

Understanding the Mastitis Spectrum: ABM Protocol # 36

- REPLACES ABM #4: MANAGEMENT OF MASTITIS
- REPLACES ABM #20: ENGORGEMENT

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What do we know about mastitis?

- It's not rare
 - About 1 in 4 lactating women in the first 26 weeks
 - Incidence seems to be going up
- Breast & milk has its own microbiome
 - Keeping a healthy family of "germs" seems to be part of the key to a happy & healthy breast

Wilson et al 2020; ABM Protocol #36, 2022

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"Causes" Not Proven by Research

- Milk Stasis
- Diet/specific foods

What may be contributing to the increase in incidence?

- CURRENT OBSESSION TO BUILDING A STASH
+
- CONSTANT WORRIES ABOUT NOT HAVING "ENOUGH MILK" =
- EPIDEMIC OF HYPERLACTATION

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New Approach to Mastitis: General Principles

- Mastitis=inflammation of the breast/chest
- Spectrum of several breast conditions
- Not just an infection that requires antibiotics
- Inflammation & edema in the tissue around the milk ducts
- Hyperlactation & mammary dysbiosis

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Spectrum of Inflammatory Conditions in the Lactating Breast

- Hyperlactation +/- Dysbiosis
- Ductal Narrowing
- Inflammatory Mastitis
- Bacterial Mastitis
- Abscess

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Early Postpartum Engorgement

- Results from secretory activation (lactogenesis II)
 - Increase in interstitial edema & hyperemia
- Bilateral breast pain, firmness, & swelling
- Typically occurs PP days 3-5
- Cesarean birth
 - May have delay of LII/engorgement
- Goal:
 - Good management to keep the breast “happy”

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Recommendation for PP Engorgement in LII

- Minimize use of IV fluids in labor
- Encourage rooming in
- Feed on demand (cue)
- Hand express
- Reverse pressure softening /HE or use hand pump prior to attempting latch
- Lymphatic breast drainage
- Ice

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Expected Milk Flow

- Through milk ducts to the nipple
- “Good” bacteria of the breast/chest & milk line the milk ducts

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Things Starting to Go Awry

- Bacteria out of balance
- Inflammation to the walls of duct
 - Cause swelling and narrowing
- Milk flow slow
- Bacteria imbalance can cause “sticky” biofilm layer to form in duct
- Milk fats can stick to the bacteria

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Breast Ductal System

- Complex
- Innumerable
- Interlacing

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If Inflammation does not decrease...

- Milk has to move through a narrow duct
- If duct becomes impassable, inflammation increases
 - Increased swelling, redness, & heat
 - Breast becomes tender
 - Milk starts to back up
- Inflammation can make you feel bad!

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Ductal Narrowing : Common Symptoms

- Typically occurs on 1 breast
- Localized hardened area (Induration)
- May feel hot, swollen, or look red
- Localized tenderness/pain
- Generally feels well/no fever
- Slower/lessened milk flow seen on affected side

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New Evidence Based Recommendations from ABM Protocol #36: Prevention

- 4th Trimester care
- Educate parents on normal
- Feed on cue and do not aim to “empty” breasts
- Minimize breast pump usage
- Avoid nipple shields
- Treatment of hyperlactation
 - ABM #32

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Traditional Treatments Prior to ABM #36

- Rest
- Stay Hydrated
- Warm Compresses
- Massage
- Analgesics
- Others?

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Physiological Breastfeeding

- Feed responsively
- No increased feeding
- No increased feeding from affected breast
- No adding pumping or Haakaa to empty the breast

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Treat the Breast Gently

- Avoid deep massage & vibration
- In the past...“You really have to get in there”
 - Pressing into inflamed tissue
 - No wonder it hurts so much!
- Wear supportive bra

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Anti-Inflammatory, Analgesia,
& Ice...
YES PLEASE

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Spectrum-Wide Recommendations: Other Medical Interventions

- Treat nipple blebs & avoid unroofing
 - Keep a cotton ball soaked in Olive or Coconut oil against the bleb continuously
 - Oral lecithin
 - 0.1% Triamcinolone cream
- Therapeutic ultrasound
- Reserve antibiotics for bacterial mastitis
- Consider probiotics
- Evaluate for PMADs, DMER, and/or nursing aversions

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Other Changes to Recommendations

- Avoid saline soaks, castor oil, other topical ointments
- Avoid routine sterilization of pumps and household items

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What about heat?

- Applying heat will dilate the blood vessels
- Increases blood flow
- Potential to increase inflammation
- But...
 - Some people may feel it gives relief
 - Use personal judgment
 - Limit use

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Inflammatory Mastitis

- Narrowing remains & worsens
- Inflammation progresses
- Increasing erythema, edema, and pain of the breast
- Systemic symptoms: Fever, chills, fast heart rate
- Can be present without infection

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Bacterial mastitis

- Progresses from narrowing and inflammatory mastitis
- May need antibiotics and/or probiotics to resolve
- **Presents as cellulitis**
- May spread to other quadrants of the breast
- Symptoms > 24 hours, needs to see provider

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Recommendations for Bacterial Mastitis

- Antibiotic treatment
- Continue breastfeeding/pumping
 - Feed/pump as have up to infection
- No improvement in 48 hours with 1st line medication, consider milk culture
 - Evaluate for resistance / less common pathogens
- Consider probiotics
 - Need more research

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Probiotics

- No high quality randomized controlled trials to assess effectiveness of probiotics for the prevention & treatment of mastitis – but it's being looked at...

(Cochran, 2020 review)

- Each strain of bacteria needs to be tested individually
 - Efficacy is both species & strain specific
- **So...probiotics may or may not work**
(Amir, 2016)

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Abscess

- Progression to an infected fluid collection
- Well-defined area that remains hard, red, & tender
- Localizes the infection by forming barrier around it & fills with pus
- Systemic symptoms may resolve as infection is walled off
- Diagnosis history, clinical exam, & ultrasound

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Recommendations for Abscess

- Needle aspiration for culture and sensitivity 1st line
- May require several aspirations
- Incise & drain placement to gravity
- Continue breastfeeding/pumping
- Antibiotics typically 10-14 days
- May take several weeks to resolve tissue inflammation
 - May feel small mass-like area
- Interval examination and imaging to ensure resolution

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Recurrent Mastitis

- No consensus of definition
- Symptoms parents may describe occurring every 2-4 weeks
 - Fever
 - Breast redness
 - Breast swelling
 - Breast pain
- Risk Factors
 - Episodes of hyperlactation
 - Dysbiosis
 - Inadequate treatment of prior mastitis
 - Underlying etiology of prior episodes not being addressed

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Subacute Mastitis

- Ductal lumens narrow by bacterial biofilms in setting of chronic dysbiosis
- Dysbiosis
 - Process whereby the population of potential pathogens increases at the expense of the normal mammary microbiota
- Contributing Factors
 - History of previously treated acute bacterial mastitis
 - C/S
 - Exclusive pumping
 - Nipple shield use
 - Other things that alter milk microbiome
- Symptoms Reported
 - Needle-like, burning breast pain
 - Nipple blebs
 - Recurrent areas congestion
 - Unresolved hyperlactation

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Phlegmon

- Ill defined collection of fluid in the body in area of inflammation
- Excessive deep tissue massage may cause increase edema and microvascular injury when there is...
 - Ductal Narrowing and/or inflammatory mastitis
- Suspect when firm, mass like without fluctuance when there was history of mastitis

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Galactocele

- “Milk Cyst”
 - Ductal narrowing that slows the flow and significant amount of milk collects in a cyst like cavity
- Firm mass that gradually increases in size over time
 - May fluctuate in size with possible decrease after feeding
- Symptoms
 - May be uncomfortable, but not to same level of abscess
 - Erythema or systemic symptoms not typical unless it becomes infected

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Additional Resources

- Adjunct ABM Protocols
 - #32 Management of Hyperlactation
 - #35 Supporting Breastfeeding During Maternal or Child Hospitalizations
- ABM Mastitis in Breastfeeding parent handout
- <https://www.mayabolman.com/videos>

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Questions?
Email me at
Wudtke5@yahoo.com

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