

RADY 413 Case Presentation

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37-year-old female presenting
with worsening right breast
redness, pain, and swelling

Patient history and physical exam

Ms. NG is a 37-year-old female presenting with a two-week history of worsening redness, pain, and swelling over a small area of her right breast. She has felt feverish over the past few days but has not taken her temperature. She is not currently breastfeeding. She has no history of prior breast abscesses.

Physical examination demonstrated a raised fluctuant area with skin erythema and edema. The patient was exquisitely tender to palpation.

Imaging studies obtained

- * Targeted ultrasound of the right breast

Right breast targeted ultrasound



Targeted ultrasound demonstrated a complicated fluid collection measuring 5.3 x 2.3 x 4.7 cm at 3:00 site with surrounding skin thickening and edema. Ultrasound-guided aspiration was recommended.

BIRADS 2: Benign.

BREAST 3 O'CLOCK 5 CM FN LONG



Ultrasound-guided aspiration (pre)

GE
L7



With ultrasound guidance, aseptic technique, and 0.5% Marcaine as the local anesthetic, the lesion of concern was aspirated to completion. Approximately 35 milliliters of purulent fluid was obtained and 10 mL sent for microbiology. Overlying skin thickening remained.

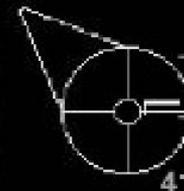


Ultrasound-guided aspiration (post)

GE
L7



With ultrasound guidance, aseptic technique, and 0.5% Marcaine as the local anesthetic, the lesion of concern was aspirated to completion. Approximately 35 milliliters of purulent fluid was obtained and 10 mL sent for microbiology. Overlying skin thickening remained.



Patient outcome

- * Along with ultrasound-guided abscess aspiration, patient was started on a ten-day course of sulfamethoxazole-trimethoprim
- * Clinical follow-up was recommended to monitor for symptomatic improvement

Discussion: Abscess

- * Most commonly develops due to progression of mastitis
- * **Puerperal abscesses** are most often caused by *Staphylococcus aureus* or streptococcal species
 - * Bacteria enter via a small skin laceration and proliferate in stagnant lactiferous ducts
 - * Most frequent in primiparous mothers
 - * Patients should be encouraged to continue breastfeeding throughout treatment to disengage the ducts as long as the antibiotic prescribed is not contraindicated for the newborn

Discussion: Abscess (cont)

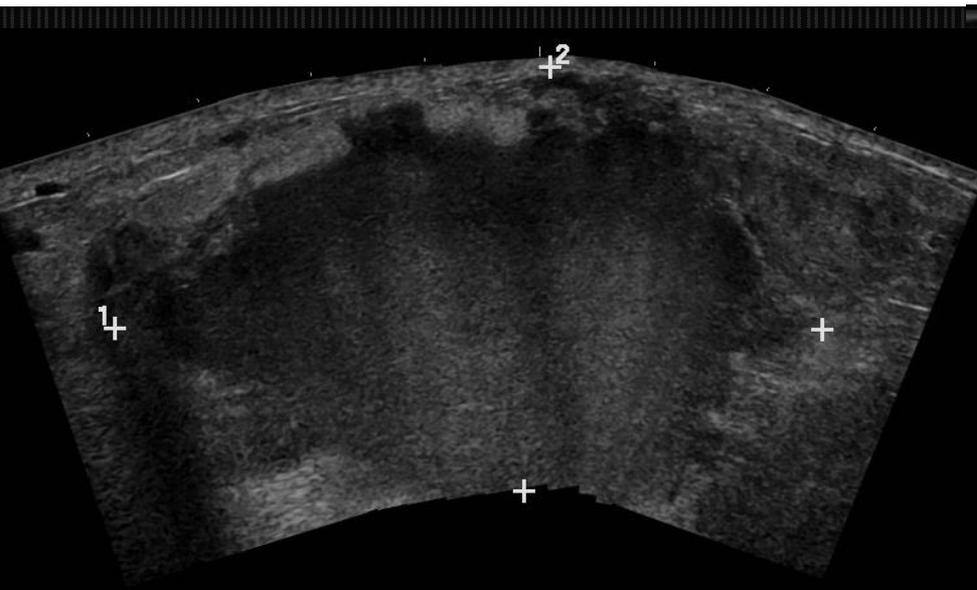
- * Risk factors for **Nonpuerperal abscesses** include smoking (leads to squamous metaplasia of the cuboidal epithelium of the lactiferous ducts and subsequent formation of keratin plugs and secondary infection)
 - * Obesity and underlying chronic medical conditions such as diabetes and rheumatoid arthritis are other risk factors
- * Microbiologic analysis often shows mixed flora: *Staphylococcus*, *Streptococcus*, as well as anaerobes
- * It can be difficult for clinicians to differentiate an abscess from mastitis
 - * Clinical suspicion for an abscess (palpable mass, localized area of tenderness) should prompt referral for ultrasound evaluation

Discussion: Abscess (cont)

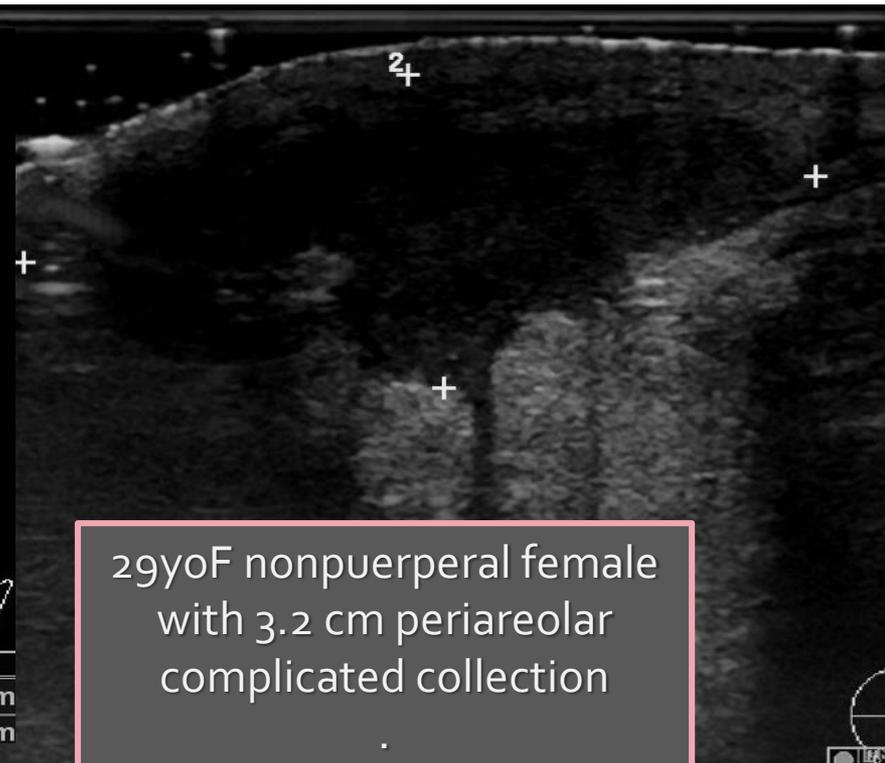
- * On ultrasound, appears as a hypoechoic fluid collection that is often multiloculated
 - * May have a thick echogenic periphery with increased vascular flow, but there should be no vascularity within the fluid collection
- * Mammography may be considered to exclude malignancy, but when possible, it ought to be delayed until after the acute episode has resolved in order to:
 - * Prioritize patient comfort
 - * Avoid potentially masking an underlying lesion due to increased radiopacity associated with the inflamed breast and lower tolerable level of breast compression

Companion cases: Imaging

BIRADS 2: Benign



1	L	6.12 cm
2	L	3.90 cm



29yoF nonpuerperal female with 3.2 cm periareolar complicated collection

36yoF lactating female with 5 cm complicated collection right breast 12:00, consistent with breast abscess

References

Ikeda, Debra M., and Kanae K. Mikaye. *Breast Imaging: The Requisites*. Mosby, 2016.

Trop, Isabelle, et al. "Breast Abscesses: Evidence-Based Algorithms for Diagnosis, Management, and Follow-Up." *RadioGraphics*, vol. 31, no. 6, 2011, pp. 1683–1699., doi:10.1148/rg.316115521.