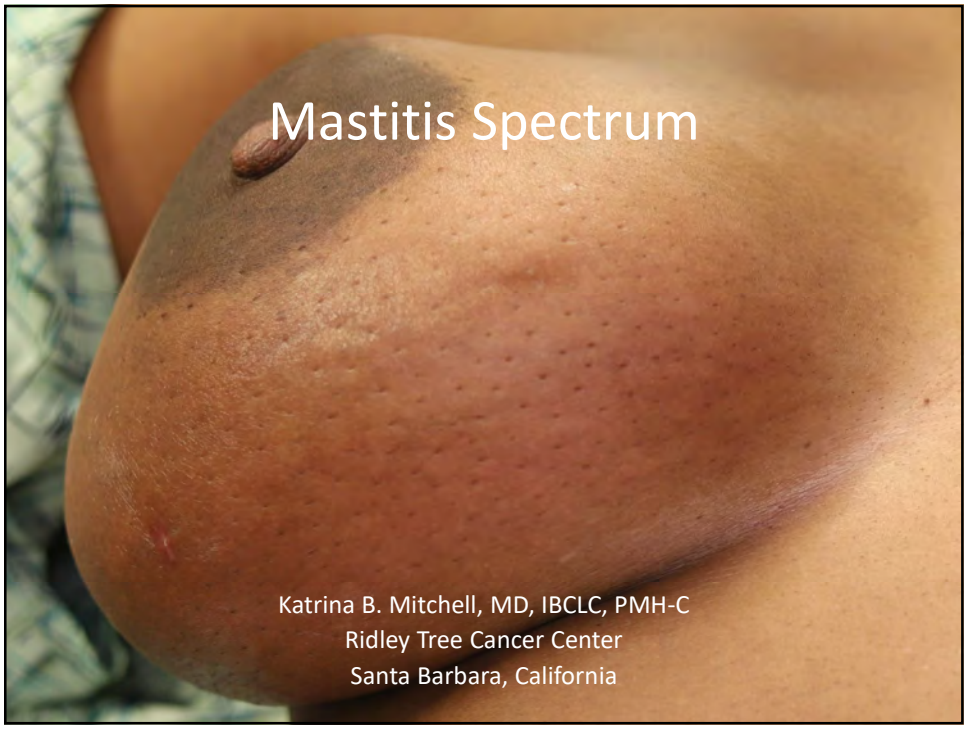

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No Disclosures

For brevity and anatomic clarity, I will use the terms “breast” and “breastfeeding.” However, information presented applies equally to transgender men who chestfeed.

2

BREASTFEEDING MEDICINE
Volume 17, Number 5, 2022

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ABM Protocol

Open camera or QR reader and scan code to access this article and other resources online.

Academy of Breastfeeding Medicine Clinical Protocol #36: The Mastitis Spectrum, Revised 2022

Katrina B. Mitchell,[1] Helen M. Johnson,[2] Juan Miguel Rodríguez,[3] Anne Eglash,[4] Charlotte Scherzinger,[5] Irena Zakarija-Grkovic,[6] Kyle Wildmer Cash,[7] Pamela Berens,[8] Brooke Miller,[9] and the Academy of Breastfeeding Medicine

Abstract

A central goal of the Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient. The Academy of Breastfeeding Medicine recognizes that not all lactating individuals identify as women. Using gender-inclusive language, however, is not possible in all languages and all countries and for all readers. The position of the Academy of Breastfeeding Medicine (https://doi.org/10.1089/bfm.2021.29188.abm) is to interpret clinical protocols within the framework of inclusivity of all breastfeeding, chestfeeding, and human milk-feeding individuals.

Keywords: abscess, breastfeeding, dysbiosis, engorgement, galactocele, lactation, mastitis, phlegmon

Introduction

Mastitis is a common maternal complication of lactation and contributes to early cessation of breastfeeding.[1] In the past, mastitis has been regarded as a single pathological entity in the lactating breast.[2] However, scientific evidence now demonstrates that mastitis encompasses a *spectrum* of conditions resulting from ductal inflammation and stromal edema (Fig. 1). If ductal narrowing and alveolar congestion are worsened by overstimulation of milk production, then inflammatory mastitis can develop, and acute bacterial mastitis may follow (Fig. 2). This can progress to phlegmon or abscess, particularly in the setting of tissue trauma from aggressive breast massage. Galactoceles, which can result from unresolved hyperlactation, can become infected. Subacute mastitis occurs in the setting of chronic mammary dysbiosis, with bacterial biofilms narrowing ductal lumens.

The pathophysiology, diagnosis, and management of each condition in the mastitis spectrum (ductal narrowing, inflammatory mastitis, bacterial mastitis, phlegmon, abscess, galactocele, and subacute mastitis) will be discussed hereunder. Early postpartum engorgement, a distinct condition that can share some clinical features with mastitis spectrum disorders, will also be reviewed.

Note that this protocol now replaces ABM Protocols #4, Mastitis, and #20, Engorgement, which will both be retired, ABM Protocols #32 (Management of Hyperlactation)[3] and #35 (Supporting Breastfeeding During Maternal or Child Hospitalization)[4] may serve as useful adjuncts to this protocol.

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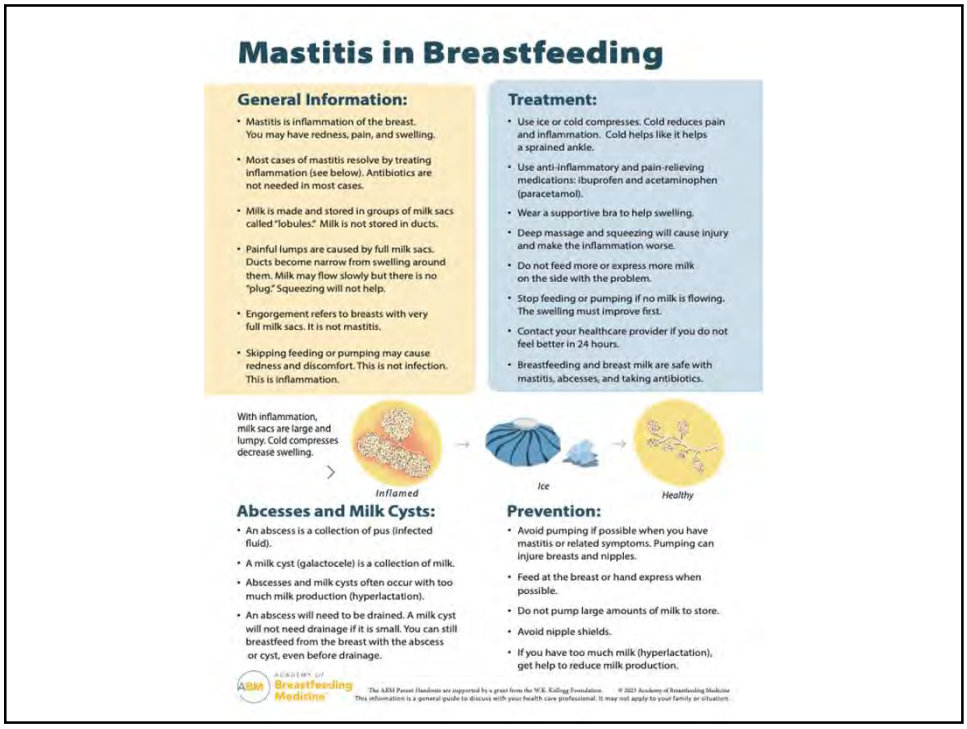

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Overview
BREASTFEEDING
URGENT CARE
• Mastitis Spectrum
– Hyperlactation
– "Plugging" i.e. ductal narrowing
– Mastitis
– Phlegmon
– Abscess
– Galactocele
• Pain

6

Mastitis: The PAST

- Patient told this:
  - Soak breast in Epsom salt
  - Pump
  - Apply castor oil wraps with heating pad on top
    - Patient said, "Our kitchen looked like a 'Breaking Bad' episode"
  - Massage
  - Pump
- Do "Breast Gymnastics"

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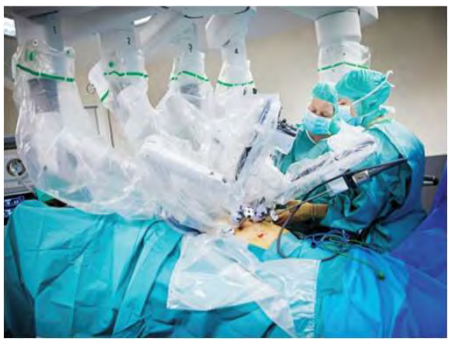
Evolution of Practice



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GENERAL SURGERY NEWS

SECTIONS ▾ DIGITAL ISSUE EDUCATION ▾ MULTIMEDIA ▾ SPECIAL EDITIONS ▾ CLASSIFIEDS

Focus on Fluorescence: Gynecologic Surgery
MAY 26, 2023

WHO: Time to Transition to Long-Term Management for COVID-19
MAY 26, 2023

Opinion

MAY 17, 2023
New Approaches in Surgery

Autonomic Blockade to Prevent Pain in Lap Sleeve Gastrectomy Patients

Approach Reduces Post-op Opioid Use, PONV

By Edward L. Felix, MD

Since retiring from surgery, I have had an excessive amount of free time to ponder how I might contribute meaningfully. I no longer act directly with patients in the clinic or OR, but maybe I can teach and mentor those who do. If I pass on some of the details I have learned during almost 50 years of practicing surgery, younger surgeons might benefit from my good and bad experiences.

I am also in a unique position to look for new and novel approaches that may improve patient care in the future. During my career, I have witnessed radical changes in the practice of surgery, including changes in the approach to many benign and malignant diseases. Some of these changes that led to improvements in care were ignored initially, or even harshly criticized. Radical mastectomy is no longer the gold

cholecystectomy. Minimally invasive surgery has replaced conventional open surgery for a multitude of diseases, and robots are now appearing in operating suites everywhere. Bariatric surgery has become the gold standard for treating morbid obesity and metabolic diseases. Decreasing the use of postoperative narcotics and reducing the length of stay after a surgical procedure have become paramount in surgeons' minds as we face the opioid crisis. It is this last

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Deepest Thank you and a Question

Hi Dr. Mitchell! I just finished scouring your website, listening to your talk for OWLA on the new mastitis protocol, and reading your clinical article on Nonpharmacologic Approaches to Engorgement and Breast Pain. I have to say, I cried with relief when I found your material. I was recently caught in the cross hairs of the changing mastitis protocol (I am 11 weeks postpartum) and was instructed for the first 6 weeks by my OB & midwives to heat my breast hotter to 'melt the cheeseballs' in my ducts that were apparently causing antibiotic resistant mastitis. They also had me heating, nursing, and then heating and pumping every 2-3 hours to keep the breast empty. It was utter HELL. I now know (and my intuition was right), that I didn't have any clogged ducts at all...I had severe engorgement and inflammation, and just lumpy, sore breasts! My breasts were red because of that, and I didn't need 3 rounds of antibiotics and to tell my body to make enough milk for twins. I'm appalled at the information I was given and I just wanted to say THANK YOU from the bottom of my heart for your efforts to right these wrongs with putting good information out there for postpartum mothers and lactating people.

Yes, yes, yes please do share. I will also add that it was recommended that, because I wasn't getting the tissue hot enough, that I use a crock pot of hot washclothes to heat the breast before pumping. It was scalding hot; I was essentially burning myself.

I remember leaning over my kitchen counters "to straighten out the ducts", scalding my breasts, at 3:00 in the morning (every 2-3 hours) and bawling my eyes out. It was not what I thought early motherhood would be like, and I went to some really dark places mentally.

Feel free to add that to my testimony.

If I help just one person with my experience it would be really therapeutic for me.

Thanks for the clarification on the massage - I still get engorged in the mornings when the baby sleeps longer stretches, so I've been doing some lymphatic drainage massage and then ice to relief some of the discomfort instead of pumping.

Because of these new recommendations I handled a clogged duct that I last week with confidence and kindness towards my breasts and it resolved quickly. Nursing, ice and ibuprofen makes so much more sense than the alternative.

I can't thank you enough!

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I know you and others are having a difficult time with the new
recommendations, but I am seeing much faster resolution and happier
breastfeeders using the gentler approach. I started going in this
direction roughly 15 years ago after hearing Donna Geddes talk on what
she was seeing upon ultrasounds of breasts- inflammation!
It's been a game changer from what I was taught earlier.
I like keeping an open mind and being open to change. I recommend the
book
Think Again by Adam Grant

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Indigenous Wayuu Woman La Guajira, Colombia

Why Didn't Our Previous Approaches Work?

- Misunderstanding of breast anatomy and physiology
- Repeated interventions (e.g. repeated antibiotics) without addressing root causes of problems
- Moved away from feeding physiologically as we used to do in traditional cultures

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"Milk Stasis": **NO**

Our Breasts **Were Made** to Feed Irregularly

- Newborns can "cluster feed" then take a break (i.e. irregular schedule)
- 3/4/5 month often decrease daytime nursing and feed more irregularly
- Toddlers don't nurse on schedule
- Other human organs do not need a schedule
  - Intestines/pancreas/gallbladder/liver upregulate secretions when eating and downregulate when not …
  - Cholecystitis and pancreatitis happen from a complex interplay of cellular-level factors, NOT from "stasis" or eating irregularly
  - We are engineered to accommodate daily lives – we aren't robots and neither are our breasts or children …

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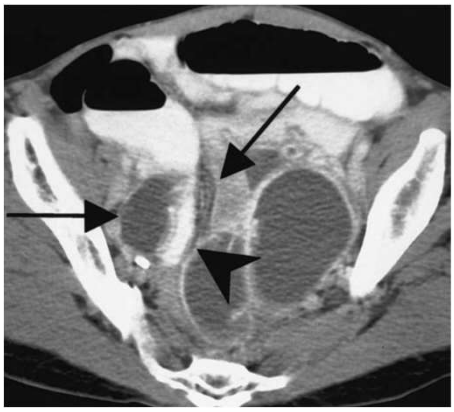
Overfeeding at the Breast is Like Feeding a Bowel Obstruction!

- Or an inflamed gallbladder
- Or feeding pancreatitis
- LET THE EDEMA AND INFLAMMATION RESOLVE!



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Massaging a Breast

- The breast is a GLAND
  - We don't massage a thyroid, pancreas, liver, or adrenal gland to make it work. In fact, anything but extremely gentle tissue handling will cause bleeding and tissue injury!
- Think of the alveolar cells like a group of delicate grapes
  - If they get squeezed at all, they turn soft and may even break open
  - If you were to continue squeezing them, they would turn into grape juice (i.e. abscess)

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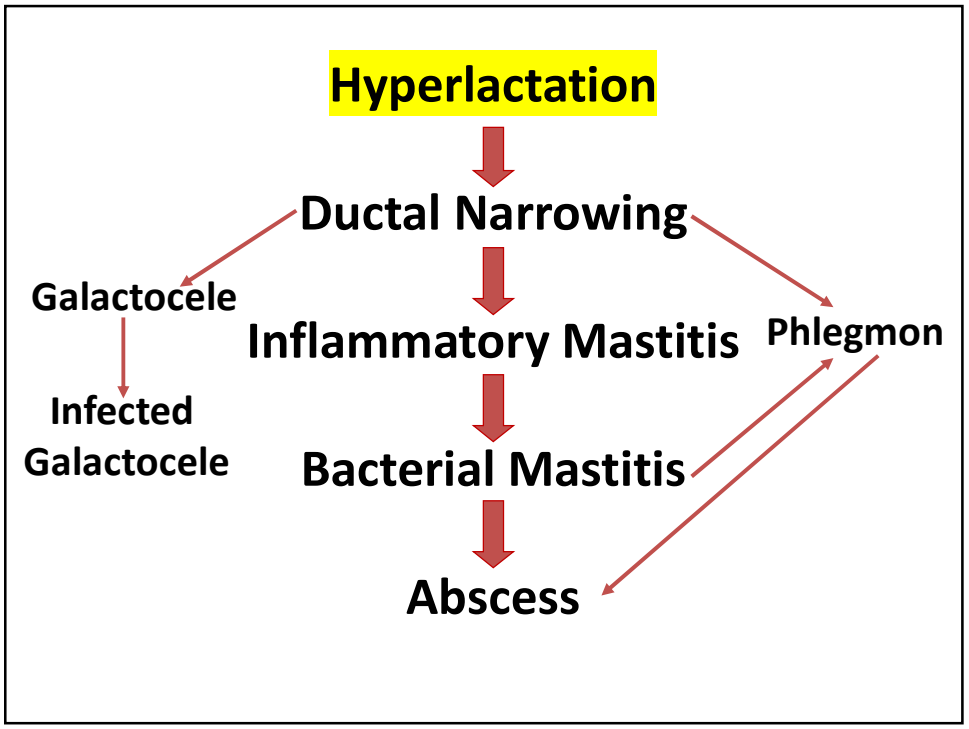

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Hyperlactation or "Oversupply"

- No precise definition
- Production of milk in excess of what baby needs
  - 450-1200ml term infant
    - doesn't change over time
- Can be localized issue to one breast

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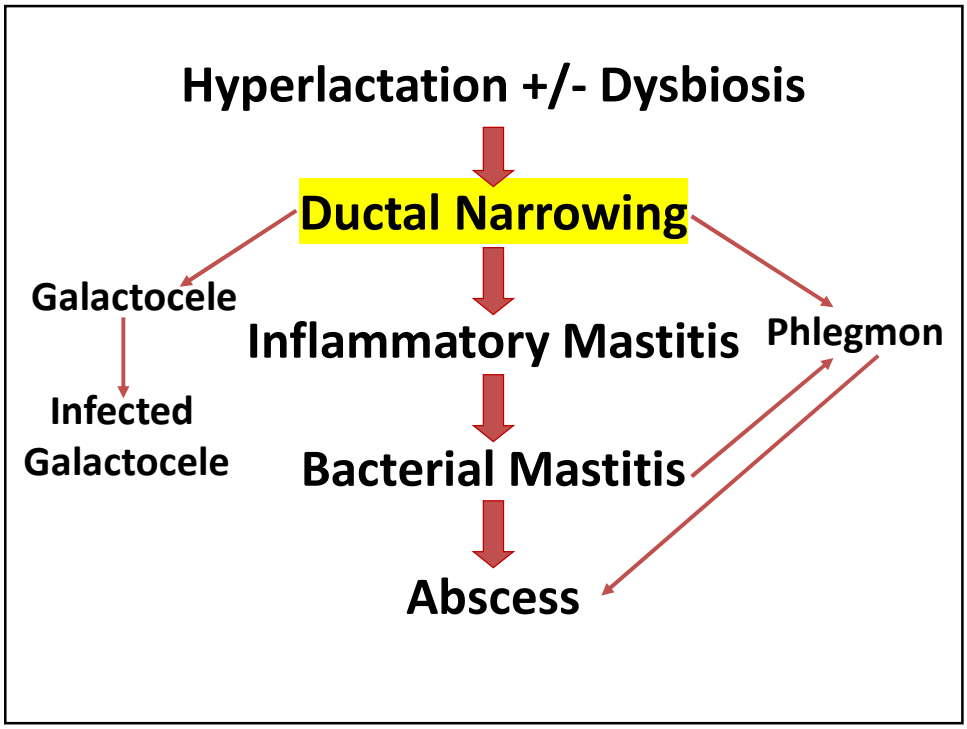

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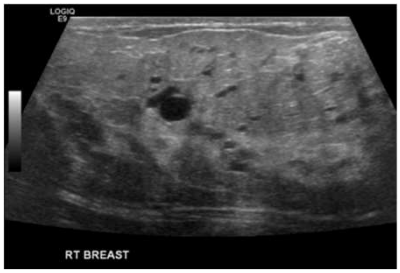
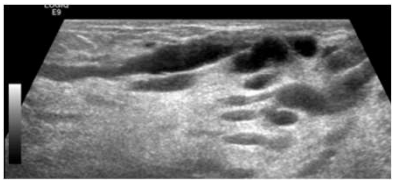
- Either …
  - Full/prominent NORMAL breast tissue
  - Bleb disease (ductal debris)
- Symptoms
  - Tender, full area or "lump" in breast or "milk plug" (bleb) at nipple orifice surface
  - May notice relief after feeding or pumping because it's simply removing that milk
  - However, it perpetuates cycle as more cars just get on freeway

Ductal Narrowing ("Plugging")





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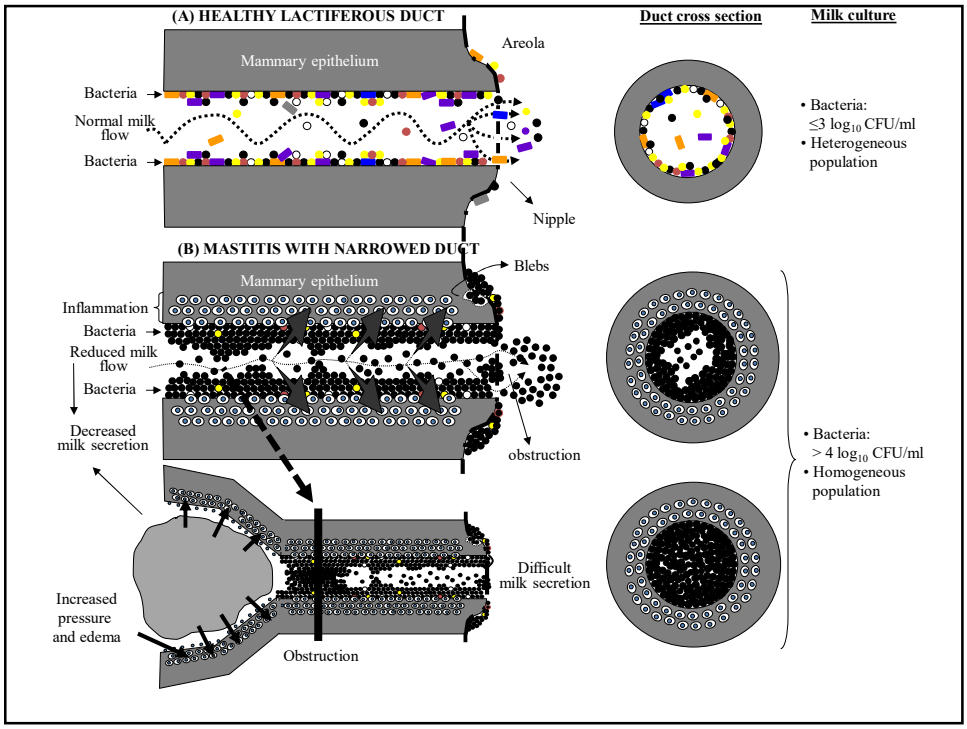

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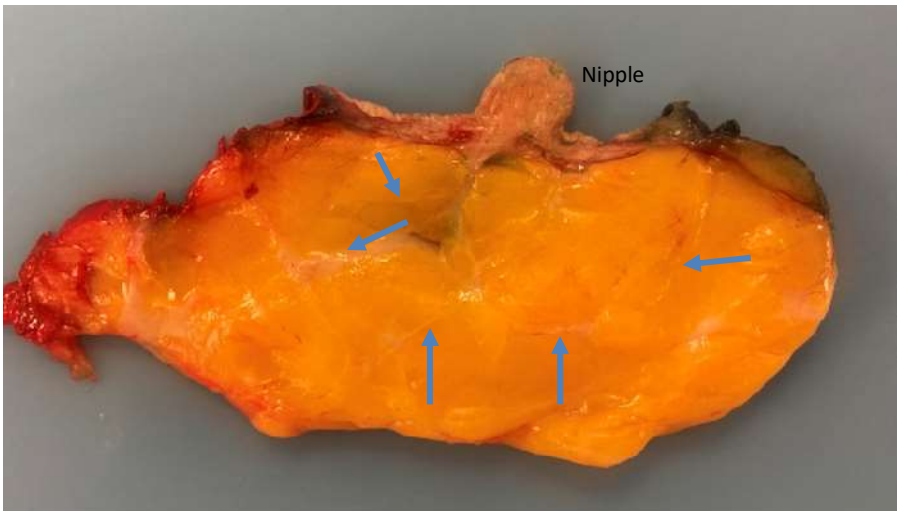
Innumerable, Interlacing Ducts



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Ductal Narrowing Risk Factors

- Non-physiologic feeding
  - Nipple shields
  - Pumping
- Hyperlactation ("oversupply")
- Debris/blebs

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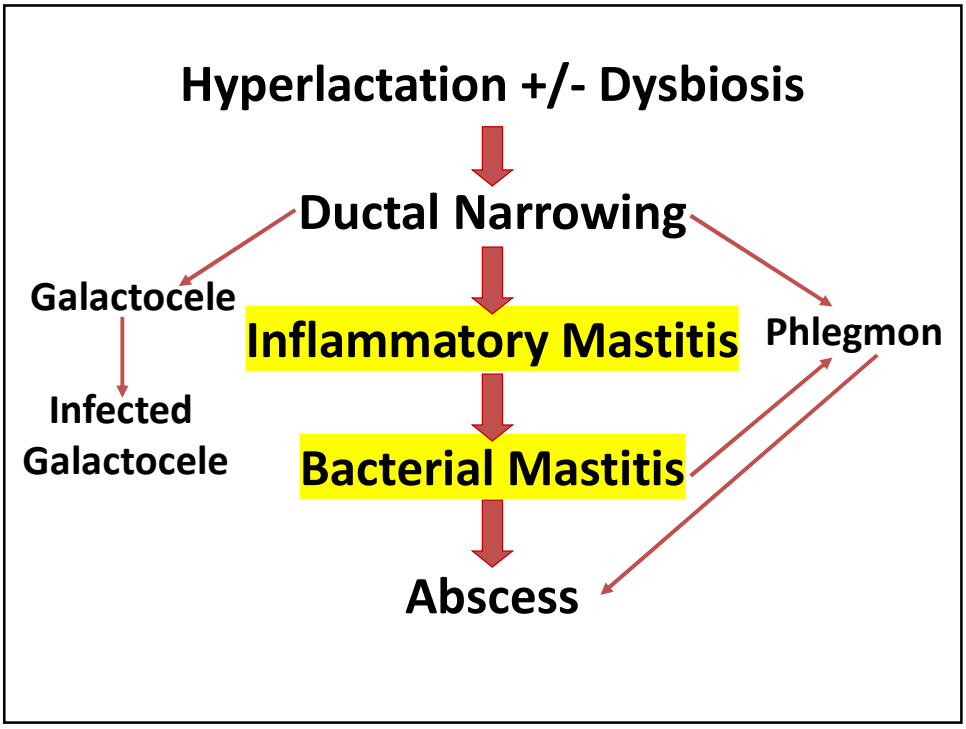

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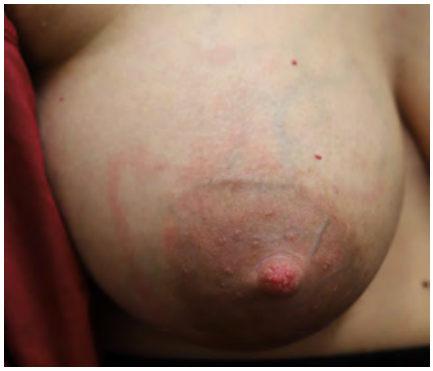
Inflammatory Mastitis



- Breast pain and redness
  - Inflammation
  - If true INFECTION, becomes much more beefy read with cellulitis-like changes
- Systemic symptoms
  - Lactating breast very metabolically active
  - Muscle aches, flu-like symptoms, headache, fatigue, tachycardia
  - It is NOT possible to develop an infection in 12 hours (e.g. baby sleeping overnight)
  - What IS possible is congestion of lymphatics, capillaries, inflammation, pain

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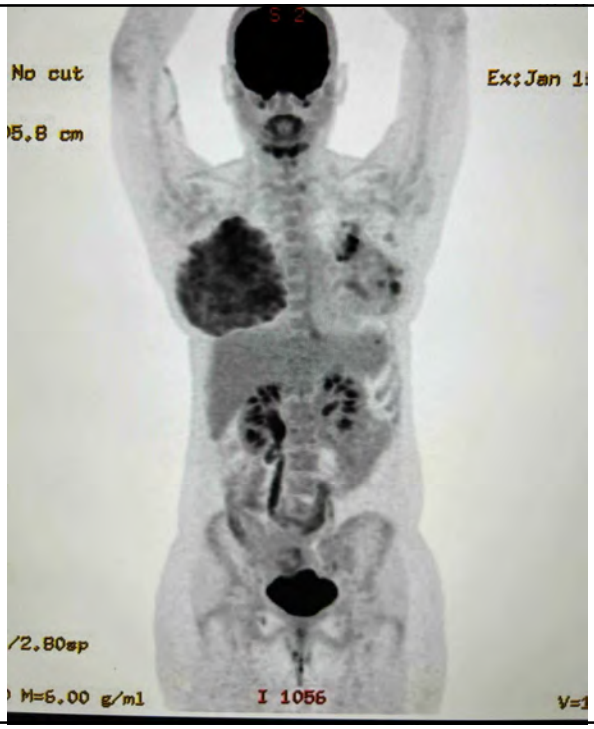

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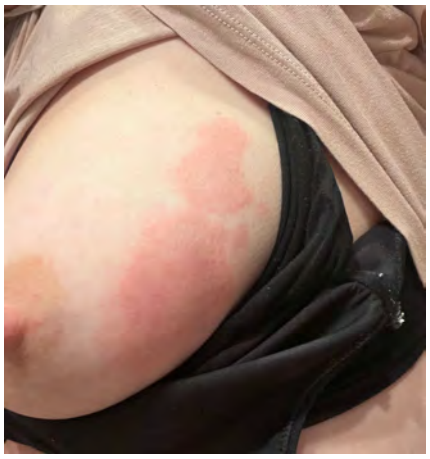
Red is NOT Always Infectious!

- Hives
- Dermatitis
- DVT (blood clot)
- Sprained ankle
- Other things that cause fever and tachycardia
  - SIRS, ARDS, paraneoplastic syndrome
  - Panic attacks (think of stage fright with shaking and sweating or a dog or cat at the vet anxious, sweating, and panting)



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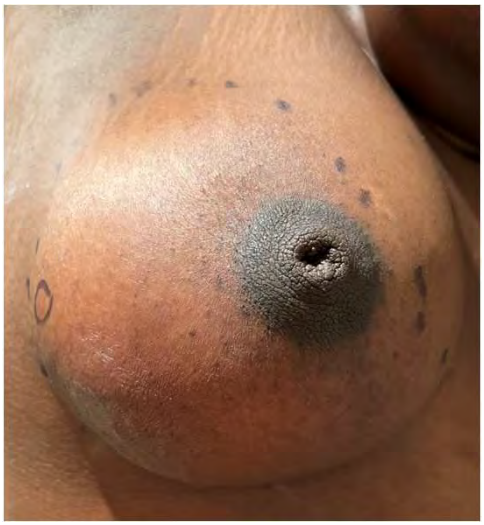
Granulomatous Mastitis—Inflammation, NOT INFECTION



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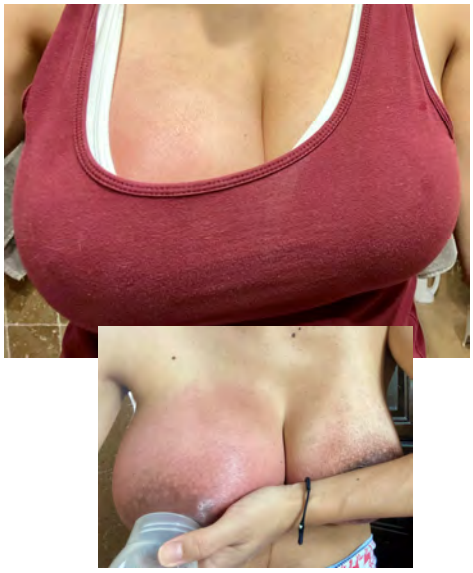
Hyperemia, NOT INFECTION

- Unilateral iatrogenic hyperlactation
  - No feedback inhibition
- Patient instructed to feed or pump "to empty" after first episode mastitis
- Developed recurrent mastitis



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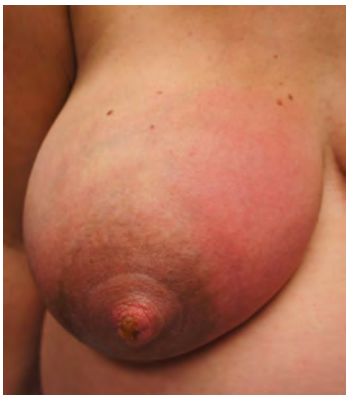
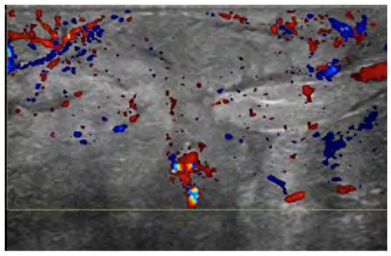
Bacterial Mastitis

- Beefy red, indurated skin
- Worsening systemic symptoms that do not resolve within 24-48 hours of **appropriate** conservative treatment
- **Vast majority of the time, the patient has been told to pump, continually breastfeed, massage**
  - **Tissue damage, cell death = bacterial infection**





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Bacterial Mastitis

- Not contagious
  - Nipples are open to the world – and our world isn't sterile. You get infection in deep organ sites, not free exchange in healthy, vascularized organs
- No basic science evidence to support poor hygiene or "being run down"
  - Likely an association that a mom is exhausted, she starts to feel some breast pain, massages and overpumps and then develops true mastitis
- No basic science or anatomic evidence for "candida mastitis"
- Nipple trauma is association, not cause and effect

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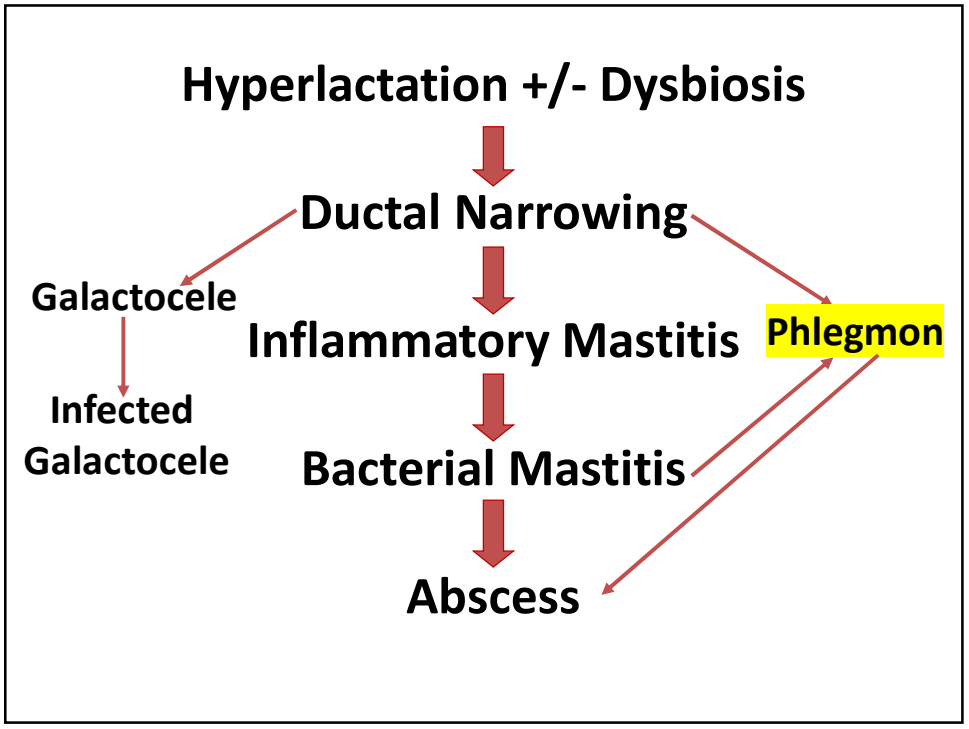

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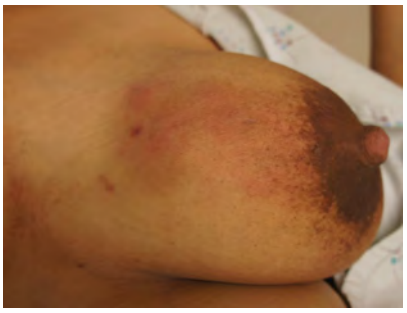
Lactational Phlegmon

- **Complex mass** without drainable collection
- Results from massage of breast in the setting of inflammatory or bacterial mastitis
- Capillary injury, edema, tissue inflammation
- With or without overlying erythema



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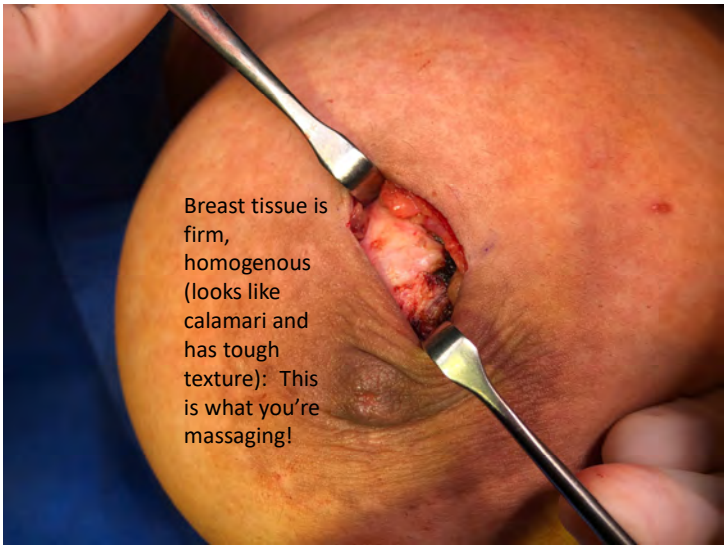

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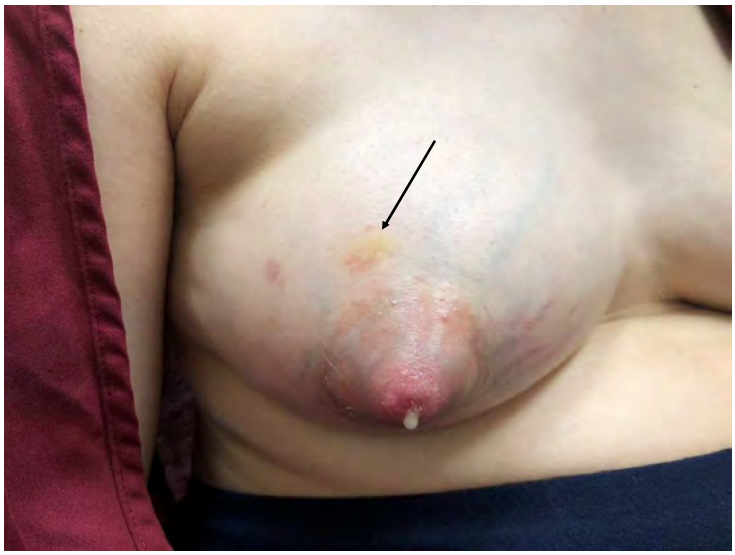
Bruising from Massage



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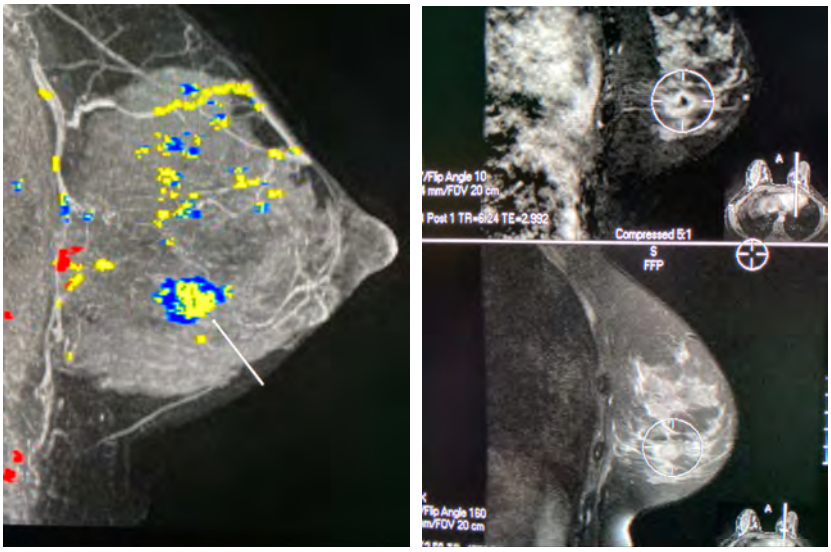
MRI Appearance of Phlegmon



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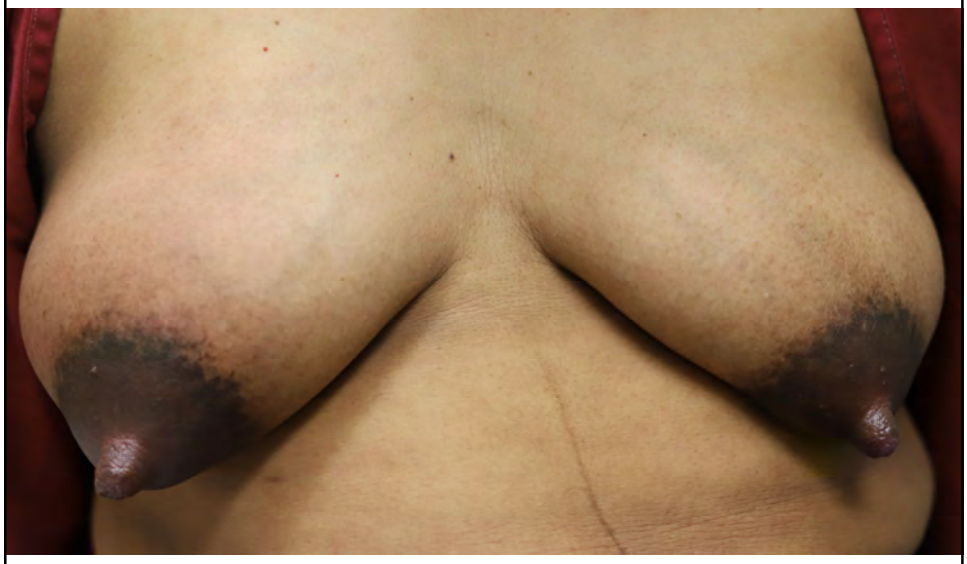

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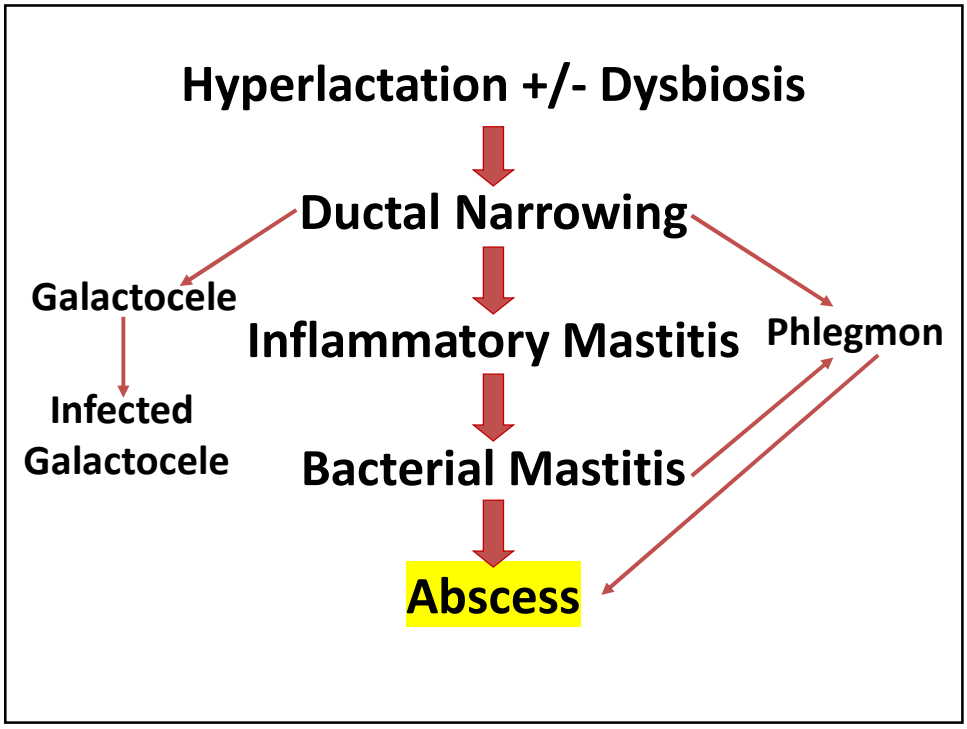
Hyperlactation +/- Dysbiosis
Ductal Narrowing
Galactocele
Inflammatory Mastitis
Phlegmon
Infected Galactocele
Bacterial Mastitis
Abscess

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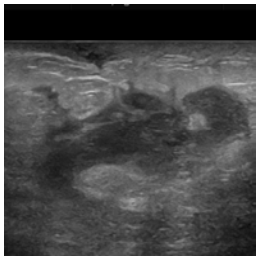
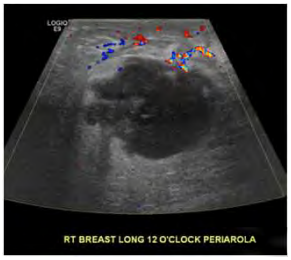
Abscess

- Often peri/retroareolar
- Risk factors
  - Massage, hyperlactation, pumping, nipple shields, delayed or inadequate treatment of mastitis
- May not have systemic findings
- Evaluation
  - Physical exam
  - +/- ultrasound





Cottrell et al J Diag Med Sono 2016

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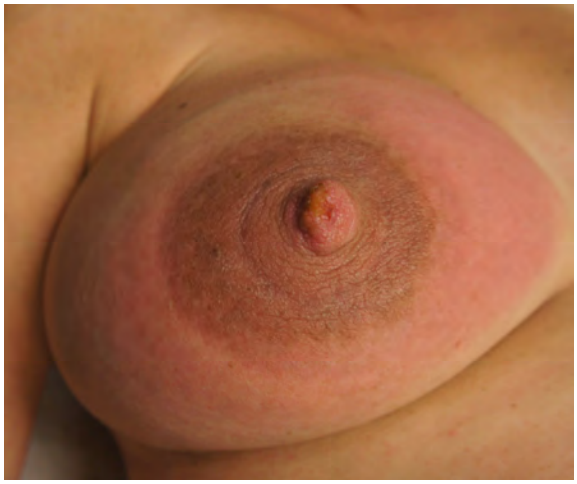
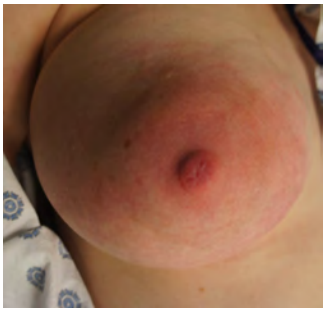
Retroareolar Abscess in Setting of Overfeeding in Hyperlactation





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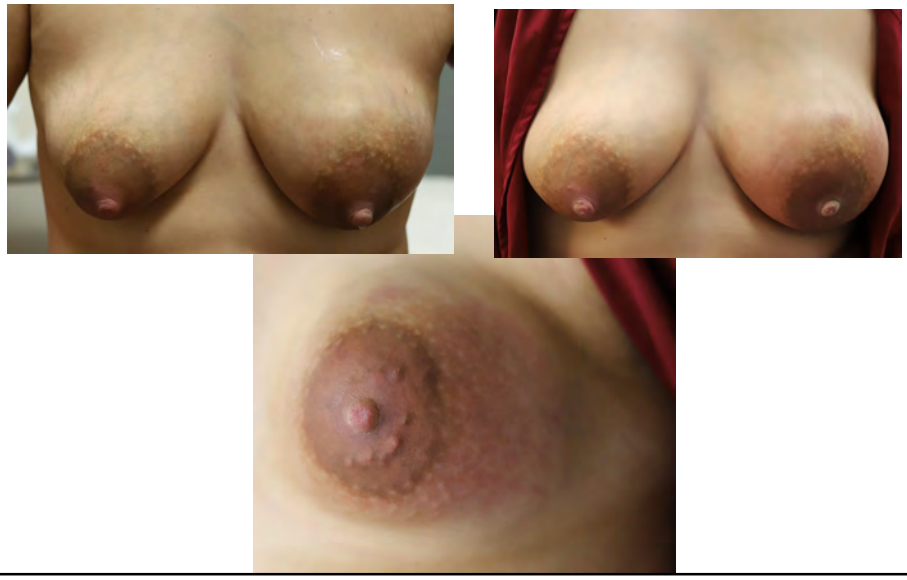
Abscess Development after Massage



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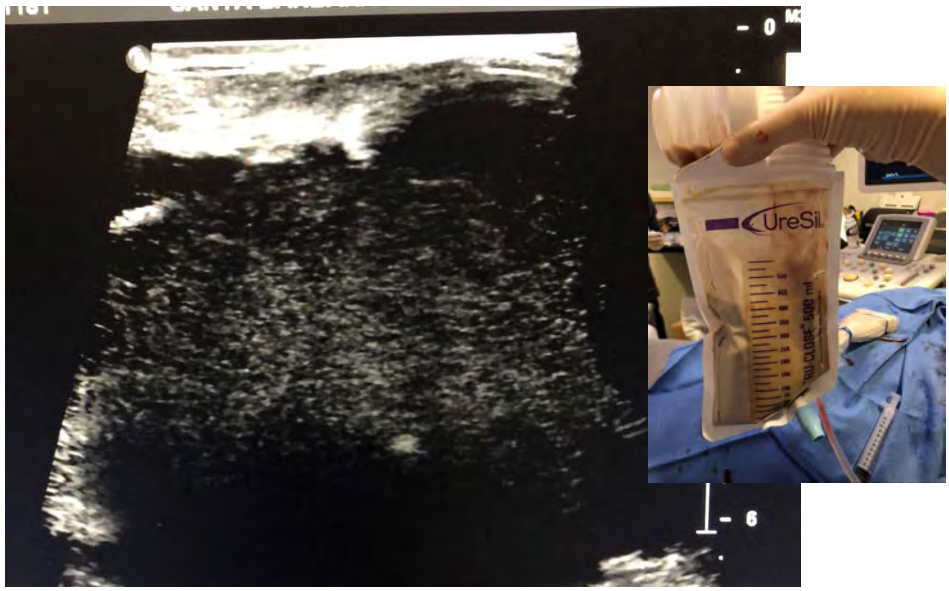

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Tissue Necrosis from Repeated Massage

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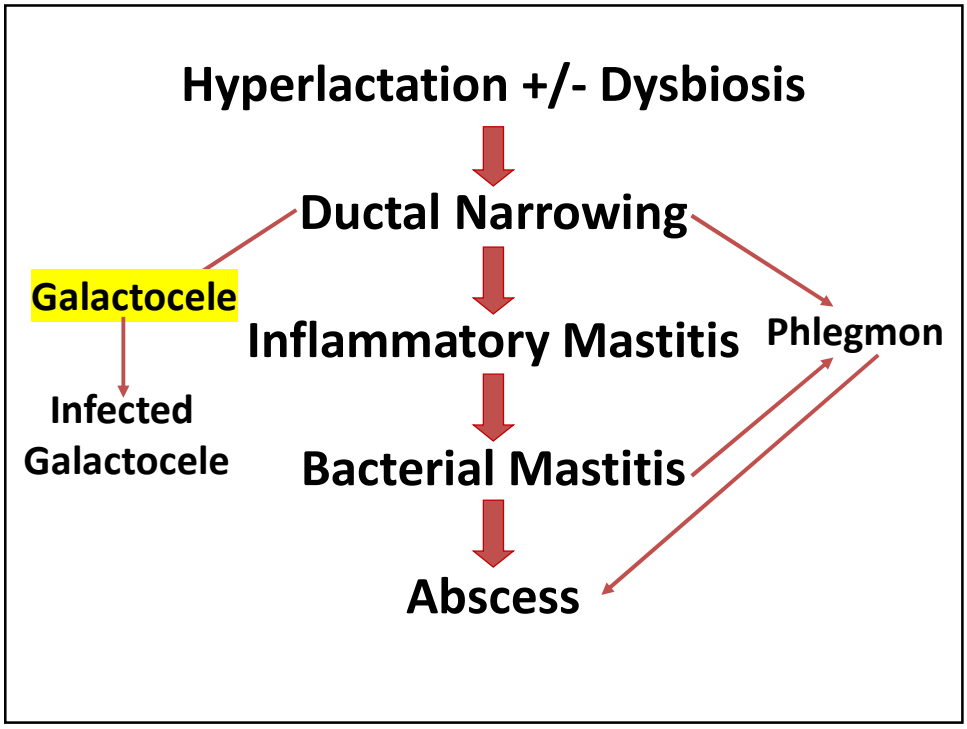
Hyperlactation +/- Dysbiosis
Ductal Narrowing
Galactocele
Inflammatory Mastitis
Phlegmon
Infected Galactocele
Bacterial Mastitis
Abscess

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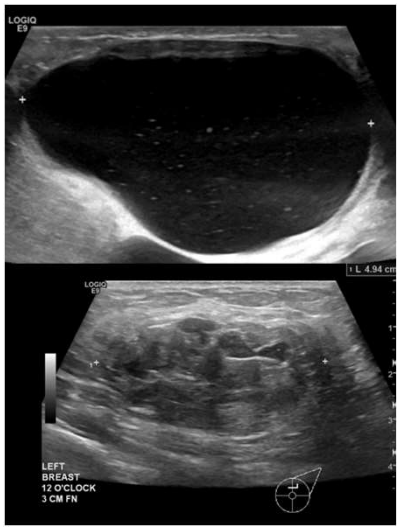
Galactocele

- Milk-filled cyst that can become solid and sticky quickly
- Well-defined lesion on ultrasound but more complex galactoceles can mimic other lesions



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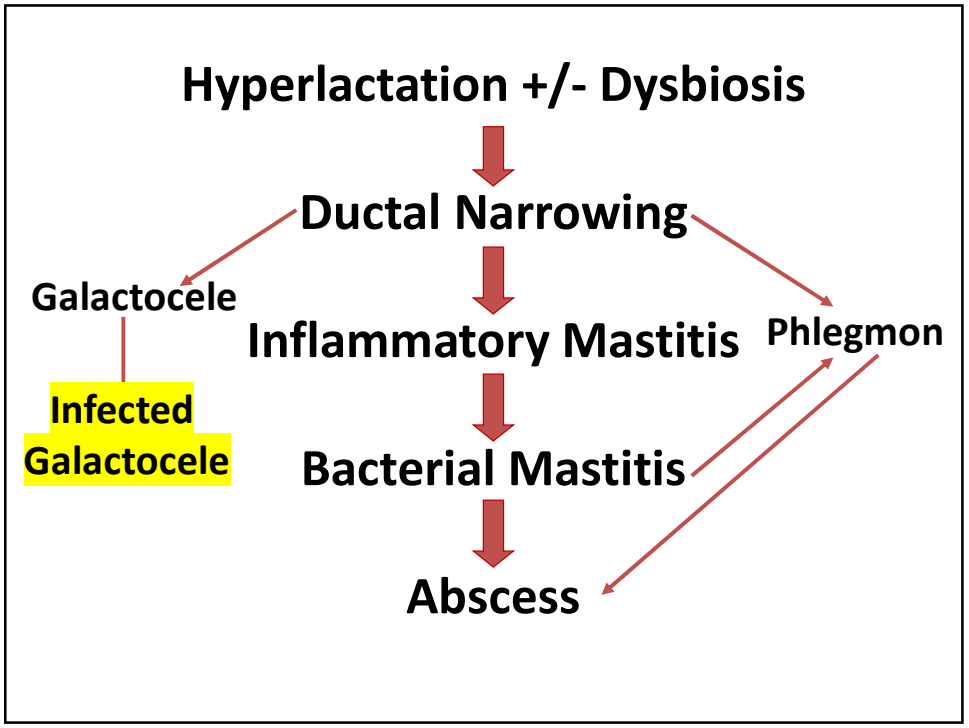
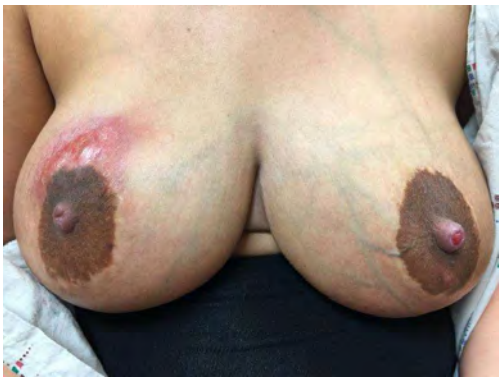


46

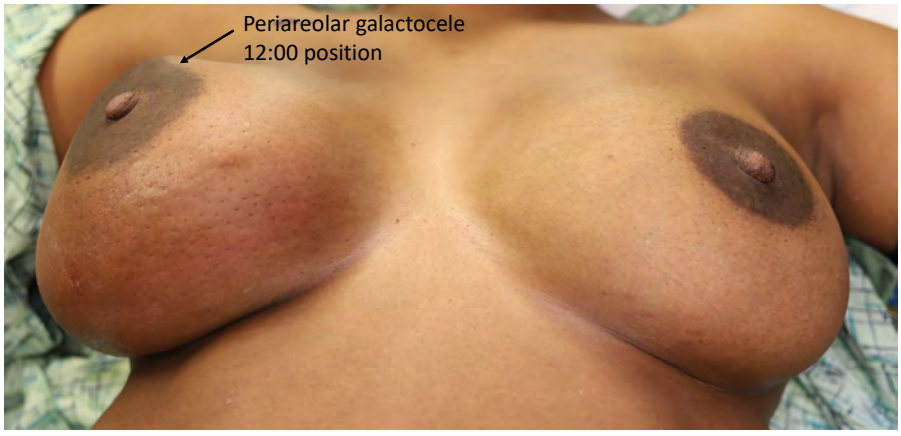
Infected Galactocele

- Repeated aspirations can convert uninfected galactocele to infected galactocele
- Most often, best to offer upfront small drainage catheter



47

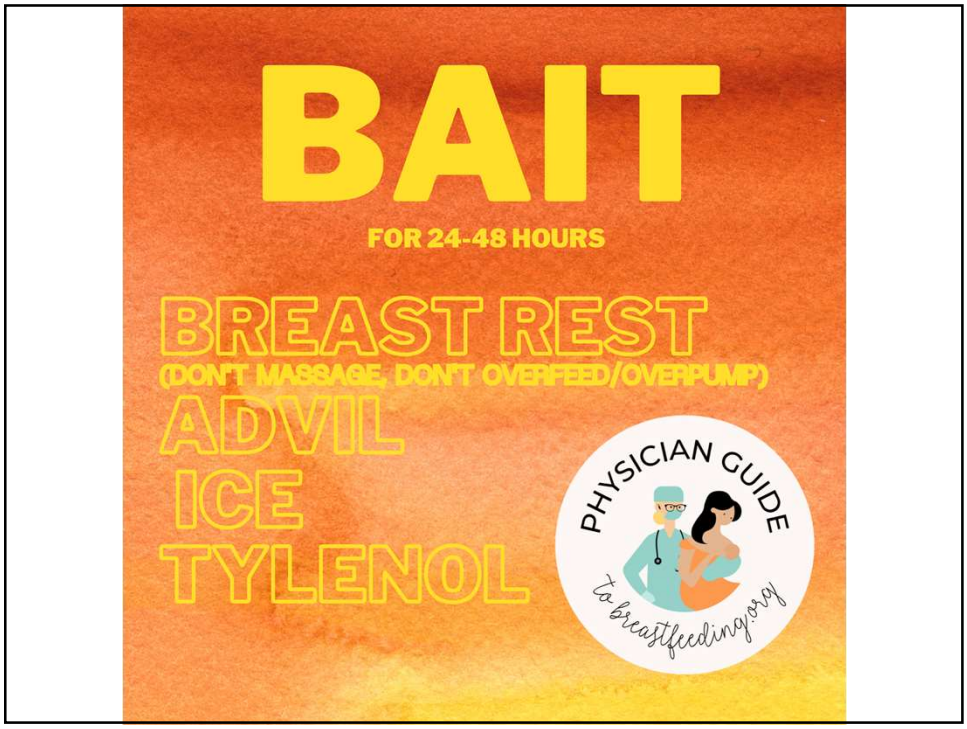
Infected Implant, Abscess, and Right Galactocele



48

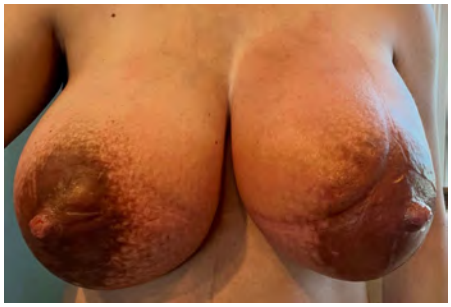

Treatment

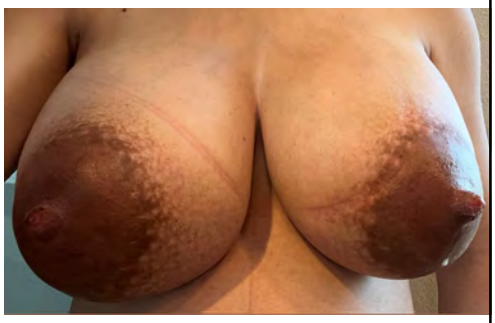
49


BAIT
FOR 24-48 HOURS
BREAST REST
(DON'T MASSAGE, DON'T OVERFEED/OVERPUMP)
ADVIL
ICE
TYLENOL
PHYSICIAN GUIDE
to breastfeeding.org

50

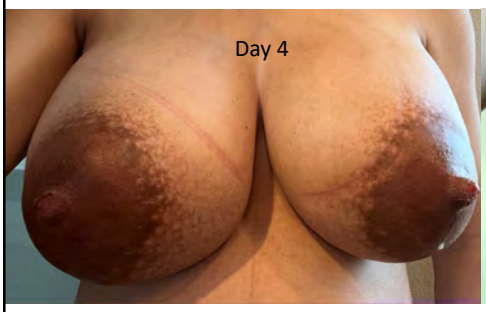
Engorgement Treatment

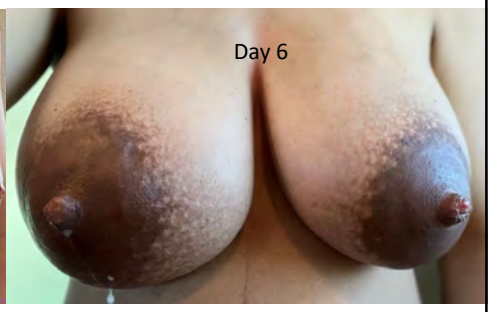


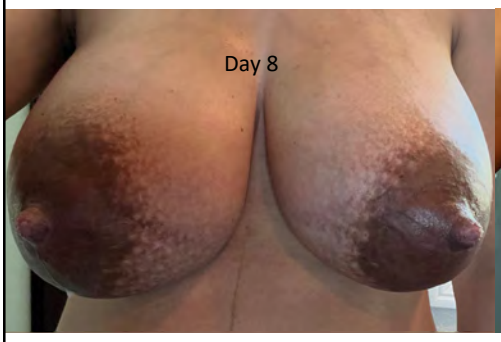


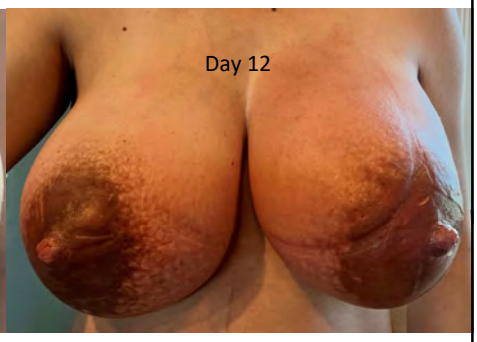
- Ice, supportive bra, lymphatic drainage
- No benefit of cabbage and other products over ice
- Only feed what baby needs
- PRN Advil, Tylenol
- Sudafed, cabergoline for extreme engorgement/hx HTLN

51









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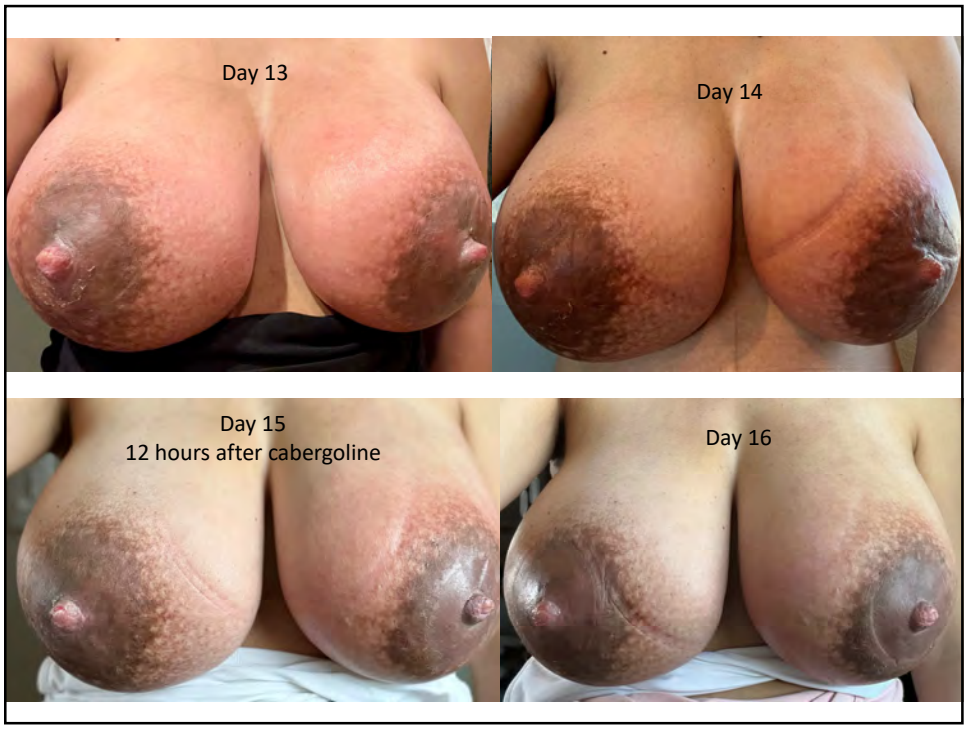

Day 13
Day 14
Day 15
12 hours after cabergoline
Day 16

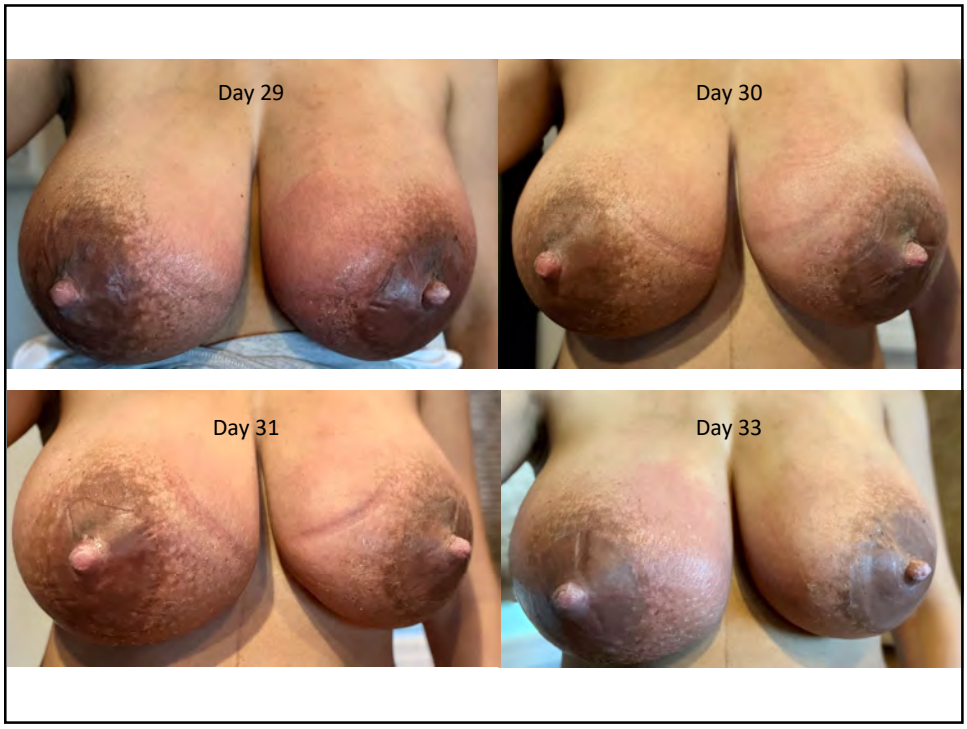
53


Day 17
Day 18 (second dose cabergoline)
Day 19
Day 20

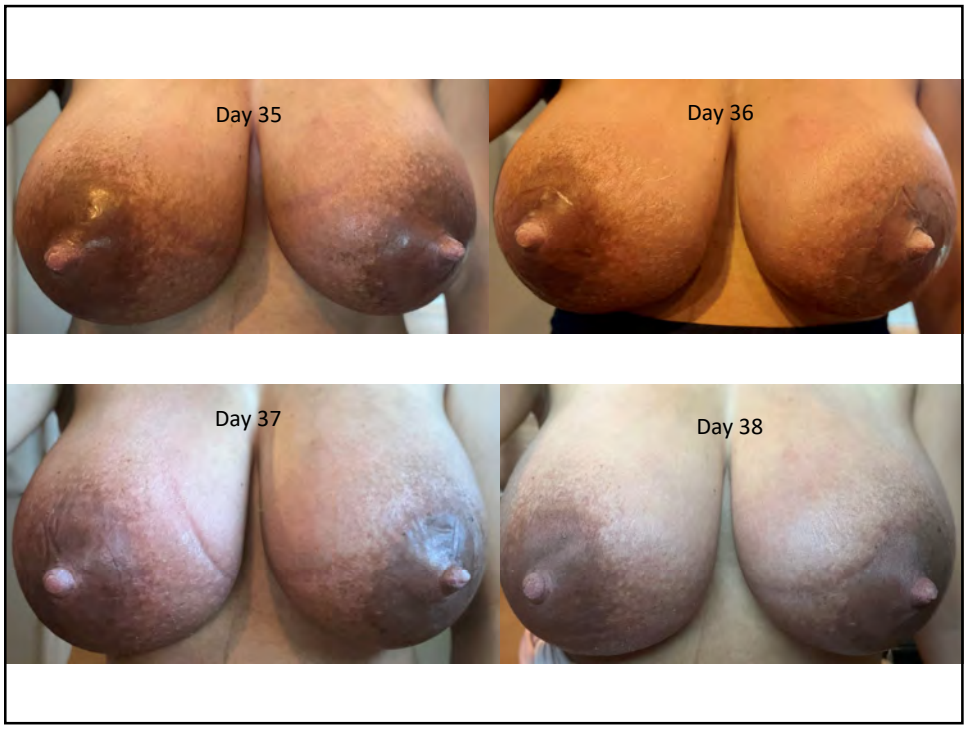
54


Day 22
Started Reglan
Day 25
Day 27
Day 28

55


Day 29
Day 30
Day 31
Day 33

56



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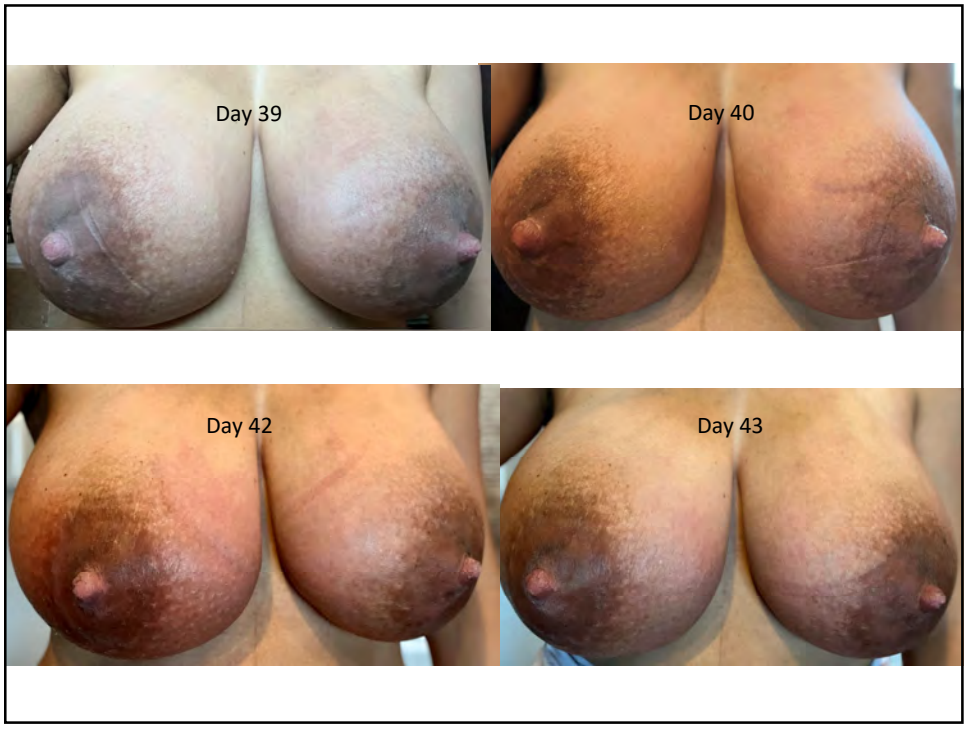

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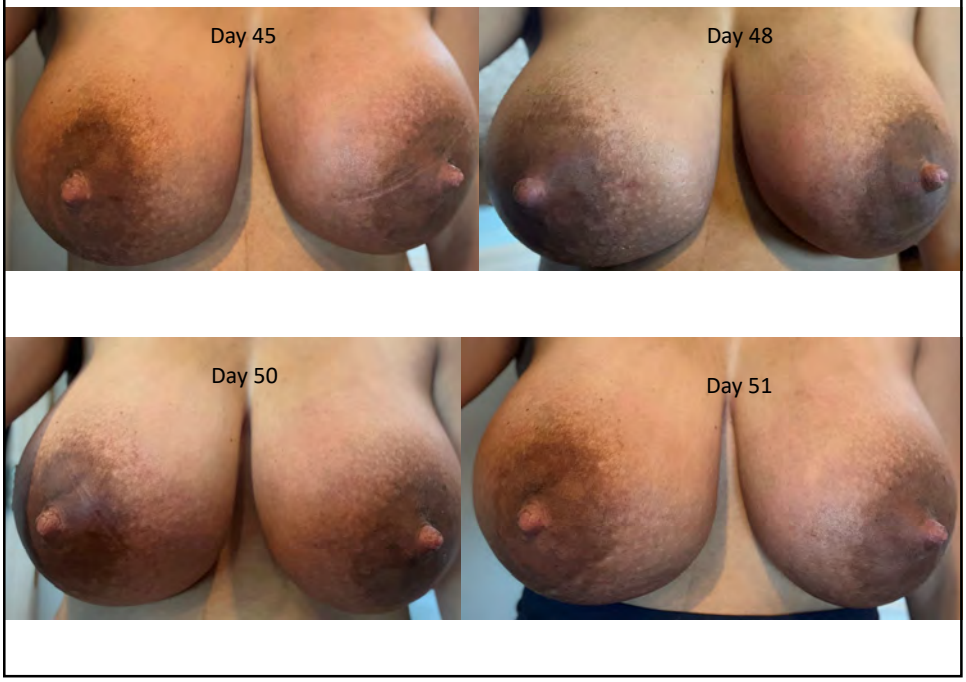

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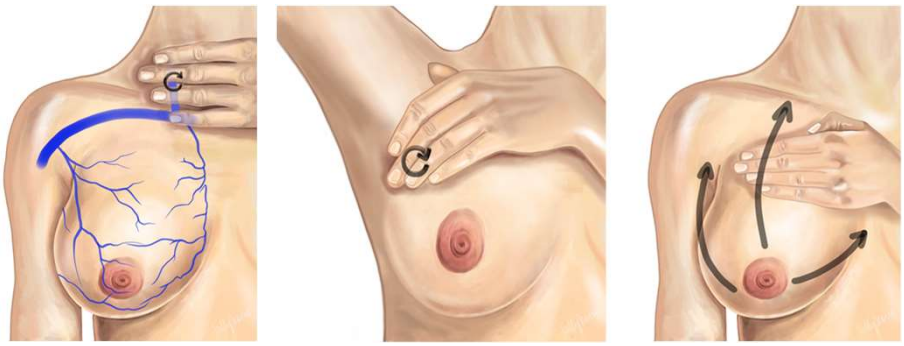
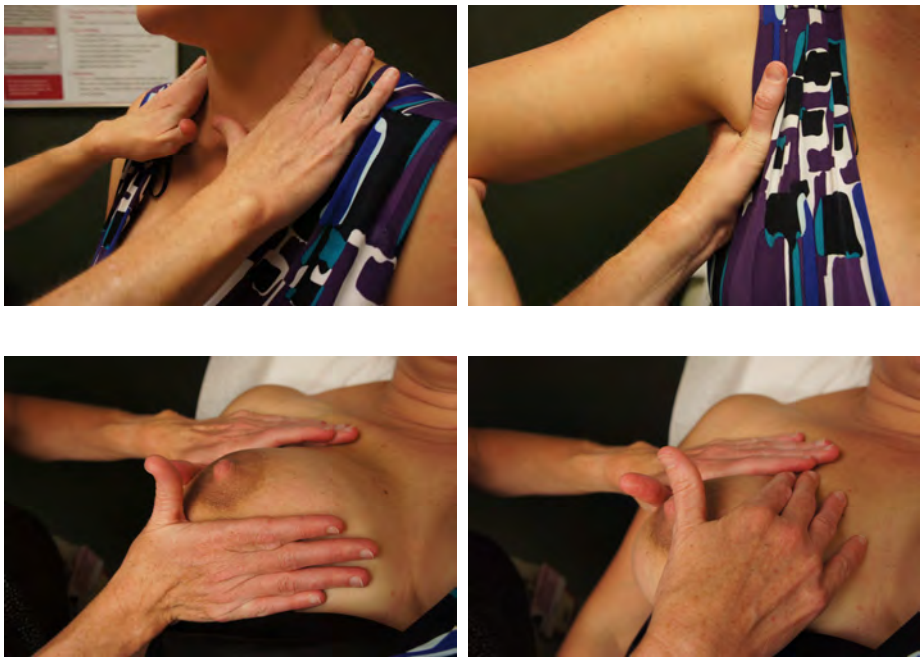
Lymphatic Drainage



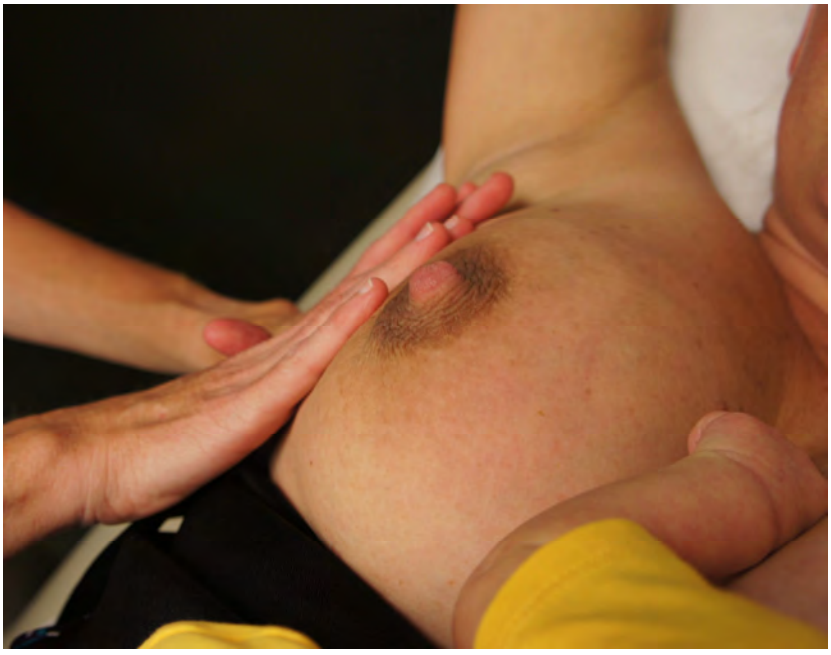
- Reduces swelling by assisting movement of lymph fluid, decreasing edema
- Technique
  - "Very gentle touch/traction of skin - "like petting a cat"
    - The purpose is to lift skin to allow flow of lymphatic drainage and vascular decongestion
  - Ten small circles at junction of internal jugular and subclavian veins
  - Ten small circles in axilla
  - Continue with light touch massage from nipple towards clavicle, axilla
- Start during pregnancy if experiencing painful rapid breast growth, and use as needed postpartum for engorgement

PhysicianGuideToBreastfeeding.org

60



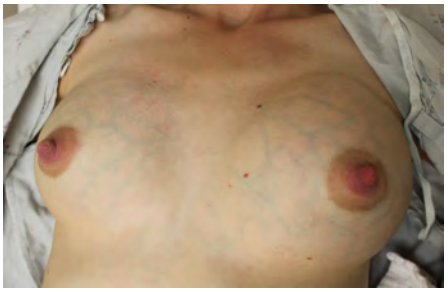
61



62

Narrowed Duct Treatment

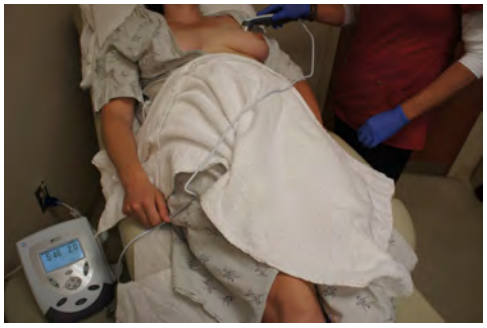
- Breastfeed physiologically
  - Avoid pump
  - Treat hyperlactation
  - **Educate about normal cellular distension**
- ICE ICE ICE
  - Advil/Tylenol PRN
- Do NOT OVERFEED ON AFFECTED BREAST
  - Backs up more cars in the traffic jam



63

Narrowed Duct Treatment

- Therapeutic ultrasound
  - Thermal and nonthermal effects, including acceleration of metabolic rate, reduction of pain, increased circulation
- Method
  - Frequency 1mHz, intensity 2.0 W/cm2
  - 5-6.5 mins for area 2-3x the head of the probe



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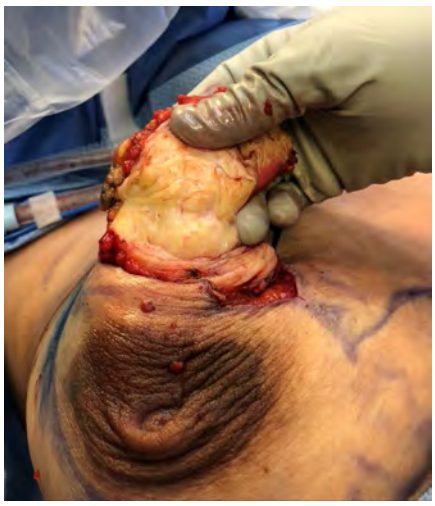
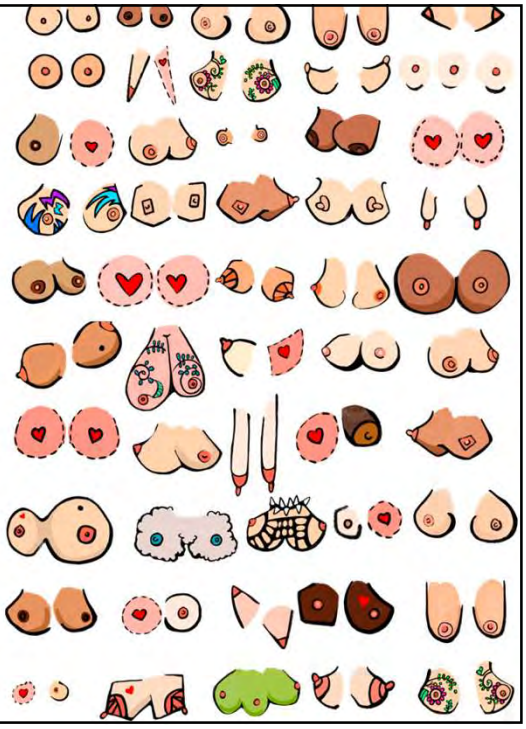
NO MASSAGE



65

"Massage" Versus Hand Expression

- Gentle compressions when nursing, hand expressing, or pumping is safe, but this is milk expression, not someone "massaging out a plug"



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Bleb Treatment

- Oral sunflower lecithin prevention 5 g/daily, 10 g/daily acute
- 0.1% triamcinolone cream topically to bleb
- Image with breast ultrasound if it doesn't resolve
  - Rule out fluid collection or mass

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Mastitis Treatment

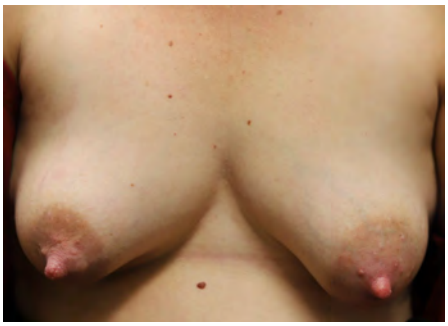
Image: Mothersun and the Captain

- EXAMINE THE PATIENT
  - Very often can wait 24 hours to start antibiotics and resolve conservatively
- Address predisposing factors
  - Hyperlactation, pump use
- Physiologic nursing
  - Do not pump to empty or overfeed on affected breast
- ICE ICE ICE
  - Advil/tylenol
- NO MASSAGE
- Probiotics
  - Still need more data
- Antibiotics if true infection/cellulitis
- Address mental health

68

EDUCATE ABOUT GLANDULAR TISSUE BEING NORMAL!

- Patients with both high AND low milk production levels may report “plugs”
- This is most often normal gland that is starting to become more prominent as their milk production increases
  - ”Islands of gland”
- Lower production patients can also experience disruptions of microbiome/early inflammatory mastitis
- However, the treatment for this is NOT massage and “pumping to prevent milk stasis”



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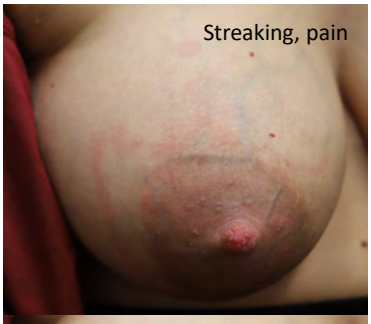
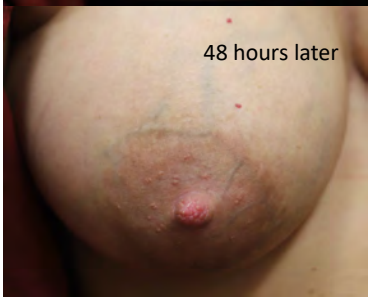
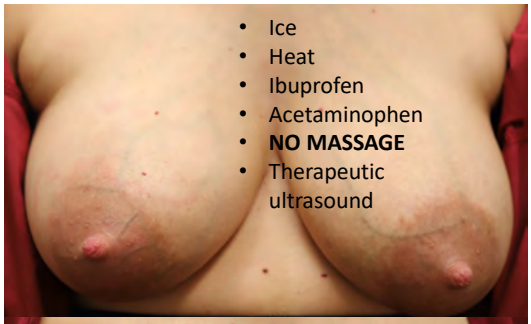
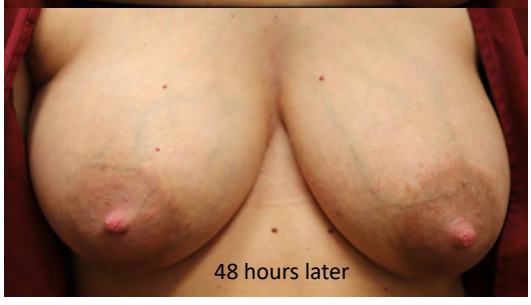
Early Mastitis RX









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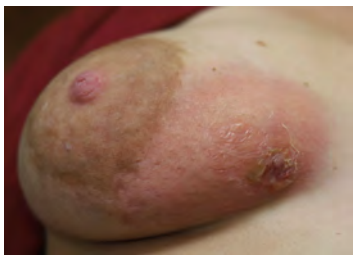
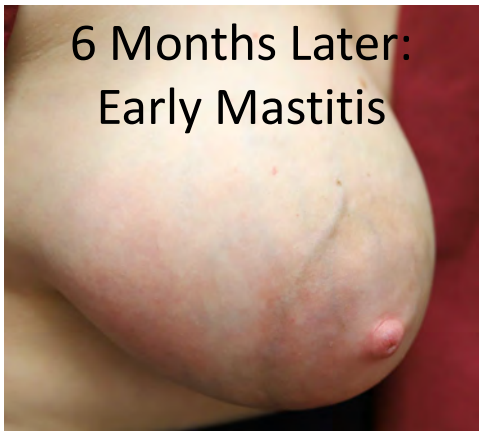
Abscess from massaging device early postpartum



6 Months Later:
Early Mastitis



- Resolved within 24 hours of no massage, ice, ultrasound, advil/tylenol

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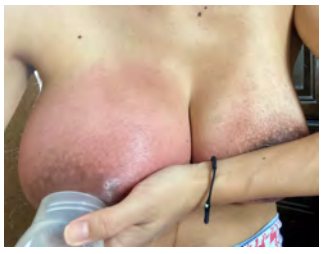
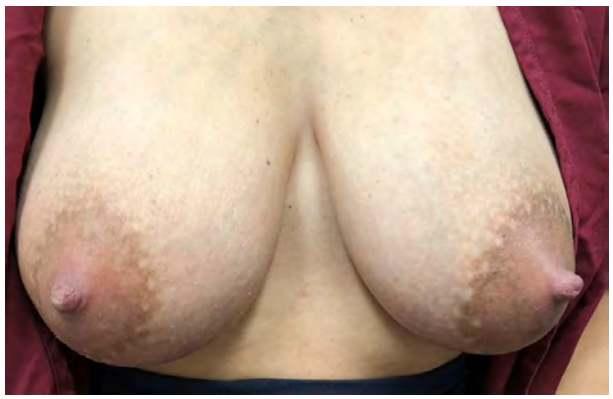
Resolution:
Stopped pumping
Fed left breast to right breast in 4:1 ratio





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Recurrent Mastitis

- **Predisposing factors**
- Breastmilk culture
  - Recognize this is limited and should be interpreted in clinical context
- Empiric change of antibiotics
- Consider imaging

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Recurrent Mastitis

- **EXAMINE THE PATIENT**
  - **Night sweats, "fever" common from hormonal shifts**
  - Racing heart can be present in panic attacks
  - Erythema most often inflammation and not infection

Image: Chloe Trayhurn.

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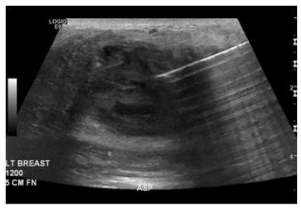
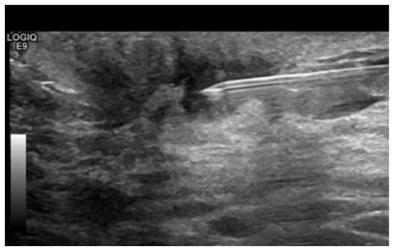
Abscess Treatment

- Drainage, culture, antibiotics
- Aspiration generally taught to surgeons/radiologists
  - However, extremely difficult to obtain definitive drainage due to sticky milk and often recurs





Eryilmaz et al The Breast 2005, Giess et al J Clin Ultrasound 2014 , Christiansen et al Br J Rad 2005

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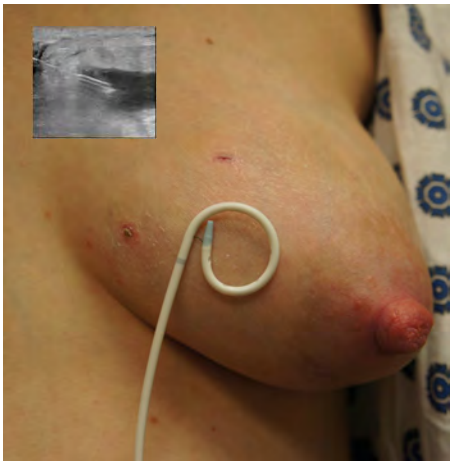
Abscess Treatment

- Interventional radiology (IR) w/ 8F catheter
- 11 blade stab incision/penrose wick placement in clinic



Eryilmaz et al The Breast 2005, Giess et al J Clin Ultrasound 2014 , Christiansen et al Br J Rad 2005

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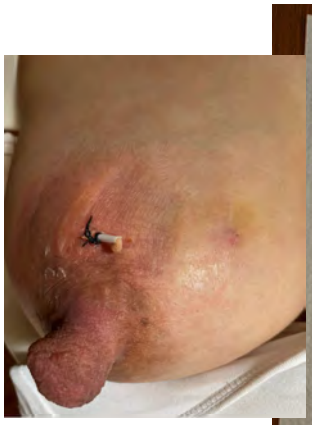
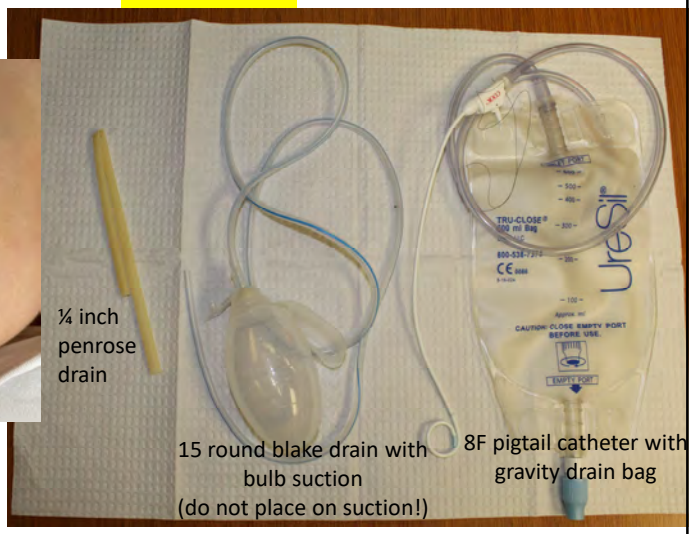
Drain to gravity, NOT suction
(Passive decompression/wicking)
NO VAC!!!



Many adaptations –
14F seroma cath cut



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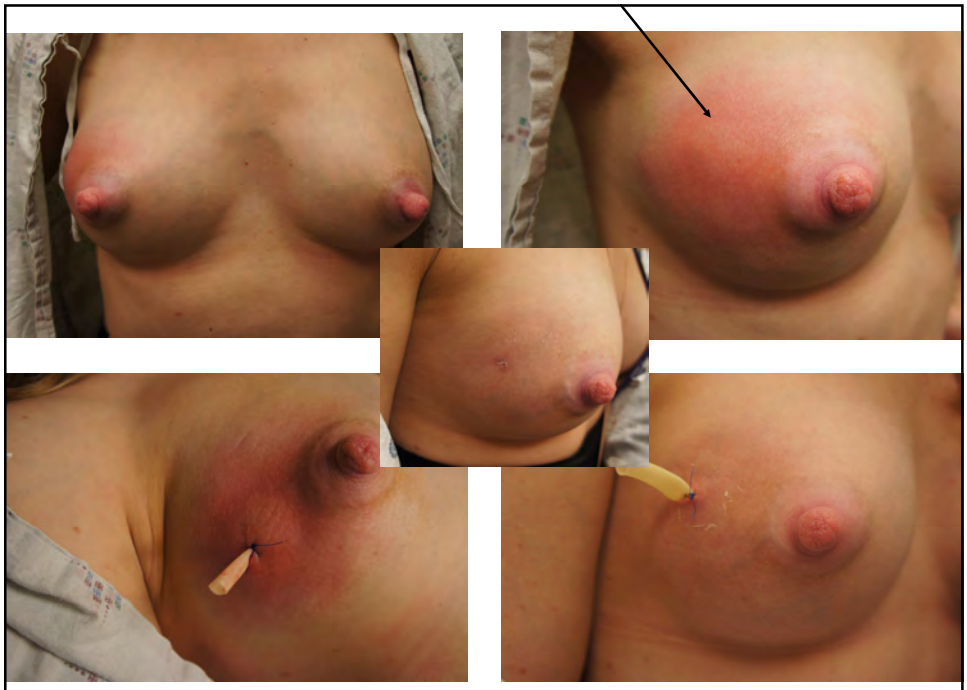

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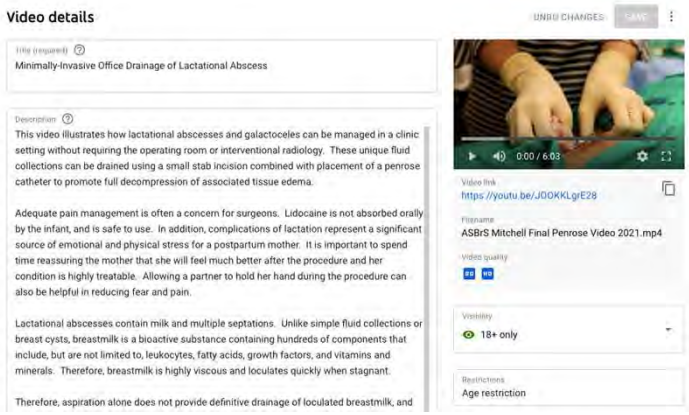
“How I Do It” Video Link

- https://youtu.be/JOOKKLgrE28



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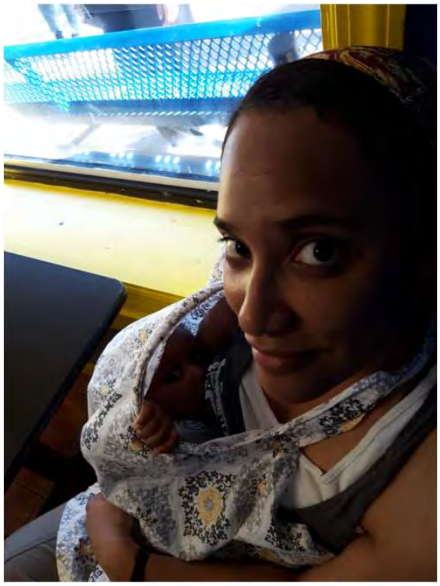
Continue to feed (but not overfeed!) from affected breast



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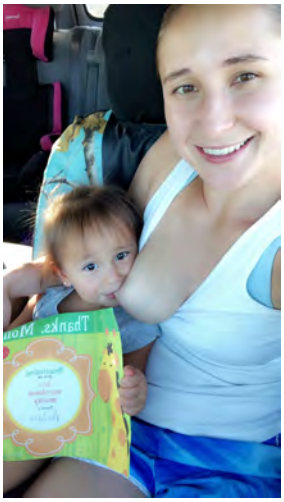
Early Intervention, Support, and Encouragement



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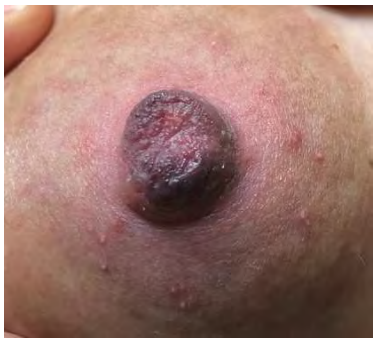
Dump the Pump!

- Excessive pumping causes many complications
- Can stimulate production without removing milk the way a baby would
- Adds stress to mom
- Hand express if possible or baby on breast

83

Pump Dependent Patients

- Pump only volume that baby needs
- If no milk is flowing, you MUST stop. The patient may have low production, but you still have to treat acute inflammation.
- Adding cars to a traffic jam makes it worse (and may result in an abscess). You may want to feed a malnourished person with a bowel obstruction, but you have to relieve the obstruction first.
- Reassure and counsel anxious patients that you can later increase production



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Sack the Pack

- Adds stress to mom and provider
- Lactating breast not meant to granulate
- Potentiates extended wound healing time and open wound

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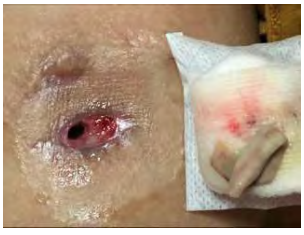
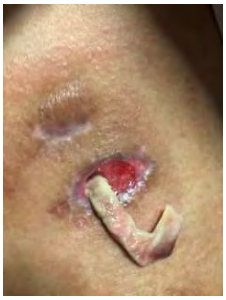
What Happens When You Pack?

- Packing is soaked immediately with milk
- Open wound
- Excessive granulation tissue
- PROLONGED HEALING TIME



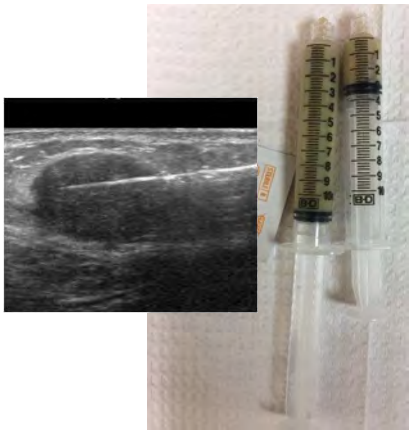


Images: Ellen Nepilly

86

Galactocele Treatment: Present

- Aspiration
- However, stagnant milk is sticky and loculated and difficult to remove via a needle
- If requires repeated aspiration, drain placement with 11 blade stab incision or Interventional Radiology



Ghosh et al Breast J 2004

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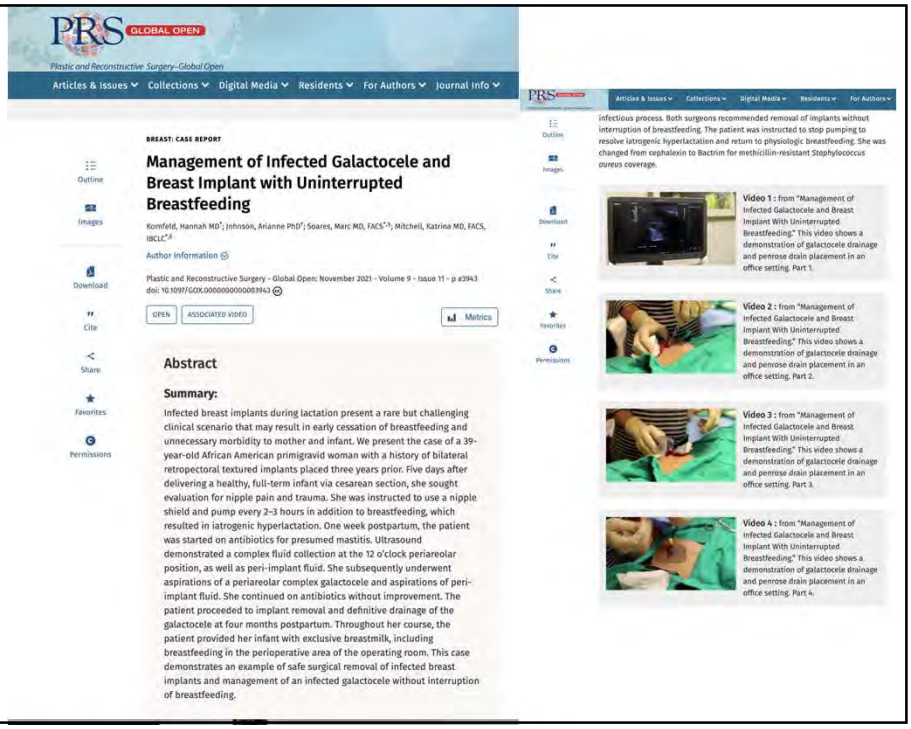

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BREAST: CASE REPORT

Management of Infected Galactocele and Breast Implant with Uninterrupted Breastfeeding

Kornfeld, Hannah MD*; Johnson, Arianne PhD†; Soares, Marc MD, FACS‡,§; Mitchell, Katrina MD, FACS, IBCLC*,¶

Author information

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Abstract

Summary:

Infected breast implants during lactation present a rare but challenging clinical scenario that may result in early cessation of breastfeeding and unnecessary morbidity to mother and infant. We present the case of a 39-year-old African American primigravid woman with a history of bilateral retropectoral textured implants placed three years prior. Five days after delivering a healthy, full-term infant via cesarean section, she sought evaluation for nipple pain and trauma. She was instructed to use a nipple shield and pump every 2–3 hours in addition to breastfeeding, which resulted in iatrogenic hyperlactation. One week postpartum, the patient was started on antibiotics for presumed mastitis. Ultrasound demonstrated a complex fluid collection at the 12 o'clock periareolar position, as well as peri-implant fluid. She subsequently underwent aspirations of a periareolar complex galactocele and aspirations of peri-implant fluid. She continued on antibiotics without improvement. The patient proceeded to implant removal and definitive drainage of the galactocele at four months postpartum. Throughout her course, the patient provided her infant with exclusive breastmilk, including breastfeeding in the perioperative area of the operating room. This case demonstrates an example of safe surgical removal of infected breast implants and management of an infected galactocele without interruption of breastfeeding.

infectious process. Both surgeons recommended removal of implants without interruption of breastfeeding. The patient was instructed to stop pumping to resolve iatrogenic hyperlactation and return to physiologic breastfeeding. She was changed from cephalexin to Bactrim for methicillin-resistant Staphylococcus aureus coverage.

Video 1 : from "Management of Infected Galactocele and Breast Implant With Uninterrupted Breastfeeding." This video shows a demonstration of galactocele drainage and penrose drain placement in an office setting. Part 1.

Video 2 : from "Management of Infected Galactocele and Breast Implant With Uninterrupted Breastfeeding." This video shows a demonstration of galactocele drainage and penrose drain placement in an office setting. Part 2.

Video 3 : from "Management of Infected Galactocele and Breast Implant With Uninterrupted Breastfeeding." This video shows a demonstration of galactocele drainage and penrose drain placement in an office setting. Part 3.

Video 4 : from "Management of Infected Galactocele and Breast Implant With Uninterrupted Breastfeeding." This video shows a demonstration of galactocele drainage and penrose drain placement in an office setting. Part 4.

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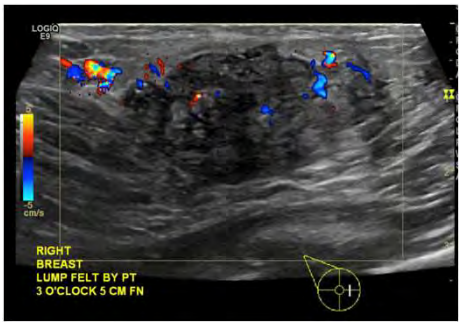
Phlegmon Treatment

- +/- Antibiotics
- +/- drainage catheter
- Q3 month interval exam to ensure resolution
- Biopsy if suspicious features



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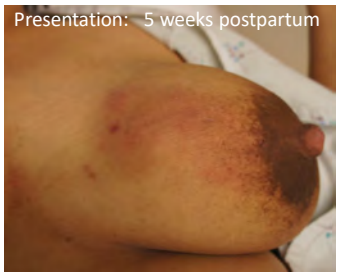
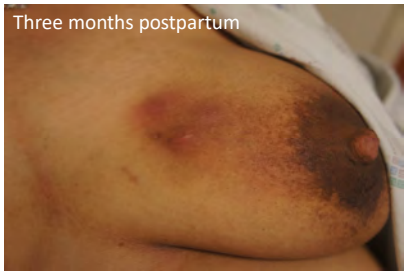
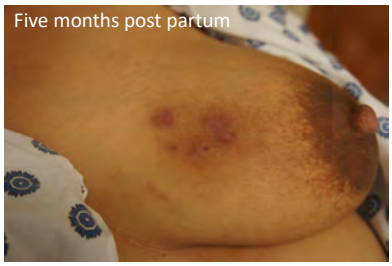
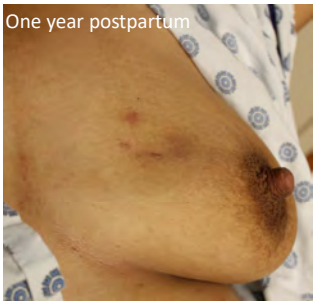
Lactational phlegmon









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Attention to Mental Health

- Complications are painful and traumatic
- Patients often have been to multiple providers and given inaccurate information or incorrect advice
- Often feel frustrated, ignored, not heard
- Can result in hypervigilance/anxiety and even OCD about the experience

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LACTATIONAL MASTITIS ALGORITHM

Mastitis

If concerned for abscess, order diagnostic ultrasound.
In obvious abscess, clinical diagnosis may be made ->
Erythema, induration, skin attenuation, failure to improve w/ antibiotics

Ultrasound Without Abscess

- Many cases resolve with ice, ibuprofen, no massage, and not overfeeding; reassess in 24 hours and start antibiotics if not resolved
- Dicloxacillin 500mg QID
- If history of MRSA: Clindamycin 300mg QID or TMP/Sulfa DS BID
- Note: Keflex has poor penetration in lactating breast tissue
- OTC probiotics may also help

Questions?
PhysicianGuideToBreastfeeding.org

Abscess

- 11 blade stab incision with penrose drain placement, as aspiration may require repeat procedures for loculated collection and sticky milk
- If >5cm consider IR consult for pigtail placement if undrained by above method
- Oral antibiotics as above; no IV antibiotics or hospital admission unless severe sepsis
- Bacterial culture, narrow antibiotics based on results

Phlegmon

- Oral antibiotics as above; may need prolonged treatment until clinical resolution
- Repeat ultrasound in one week if no clinical improvement
- Drainage if abscess develops
- Follow up with breast surgery, ultrasound 1-2 months after clinical resolution to r/o underlying mass

Additional Information

- Ice, Ibuprofen alternating with acetaminophen q2 hours for tissue inflammation
- NO MASSAGE: worsens tissue edema and injury
- Breastfeed from affected side, but do not overfeed
- Antibiotics are safe; no need to pump and dump
- Physiologic nursing: avoid pumping
- Treat hyperlactation: no "pumping to empty," no milk production in excess of baby's intake
- No nipple shields: non-physiologic milk removal

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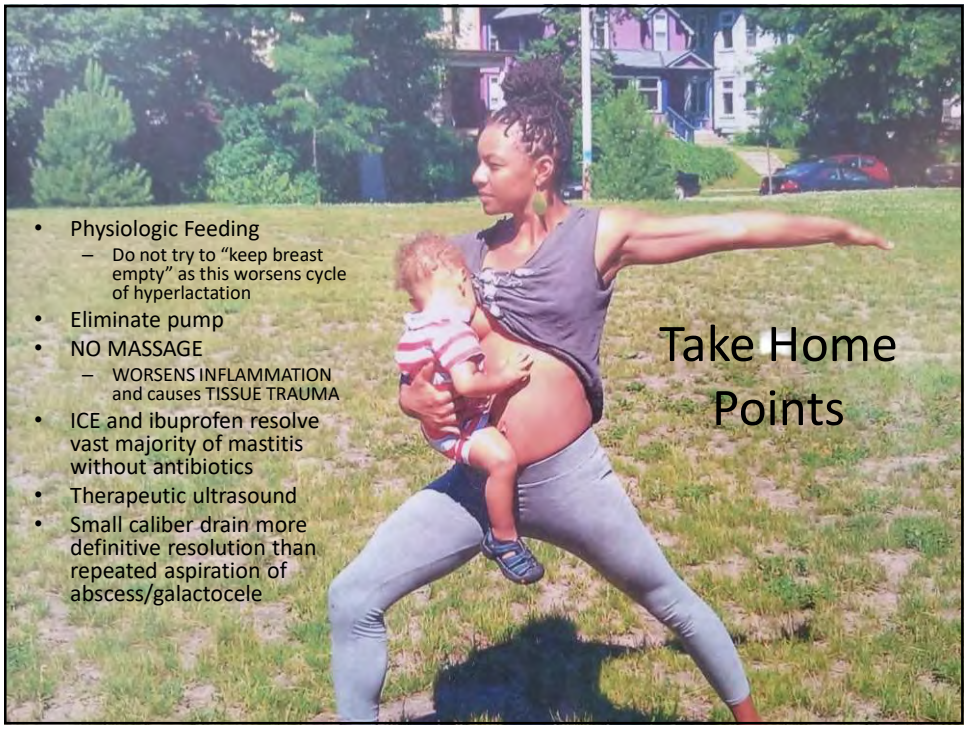
Take Home Points
• Physiologic Feeding
– Do not try to "keep breast empty" as this worsens cycle of hyperlactation
• Eliminate pump
• NO MASSAGE
– WORSENS INFLAMMATION and causes TISSUE TRAUMA
• ICE and ibuprofen resolve vast majority of mastitis without antibiotics
• Therapeutic ultrasound
• Small caliber drain more definitive resolution than repeated aspiration of abscess/galactocele

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Thank You!
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PHYSICIAN GUIDE
to breastfeeding
LACTATION
MENTAL HEALTH
RESOURCES
MY SERVICES
ABOUT
CONTACT
Search...
Evidence-based breastfeeding guidance
for families and the communities that support them
KatrinaMitchell.Org
@physicianguidetobreastfeeding
Infant Concerns
Maternal Health and Illness
Mastitis and Everything Related
Nipples
General Breast
Postpartum Health
Other Concerns
Feeding By Age and Stage
Pregnancy and Lactation
Surgery and Breastfeeding
Breast Cancer and Breastfeeding

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