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Mastitis: Patient Information

Definition: Mastitis (Lactational Mastitis) is a breast infection that occurs while nursing. Symptoms are usually characterized by a localized hard, pie shaped swollen reddish area that is painful on one breast. There may also be a fever over 38.3°C (101°F) and generalized achy flu-like symptoms (body ache, fatigue, fever and chills). About 2 to 10 percent of breastfeeding women will experience mastitis. A few will have a breast abscess that needs drainage by a breast surgeon and a rare patient may need hospitalization. Almost all patients can be treated as an out-patient. Mastitis differs from severe engorgement because engorgement is bilateral with generalized involvement and a breast infection or mastitis is localized.

Risk factors: Women who develop mastitis while lactating usually have breastfeeding problems. Some women have a history of mastitis with a previous child, severe prolonged unilateral engorgement, poor milk drainage and nipple excoriation or cracking. Organisms gain access to the stagnant milk through the nipple.

Laboratory: Lab tests are not needed for the diagnosis of mastitis. Culture of the breast milk (midstream milk) is useful when the infection is severe, hospital acquired, or unresponsive to appropriate antibiotics. Blood cultures are only needed in hospitalized patients who are septic.

Ultrasound Imaging: Imaging is useful if the breast infection does not respond to 48 hours of antibiotics or when a mass persists. Ultrasound can differentiate mastitis from a breast abscess and also allows for an abscess to be drained with ultrasound guidance. (referral to Breast US Clinic NP Susan McKenny or radiology)

Other diagnosis:

1. **Plugged ducts** are localized areas of milk stasis with distention of mammary tissue. You may feel a tender lump with tenderness but no fever or ill feeling. (see below blocked duct protocol)
2. **Galactoceles** (**milk retention cysts**) are cystic collections of fluid caused by an obstructed milk duct. They feel like soft cystic masses that are not tender and there is no fever. Ultrasound may show a complex mass and aspiration yields milk.
3. **Inflammatory breast cancer** - It is most important to rule out a suspected breast infection from a reare condition called inflammatory breast cancer. In inflammatory breast cancer, the skin looks like an orange peel; thickened, discolored and the lymph nodes are swollen.

PREVENTION — The risk of developing mastitis can be reduced by frequent complete emptying of the breast and by optimizing breastfeeding techniques.

Blocked Duct Protocol:

- If pumping, change type of flange and fit to empty completely
- Position baby's nose and chin towards the blockage to feed
- Hand massage and pump to empty after feeds
- Soak nipples before and after feeds in warm water
- Wear loose clothing and loose bra, get plenty of rest
- Recurrent blocking can be treated with Lecithin 1200mg 3-4x/d
- White stone nipple plugs can be treated with urea cream 20-40% massaged in 2x/day then wash nipple with cetaphil cleanser before next feeding.

- Cracked or dry nipples can be treated 4x/day with Jack Newman's "APNO" by prescription or a home made version by mixing 3 creams: 1) Polysporin (triple antibiotic cream) 2) Hydrocortisone 1% cream 3) Lotrimin cream (just wipe off before feeds)

Causes: Mastitis is usually caused by a common skin bacteria called *Staphylococcus aureus*. Some reports suggest that MRSA (methicillin-resistant Staph) has become most important cause of lactational mastitis.

TREATMENT:

1. Rest, take plenty of fluids, nurse or pump every 2-3 hours and use Tylenol as directed for fever and mild pain (maximum dosage is a total of 4 grams/day for no more than 7 days).
2. Relieve symptoms with anti-inflammatory measures like taking ibuprofen (maximum 800mg 3x/day for a week) and apply compresses or ice packs to reduce local pain and swelling.
3. Improve breast feeding techniques and continued breastfeeding. Breast emptying is essential throughout the course of treatment. (see blocked duct protocol)
4. Treat with antibiotics can be started as an outpatient without an office visit. It symptoms do not improve after 12-24 hours of antibiotics then you will need to come in to be seen. (Some patients have success with probiotics and breast emptying alone.)
5. If symptoms do not improve within 48 to 72 hours of antibiotic treatment, an ultrasound imaging of the breast and a referral to a breast surgeon is needed.

Antibiotic Treatment:

- Dicloxacillin 500 mg taken orally four times daily for 10 days (if not allergic to Penicillin) is first line treatment.
- If mild rash Penicillin allergy: take Cephalexin (Keflex) 500 mg orally 4 times daily for 10 days
- If severe Penicillin allergy: take Clindamycin 300 mg orally four times daily for 10 days
- In the setting of non-severe infection with risk for MRSA, outpatient therapy with trimethoprim-sulfamethoxazole (1 to 2 tabs orally twice daily) or clindamycin (300 mg orally four times daily) may be initiated. Linezolid (600 mg orally twice daily) is also acceptable.
- In the setting of severe infection (eg, hemodynamic instability, progressive erythema), empiric inpatient therapy with vancomycin (30 mg/kg intravenously in two divided doses every 24 hours) should be initiated; therapy should be tailored to culture and sensitivity results.
- The optimal length of therapy is not certain; 10 to 14 days is likely appropriate to reduce risk of relapse.

Role of breastfeeding: Milk drainage, either by breastfeeding or pumping, along with pain control will help relieve symptoms. Women rarely have widespread nipple excoriation or whole breast involvement but this could cause severe pain and need for hospitalization. Such women should consider stopping breastfeeding so their breast infection can be controlled. It may be advantageous for these women to suppress milk production using the agent cabergoline, 250 micrograms given twice a day for two days.

RECURRENCE — Recurrent mastitis can occur and may result from inappropriate or incomplete antibiotic therapy, or failure to resolve underlying problems in lactation management that interfere with complete milk drainage. Patients with breast mastitis that recurs repeatedly in the same location or does not respond to antibiotic therapy are referred for an ultrasound and to a breast surgeon for evaluation.