Lactation and Non-puerperal Mastitis, and Nipple Candidiasis

DEFINITION	Breastfeeding can be complicated by breast engorgement, mastitis, breast abscess or nipple candidiasis. Inflammation of the breast with or without infection has a variety of etiologies and presentations that range from the fairly benign blocked milk duct, or milk stasis, to more serious breast abscess and inflammatory carcinoma. Mastitis occurs in as many as 1/5 of breastfeeding women in the U.S. Mastitis can be infective or non-infective depending on the mode of occurrence. Infective mastitis is usually caused by Staphylococcus aureus. Untreated mastitis or non-responsive to therapy can result in a breast abscess; this condition will likely need treatment of incision & drainage with a culture to determine proper antibiotic treatment. Nipple candidiasis is commonly caused by fungus, Candida albicans, that thrives in warm and moist environments. Infant exposure can occur during vaginal birth and lead to subsequent transmission to the mother's nipples during breastfeeding.
SUBJECTIVE	Mastitis: 1. Recently weaning or currently breastfeeding history; lactation mastitis most commonly occurs during breastfeeding within several weeks to 6 months 2. Review of medical history and obstetric history 3. Risk factors such as stress and fatigue, smoking, nipple/breast piercings, cracked or fissured nipples, plugged ducts, milk stasis/engorgement, infrequent feeding, rapid weaning, over-supply of breastmilk, breast trauma or restriction, poor nutrition, and vigorous exercise. 4. Risk increases with previous mastitis 5. Symptoms (usually unilateral): breast tenderness or pain, warmth at site, painful breastfeeding, fever > 101.3 F, chills, fatigue, diffuse myalgia, or flu-like symptoms, sore/cracked nipples Candidiasis: 1. Medical and obstetric history 2. Breastfeeding history; changes/poor feeding by infant 3. Noted symptoms of oral thrush of infant 4. Recent antibiotic use in patient or infant 5. Symptoms (can occur bilaterally): sudden onset of deep red coloration, burning, shooting/stabbing pain during and after breastfeeding, itching
OBJECTIVE	Should include: 1. Vital signs 2. Assessment of mastitis affected breast may reveal unilateral localized erythema, edematous breast with tenderness upon palpation, warmth at site, axillary lymphadenopathy; fluctuant, tender, and palpable breast mass be present if an abscess is present 3. Assessment of nipple candidiasis may reveal red or purple nipple discoloration, striae radiating from the nipple, shiny or flaky skin of the affected nipple, nipple tenderness without breast tenderness, pain out of proportion to physical findings
LABORATORY	None necessary *Culture of breast milk is not recommended before the initiation of treatment for mastitis.
ASSESSMENT	Mastitis or nipple candidiasis
PLAN	**Engorgement** treatment options, to prevent mastitis, include:

	1. Supportive therapy including adequate fluid intake, acetaminophen 500mg orally every 4 hours prn or NSAIDs 600mg orally every 6 hours prn, acupuncture, cabbage leaves, breast massage and hand expression 2. Encourage to continue breastfeeding and completely empty breast(s). Consider applying warm pack to breast prior to feeding and cold packs after feeding. 3. If client desires to discontinue breastfeeding, advise the importance of wearing a good support bra, avoiding excessive breast stimulation, and application of a cold pack to the affected area. **<u>Mastitis</u>** treatment options without MRSA presence: (treat with one of the following): 1. Dicloxacillin 500mg every 6 hours orally for 10-14 days **OR** 2. Cephalexin 500 mg every 6 hours orally for 10 days **OR** 3. Flucloxacillin 500 mg PO QID for 5-7 days **OR** 4. If penicillin allergic: use Clindamycin 300 mg orally every 6 hours for 10-14 days If no symptom resolve by 48 hrs. or suspected MRSA infection, begin one of the following antibiotics and consider urgent referral for culture: 1. Clindamycin 300mg orally every 8 hours for 10-14 days **OR** 2. Trimethoprim-sulfamethoxazole 1 DS tablet orally every 12 hours for 10-14 days Breastfeeding continuation is encouraged and will often aid in recovery. 1. Nipple Candidiasis treatment options: **2.** Initial treatment with topical miconazole or clotrimazole applied to affected area BID for 2-4 weeks a. Gentian violet is no longer recommended in areas where other alternatives are available. b. Avoid topical ketoconazole due to potential hepatotoxicity to infant 2. If fissures are present, a topical antibiotic such as mupirocin or bacitracin may be added 3. Alternative treatment: fluconazole PO 400mg on day one followed by 200mg daily for 14 days. Severe infections should be referred 4. Should also refer infant for treatment; infants should receive treatment regardless of visualized oral symptoms <u>Breast abscess:</u> 1. Consider U/S of the affected breast (if question of abscess) 2. Referral to clients' primary care for immediate I&D or ER for treatment
CLIENT EDUCATION	Mastitis: 1. Increase rest, fluids, nutrition, smoking cessation, application of moist heat, and anti-inflammatory medications, education regarding importance to adherence of antibiotic treatment 2. Review importance of optimal breastfeeding techniques; consider referral to lactation consultant 3. Counsel importance well-fitted (non-underwire) bra 4. Prevention of breast engorgement is key to preventing mastitis 5. If no relief of symptoms or symptoms worse in 24 hours, to seek medical attention Nipple Candidiasis: 1. Provide education/instruction of application and removal of topical therapy while actively breastfeeding 2. If no relief of symptoms or worsening of symptoms despite treatment, seek medical attention

CONSULT/ REFER TO PHYSICIAN	1. Patient with abscess or significant breast abnormalities. 2. If unresponsive to treatment or allergies to antibiotics. If unresponsive to antibiotic may be possible MRSA infection. 3. If severity of fungal infection warrants additional consultation or if unresponsive to fungal infection treatment 4. Any client with inflammatory breast lesion, with no recent history of breastfeeding, to rule out inflammatory breast cancer.

References:

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