeding (Deng et al., 2021). A significant complication of mastitis is breast abscesses, which can cause severe wounds on the breast (Lai et al., 2021). Mastitis frequently affects women aged 18 to 50 and can be classified into lactational and non-lactational mastitis. Lactational mastitis cases typically occur within the first 12 weeks to the second year of breastfeeding. According to the World Health Organization (WHO), the incidence of mastitis in breastfeeding mothers is around 2.6%-33%, with a global prevalence of approximately 10% (WHO, 2023). Mastitis is a significant issue during breastfeeding as it can lead to weaning. It reduces breast milk production, prompting mothers to stop breastfeeding, and may progress to more severe conditions like breast abscesses. Studies show that women who breastfeed exclusively are less likely to develop mastitis compared to those who do not practice exclusive breastfeeding (Liana et al., 2022).

Age influences an individual's ability to comprehend and think critically (Tao et al., 2020). As a person ages, their understanding and cognitive patterns tend to develop, improving their knowledge. However, at certain stages, mental development may slow compared to adolescence. Additionally, respondents are often less proactive in seeking information about mastitis and rarely receive counseling from healthcare providers (Notoatmodjo, 2010). Poor personal hygiene, ineffective breastfeeding techniques, and lack of family involvement can negatively impact behavior, as these practices are not based on positive principles of personal hygiene (Pevzner & Dahan, 2020). Many mastitis patients face challenges in maintaining personal hygiene, breastfeeding effectively, and receiving adequate family support, which can hinder mastitis prevention efforts (Mulyati, 2019).

Efforts to improve personal hygiene, breastfeeding techniques, and family involvement in preventing mastitis include health education, particularly through more active roles of healthcare providers in counseling (Wilson et al., 2020). The goal is to enhance personal hygiene and further improve mastitis prevention. This can be achieved by providing educational materials, such as brochures and banners, to increase public knowledge and foster positive attitudes toward good personal hygiene, avoiding mastitis, and preventing complications like abscesses. Holistic management aims to identify the patient's clinical issues and family functioning problems, conduct interventions, and evaluate intervention

outcomes. These interventions are expected to resolve clinical issues, transform family health behaviors, and enhance family participation in addressing health problems.

The purpose of this study is to identify the risk factors and clinical issues experienced by patients. Additionally, this study aims to evaluate the implementation of family doctor services based on evidence-based medicine, which prioritizes a patient-centered approach, as well as a family-based and community-oriented approach in patient management. This approach is expected to improve the quality of care by considering proven medical aspects and involving the family and community in the patient's healing process.

METHODS

This study employed a case report design with a holistic approach aimed at analyzing the patient's clinical condition, as well as the role of family and environmental factors in supporting the recovery process. Primary data were collected through various methods, including autoanamnesis, which involved direct interviews with the patient to explore medical history, complaints, and relevant risk factors. Additionally, alloanamnesis was conducted through interviews with family members or individuals knowledgeable about the patient's condition. Physical examinations were carried out to identify clinical signs supporting the diagnosis, while additional diagnostic tests or medical procedures were performed as supportive examinations. Home visits were also conducted to observe environmental and familial factors contributing to the patient's health condition.

Data analysis was carried out using both qualitative and quantitative approaches. Qualitative analysis was employed to understand the context of the patient's health issues, family interactions, and the effectiveness of the interventions provided. Assessments were conducted comprehensively at each stage of the study, starting from the initial diagnosis, the intervention process, to the evaluation of outcomes. Meanwhile, quantitative analysis was applied to numerical data obtained from diagnostic tests and patient health indicators to support qualitative findings. This holistic approach is expected to provide effective and sustainable interventions, not only for the patient but also for their family, in efforts to improve overall health quality.

RESULTS AND DISCUSSION

Anamnesis

The patient reported a complaint of a lump in the right breast, accompanied by pain and fever, which had persisted for five days. She mentioned experiencing similar symptoms in the same breast five months earlier. In 2021, the patient, who has a history of breastfeeding, stopped nursing her child after the child bit her nipple. Since then, she has neither attempted to express breast milk nor sought treatment for recurring pain in the right breast, which she often ignored. The patient also revealed a family medical history, including diabetes mellitus (DM) in her mother and her father's death from liver disease 13 years ago. The patient, a homemaker, disclosed a lifestyle that includes bathing only every two days, rarely cleaning her house, seldom changing bed linens, and a lack of regular physical exercise.

Physical Examination

The patient appeared to be in mild discomfort but was conscious and cooperative, with a Glasgow Coma Scale (GCS) score of 15. Vital signs included a blood pressure of 134/94 mmHg, pulse rate of 74 beats/min, respiratory rate of 19 breaths/min, and a body temperature of 36.7°C. Anthropometric measurements indicated a waist circumference of 109 cm, body weight of 62 kg, height of 150 cm, and a Body Mass Index (BMI) of 27.6 kg/m², classifying her as obese type 1 based on the Asia-Pacific BMI classification.

General Status

- a. Head, Normocephalic, evenly distributed hair without hair loss.
- b. Eyes, No anemia in conjunctiva and no jaundice in sclera.
- c. Ears, Normal structure with no discharge, redness, or tenderness.
- d. Nose, No deviation, redness, or discharge.
- e. Neck, Normal jugular venous pressure (JVP), no lymph node enlargement, and no thyroid swelling.

Thorax

- a. Heart, Ictus cordis was not visible but palpable at the 5th intercostal space (ICS). Heart borders were normal, and heart sounds (S1/S2) were regular, with no gallop or murmurs.
- b. Lungs, The right breast showed a red lump with lesions. Both sides of the thorax were symmetrical, with no retraction or lag in breathing. Palpation revealed no tenderness or masses. Percussion produced sonorous sounds in all lung fields, and auscultation showed no rhonchi or wheezing.

Abdomen

The abdomen appeared flat, with no tenderness upon palpation. Percussion revealed tympani across all regions, and bowel sounds were present at eight times per minute.

Extremities

The extremities were warm, with no edema, and capillary refill time (CRT) was less than two seconds. The musculoskeletal and neurological examinations were within normal limits.

Supporting Examination

Fasting blood sugar was 78 mg/dL, which is within the normal range.

Family Data

The patient is the third child among five siblings, and her father passed away 13 years ago. Her husband is the fifth of six siblings. The patient has one child who is four years old. The patient's family structure is a nuclear family, consisting of the patient, her husband, and their child, all living together. The patient has an elementary school education, her husband has completed high school, and their child is not yet attending school.

Problem-solving within the family is typically led by the patient's husband and discussed collaboratively with the patient. The family's daily needs are met through the husband's income of approximately IDR 3 million per month, which supports the patient and their child. Communication within the family is very good. The patient routinely visits the health center for regular check-ups. The family's residence is located less than one kilometer

from the health center. To date, the patient and her family have not yet learned how to prevent or manage the health condition affecting the patient.

Genogram

The following genogram was created on October 10, 2023.

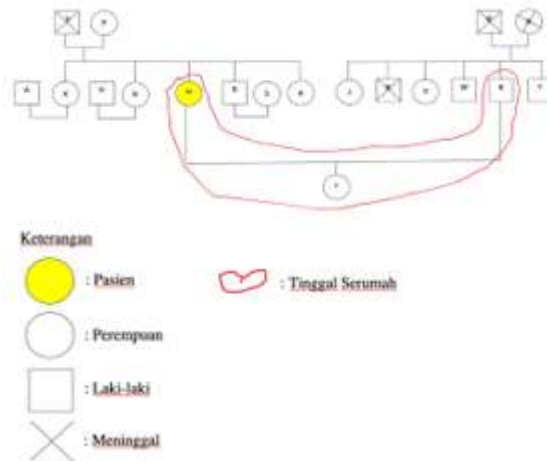


Figure 1. Genogram of Mrs. M's Family

Family Mapping

The family mapping illustrates a close relationship between the patient, her husband, and their child, as shown below.

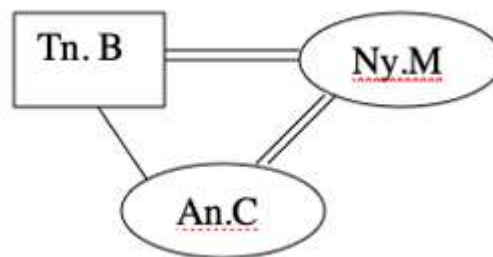


Figure 2. Family Mapping of Mrs. M

Family Lifecycle

The family lifecycle of Mrs. M's family is illustrated in Figure 3. It indicates that the family is in the third stage of the lifecycle: a family with a preschool-aged child.

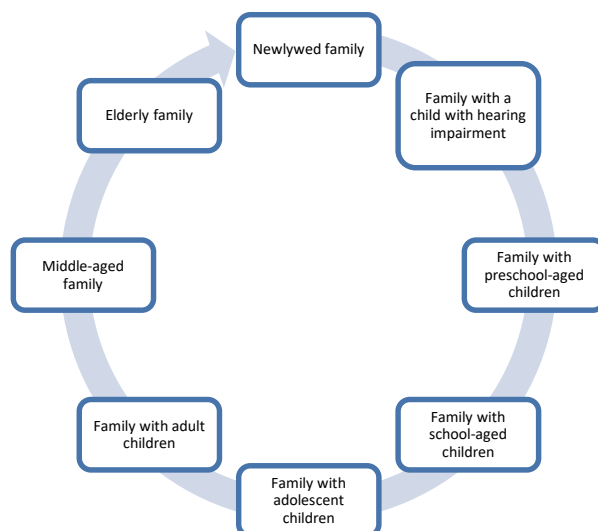


Figure 3. Family Lifecycle

Family APGAR Score

Table 1. Family APGAR

APGAR	Score
Adaptation	I feel satisfied because I can ask for help from my family when I face problems
Partnership	I feel satisfied with the way my family discusses various matters with me and shares problems with me
Growth	I feel satisfied because my family accepts and supports my desires to start new activities or goals in my life
Affection	I feel satisfied with the way my family expresses affection and responds to my feelings, such as anger, sadness, and love
Resolve	I feel satisfied with the way my family and I spend time together
Total	8

Total Family APGAR Score: 8 (no family dysfunction).

Family APGAR Interpretation:

7 – 10: Functional family

4 – 6: Less functional family

0 – 4: Highly dysfunctional family

Family SCREEM Score

Pathological function in the family can be assessed using the SCREEM Score, with the results as follows:

Table 2. SCREEM Score Ny. M (35 years)

Statement	SS	S	TS	STS
	(3)	(2)	(1)	(0)
S1 We help each other in our family	✓			
S2 Friends and neighbors around us help our family		✓		

Statement	SS (3)	S (2)	TS (1)	STS (0)
C1 Our culture gives strength and courage to our family		✓		
C2 The culture of helping, caring, and attention in our community is very helpful to our family		✓		
R1 Our faith and religion are very helpful in our family	✓			
R2 Religious leaders or religious groups help our family		✓		
E1 Our family's savings are sufficient for our needs			✓	
E2 Our family's income is enough for our needs		✓		
E'1 Our knowledge and education are sufficient for us to understand information about diseases	✓			
E'2 Our knowledge and education are sufficient for us to care for family members with illness	✓			
M1 Medical assistance is available in our community		✓		
M2 Doctors, nurses, and/or health workers in our community assist our family		✓		
Total	6	18	1	

Based on the SCREEM scoring results, the total score is 25, which means that Ny. M's family function is adequate (Score range: very inadequate: 0-12; fairly adequate: 13-24; adequate: 25-36).

Household Environment Data

The patient currently lives with her husband and one child in a rented house. The rental house measures 7 x 6 meters, is a single-story building, and has one bedroom, one bathroom, a kitchen, and a living room. There is no dining room. The floor is made of ceramic tiles, the walls are made of brick, and the bedroom walls are made of plywood, with a multi-roof metal roof. Lighting and ventilation are insufficient, as the windows are rarely opened, limiting air circulation. The cleanliness of the rental house is poorly maintained, with furniture placed too close together and scattered around. The patient sleeps with her husband and child in the bedroom. The house has electricity. The distance between the patient's house and other houses is close. The bathroom is located next to the kitchen, with a squat toilet and no septic tank, so waste is directly disposed of into a river behind the patient's house. The disposal river is located less than five meters from the borewell, and the air circulation in the bathroom is minimal, making it quite humid. The bathroom walls and floor are ceramic. The kitchen is located at the back. When they want to eat, the patient and her family eat in the living room.

The patient's house is quite humid. There is a front yard with a width of approximately 5 meters. The front yard is usually used by the patient to dry clothes that have been washed in the bathroom and for burning trash. Water source is from a borewell, used for bathing and washing. Drinking water is from a refillable gallon. Household waste is directly thrown into the river behind the house. The living environment around the patient is quite dense. The distance from the borewell to the waste disposal river is about two to three meters, or less than five meters. The house is near the main road and is accessible through a narrow alley that only motorbikes can pass through.

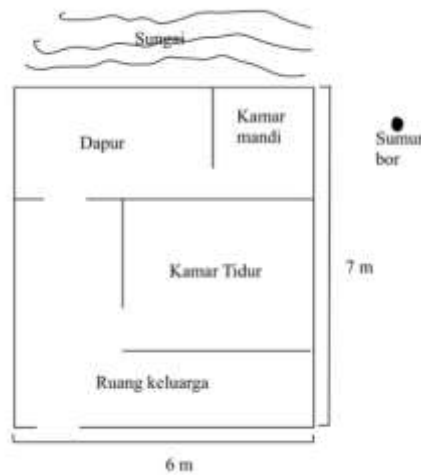


Figure 4. Floor Plan of Ny. M's Rental House

Initial Holistic Diagnosis

a. Aspect 1. Personal Aspect

Reason for Visit: There is a red lump on the lower right breast, with a lesion in the center of the lump accompanied by fever. The patient reports having experienced a similar issue five months ago.

Expectations: The patient hopes for the illness to be cured and not to recur.

Concerns: The pain in the breast has increased, causing the patient to worry that it might lead to a more serious illness.

Perception: The patient and family are unaware that the breast pain is caused by a bacterial infection, and the patient is also unaware of the disease's progression or how to prevent it.

b. Aspect 2. Initial Clinical Diagnosis

Mastitis with abscess (ICD 10: N61.14)

c. Aspect 3. Internal Risk Aspect

The patient is unaware of the disease progression and how to prevent it.

The patient does not maintain personal hygiene, such as showering only every two days, wearing a wire bra that is too tight, and rarely cleaning the house.

d. Aspect 4. External Risk Aspect

Home Environment: The patient's home is cluttered and damp, with poor ventilation, and windows are rarely opened.

Lack of knowledge from the family about the disease the patient is suffering from.

e. Aspect 5. Functional Scale

Functional Degree 1: The patient is able to perform physical activities without any hindrance, as before the illness.

Intervention Plan

The intervention plan provided includes both medication and non-medication strategies related to the patient's condition. The goal of pharmacological interventions is to reduce symptoms and prevent complications, thereby improving the patient's quality of life. Non-

pharmacological interventions involve educating the patient and family about the risk factors of the disease and lifestyle modifications. The plan includes three visits: the first visit for anamnesis and data collection, the second for interventions through a forum guide discussion with the patient and family, and the third for evaluating the interventions.

Patient-Centered Interventions

Non-Medication:

- a. Referral to a general surgeon.
- b. Education on maintaining personal hygiene, such as bathing twice a day and cleaning the house daily.
- c. Avoiding triggering factors, such as wearing a wire or tight-fitting bra.

Medication:

1. Gentamicin Sulfate 0.1% ointment to be applied thinly to the affected red area, three times a day.
2. Cefixime 100 mg, twice daily.
3. Mefenamic Acid 500 mg, three times a day.

Family-Focused Interventions

- a. Educating the patient's family about mastitis, risk factors, the progression of the disease, prevention methods, control to prevent recurrence, and management plans.
- b. Educating the family to support the patient's lifestyle, including maintaining personal hygiene.
- c. Educating the family to pay more attention to the air circulation in the home (opening windows) to reduce humidity.

Final Holistic Diagnosis

Aspect 1. Personal Aspect

- a. Reason for Visit: Follow-up for painful breast lump and wound on the breast.
- b. Expectations: The patient hopes the pain will improve, the wound will dry up, and the redness of the lump in the breast will no longer be felt.
- c. Concerns: The patient's behavior of frequently wearing a tight bra and scratching the breast area, leading to wounds, has decreased. The patient has stopped using the tight bra and rarely scratches the area, resulting in gradual improvement of the wound.
- d. Perception: The patient's family is now more diligent in monitoring the patient's personal hygiene. The family and patient are also expected to understand that the symptoms are due to a bacterial infection and to be aware of how to manage and prevent it.

Aspect 2. Clinical Aspect, Mastitis with abscess (ICD 10: N61.14)

Aspect 3. Internal Risk Aspect

- a. The patient is maintaining personal hygiene by showering twice daily and wearing loose-fitting bras.
- b. The patient is cleaning the house regularly every day.

Aspect 4. External Risk Aspect

- a. Psychosocial Family: The family is closely monitoring the patient's personal hygiene and ensuring the timely use of prescribed medication from the health center.

- b. Home Environment: The patient's home is now tidier compared to before, with better air circulation due to open ventilation and windows.
- c. Family Knowledge: The family is now informed about the patient's condition.

Aspect 5. Functional Scale, Degree 1: The patient is functioning as they were before the illness, with no functional impairment.

Discussion

Holistic management was carried out for Mrs. M through three family visits. During the first visit, a family folder was completed to gather information related to the patient's illness and internal and external factors affecting the current diagnosis. During the anamnesis, it was found that the patient had a lump in the right breast, which was painful and accompanied by redness, with a wound on the lower part of the right breast and fever, which had been present for five days. A similar complaint occurred in the right breast in May 2023. In 2019, the patient gave birth to her first child and exclusively breastfed. When the child was two years old, the child frequently bit the patient's nipple, causing injury, and as a result, the patient stopped breastfeeding. One week later, milk stopped flowing, and the patient often experienced pain in the right breast, but this was ignored. The patient admitted to never massaging, pumping, or compressing the breast. Before the illness, the patient frequently wore a tight wired bra, sweat easily, scratched the sweating area, and bathed every other day. On physical examination, a red, warm, and painful lump was palpated on the right breast, leading to a diagnosis of mastitis with an abscess.

Mastitis is inflammation of the breast, and it can be categorized into lactation and non-lactation types (Johnson & Mitchell, 2020). Lactational mastitis is the most common form, while non-lactational mastitis includes periductal mastitis and idiopathic granulomatous mastitis (IGM). Lactational mastitis, or puerperal mastitis, is usually caused by prolonged swelling of the milk ducts due to infection from bacteria entering through damaged skin. Patients may experience erythema, pain, and swelling, as well as systemic symptoms such as fever (Rutagwera et al., 2022). This is most common during the first six weeks of breastfeeding but can occur at any time during breastfeeding, with most cases improving within three months. Periductal mastitis is a benign inflammatory condition affecting the subareolar ducts and most commonly occurs in women of childbearing age. IGM is a rare, benign inflammatory condition that clinically resembles breast cancer, occurring mainly in women who have given birth, usually within five years after childbirth. In this patient, the condition is categorized as non-lactational mastitis because she is no longer breastfeeding. The cause of periductal mastitis is unclear. Bacteria are isolated in cultures from 62% to 85% of patients with periductal mastitis, with common causative organisms including *S. aureus*, *Pseudomonas aeruginosa*, *Enterococcus*, *Bacteroides*, and *Proteus*. Obesity and diabetes are also suspected risk factors. The etiology of IGM is also unclear, but autoimmune diseases, trauma, lactation, oral contraceptive use, and hyperprolactinemia are all suspected causes.

The pathophysiology of periductal mastitis is still not fully understood. Smoking is thought to play a role by directly or indirectly damaging the ducts, leading to necrosis and infection. Squamous metaplasia is found in patients with this condition, and the desquamated metaplastic cells are thought to form a blockage that causes duct obstruction and subsequent

infection. One study showed increased regulation of IFN- γ and IL-12A in patients with periductal mastitis compared to controls. These cytokines, released by T-helper cells, play a role in eliminating foreign pathogens. This increased cytokine regulation suggests that the immune response may play a role in the pathogenesis of periductal mastitis. The pathophysiology of IGM is also unclear, but the most widely accepted theory suggests autoimmune damage triggered by certain factors, such as trauma, bacteria, or leaking breast milk. This causes leakage of secretions from the ducts into the breast tissue, leading to the release of inflammatory cells and triggering a granulomatous response.

Characteristics of periductal mastitis include a mass in the periareolar or subareolar region, associated with pain and erythema. Patients may experience inverted nipples, thick discharge from the nipple, breast abscesses, or draining fistulas. IGM usually presents with a firm, unilateral breast mass, nipple retraction, skin thickening, axillary adenopathy, ulceration, and abscess formation. Many of these characteristics overlap with those of breast malignancies, sometimes leading to misdiagnosis. Patients with IGM may also experience extra-breast manifestations, including arthralgia, episcleritis, and skin changes.

Periductal mastitis is primarily a clinical diagnosis. If there is drainage from the nipple, Gram staining and culture should be performed to identify the associated organisms. Ultrasound (USG) or mammography should be conducted if a breast mass or suspicion of malignancy is present. Given the overlapping clinical presentation of IGM with breast cancer, breast biopsy should be performed for diagnosis. Core needle biopsy or excisional biopsy are acceptable options. Because of the suspected link between hyperprolactinemia and IGM, prolactin levels should also be assessed. USG and mammography alone cannot differentiate IGM from breast malignancy.

Periductal mastitis is empirically treated with amoxicillin-clavulanate. Alternative options include dicloxacillin plus metronidazole or cephalexin plus metronidazole. If an abscess is present, needle aspiration under ultrasound guidance followed by antibiotic therapy is an appropriate management option. Periductal mastitis is a condition that often recurs. Surgical excision of the inflamed ducts may be necessary if the patient experiences recurrent infections.

The treatment of IGM remains controversial. Current treatment strategies vary widely, including observation, corticosteroids, immunosuppressants, antibiotics, and surgery. IGM is a benign condition that usually resolves without treatment in an average of five months. Surgical excision is an option, but there is a 10% recurrence rate even with surgical management. If IGM is complicated by secondary infection, antibiotics should be selected based on culture and sensitivity results. Most mastitis patients will recover with appropriate treatment. The recurrence rates for different types of mastitis are as follows:

- a. Lactational mastitis: 8% to 30%
- b. Periductal mastitis: 4% to 28%
- c. Idiopathic granulomatous mastitis (IGM): 20% to 78%

One study reported that 38% of IGM patients had significant scarring, and 29% reported long-term pain. Periductal mastitis and IGM can be complicated by abscess or fistula

formation. Both forms of non-lactational mastitis are associated with recurrence and can lead to scarring and deformities of breast tissue (Kornfeld & Mitchell, 2021).

During the second visit, an intervention was carried out, providing education using posters related to mastitis in mothers, including steps to manage and prevent mastitis. This was done because of the high likelihood of recurrence of mastitis in this patient due to poor personal hygiene, such as wearing a tight bra, infrequent bathing, and not cleaning the breast area properly. A pretest was conducted before the intervention to assess the patient's knowledge level. After the education, a behavioral change plan was implemented to address the mastitis the patient was experiencing, and it would be evaluated during the next visit.

During the third visit, an evaluation of the behavioral change plan was conducted based on the previous visit's intervention. A post-test was performed, followed by questions related to the patient's habits after receiving education about mastitis. The patient reported that they had followed the treatment advice, maintained better personal hygiene, especially in the breast area, and used a non-wired, looser bra. The patient's complaints had resolved, and their knowledge level had increased, as indicated by the improved post-test score compared to the pretest.

CONCLUSION

The mastitis experienced by the patient is closely linked to the patient's hygiene practices and personal habits, such as bathing every two days and frequently scratching areas around the breast folds. Additionally, a significant risk factor contributing to the condition is the frequent use of bras that do not fit properly. These factors combined have likely contributed to the development of mastitis. Furthermore, increasing the knowledge of the family members as a support system for the patient plays a crucial role in preventing the recurrence of the disease. When family members understand the patient's condition and necessary care measures, they can better assist in managing the illness and minimizing the risks. To ensure proper recovery, it is recommended that the patient continue the full course of treatment for mastitis and seek medical attention if symptoms worsen. After cleaning the wound, the patient should always wash their hands thoroughly with soap to avoid re-infection. Both the patient and their family need to adopt preventive health measures, including maintaining a clean and healthy lifestyle, to reduce the risk of complications like breast cancer. Lastly, it is essential that family members provide continuous support during the patient's illness, as their involvement plays a vital role in the patient's recovery process.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude for your valuable assistance and support in managing the patient's condition. Your efforts in helping to identify the contributing factors, such as hygiene practices and improper bra usage, have been crucial in understanding the patient's situation. Moreover, the importance of family involvement as a support system cannot be overstated, as their increased knowledge and engagement are key in preventing the recurrence of the illness. I deeply appreciate the commitment to the patient's full recovery, emphasizing the need for continued treatment and adherence to hygiene practices. Your

dedication to promoting a clean and healthy lifestyle for the patient and their family is truly commendable. Thank you once again for your dedication and care in ensuring the patient's recovery and well-being.

REFERENCE

- Deng, Y., Huang, Y., Ning, P., Ma, S.-G., He, P.-Y., & Wang, Y. (2021). Maternal Risk Factors for Lactation Mastitis: A Meta-analysis. *Western Journal of Nursing Research*, 43(7), 698–708. <https://doi.org/10.1177/0193945920967674>
- Johnson, H. M., & Mitchell, K. B. (2020). Lactational phlegmon: A distinct clinical entity affecting breastfeeding women within the mastitis-abscess spectrum. *The Breast Journal*, 26(2), 149–154. <https://doi.org/10.1111/tbj.13624>
- Kementerian Kesehatan Republik Indonesia. (2021). *Profil Kesehatan Indonesia Tahun 2020*. Kementerian Kesehatan Republik Indonesia.
- Kornfeld, H. W., & Mitchell, K. B. (2021). Management of idiopathic granulomatous mastitis in lactation: Case report and review of the literature. *International Breastfeeding Journal*, 16(1), 23. <https://doi.org/10.1186/s13006-021-00370-8>
- Lai, B.-Y., Yu, B.-W., Chu, A.-J., Liang, S.-B., Jia, L.-Y., Liu, J.-P., Fan, Y.-Y., & Pei, X.-H. (2021). Risk factors for lactation mastitis in China: A systematic review and meta-analysis. *PLOS ONE*, 16(5), e0251182. <https://doi.org/10.1371/journal.pone.0251182>
- Lakunina, S., & Barthelmes, L. (2021). Continuation of Breastfeeding in the Presence of Mastitis: A Literature Review. *Clinical Lactation*, 12(4). <https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authType=crawler&jrnl=21580782&AN=153751213&h=JGVHsWsESEwMAjBM%2BVhpivpPAgyFjyLvxx2uThwweuJd6dv%2BnPcHXq1AipJXwUzdiMBZY6Bs8HdA866d8G6Oow%3D%3D&crl=c>
- Liana, N., Oktora, M. Z., Jelmila, S. N., Febrianto, B. Y., & Hasni, D. (2022). Edukasi Penyakit Mastitis Saat Menyusui di Kantor Lurah Gantiang, Padang Panjang Timur. *Jurnal Abdimas Kesehatan (JAK)*, 4(3), 430–434.
- Mulyati, S. (2019). Hubungan Pengetahuan, Status Ekonomi, Peran Petugas Kesehatan dan Peran Keluarga terhadap Vaksinasi Hpv (Human Papilloma Virus) di Klinik Dara Jingga Kota Jambi Tahun 2018. *Scientia Journal*, 8(1), 256–262. <https://doi.org/10.5281/scj.v8i1.468>
- Notoatmodjo, S. (2010). *Ilmu Perilaku Kesehatan* (Vol. 200). Rineka Cipta. <https://scholar.google.com/scholar?cluster=2802009801971961444&hl=en&oi=scholar>
- Pevzner, M., & Dahan, A. (2020). Mastitis While Breastfeeding: Prevention, the Importance of Proper Treatment, and Potential Complications. *Journal of Clinical Medicine*, 9(8), Article 8. <https://doi.org/10.3390/jcm9082328>
- Proverawati, A., & Rahmawati, E. (2010). *Kapita Selektta Asi Dan Menyusui*. Nuha Medika.
- Rambe, N. L., & Savira, M. (2022). Studi Kasus: Asuhan Kebidanan Dalam Masa Nifas Dengan Mastitis. *Jurnal Ilmiah Kebidanan Imelda*, 8(2), Article 2. <https://doi.org/10.52943/jikebi.v8i2.1061>

- Reeder., M. (2011). *Keperawatan Maternitas: Kesehatan Wanita, Bayi, & Keluarga Vol. 2* (Jakarta). EGC.
[//elib.sanagustin.ac.id%2Findex.php%3Fp%3Dshow_detail%26id%3D994](http://elib.sanagustin.ac.id%2Findex.php%3Fp%3Dshow_detail%26id%3D994)
- Rutagwera, D. G., Molès, J.-P., Kankasa, C., Mwiya, M., Tuailon, E., Peries, M., Nagot, N., Van de Perre, P., & Tylleskär, T. (2022). Recurrent Severe Subclinical Mastitis and the Risk of HIV Transmission Through Breastfeeding. *Frontiers in Immunology*, 13. <https://doi.org/10.3389/fimmu.2022.822076>
- Sobri, F. B. (2020). *Cerdas Menghadapi Kanker Payudara 2*. Gramedia Pustaka Utama.
- Tao, Y.-N., Tong, X.-K., Qian, C., Wan, H., & Zuo, J.-P. (2020). Microbial quantitation of colostrum from healthy breastfeeding women and milk from mastitis patients. *Annals of Palliative Medicine*, 9(4), Article 4. <https://doi.org/10.21037/apm-20-56>
- WHO. (2023). *World Breastfeeding Week 2023*. <https://www.who.int/campaigns/world-breastfeeding-week/2023>
- Wilson, E., Woodd, S. L., & Benova, L. (2020). Incidence of and Risk Factors for Lactational Mastitis: A Systematic Review. *Journal of Human Lactation*, 36(4), 673–686. <https://doi.org/10.1177/0890334420907898>