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CASE REPORT
Breast

Management of Infected Galactocele and Breast Implant with Uninterrupted Breastfeeding

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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.
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Breast augmentation rates continue to rise in the United States, with more than 290,000 procedures performed in 2019, a 37% increase from 2000.[1] Breast implant infection is rare (1.9%–6%) and explantation is required in about 3% of cases.[2,3] Few studies exist on cosmetic implant infection during lactation. One report describes a woman with PAAG implants who suffered repeated infections during lactation, ultimately requiring surgical drainage.[4] She was instructed to stop breastfeeding.[4] No studies review the association between hyperlactation, incompletely drained galactocele, and subsequent implant infection. Further, no reports document maintenance of lactation during resolution of these complications. We describe a breastfeeding patient who underwent removal of an infected implant, and drainage of her galactocele without interruption of breastfeeding.

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Case Presentation

A 39-year-old African American woman G1P0 with a history of bilateral retropectoral Sientra brand textured implants, placed via a dual-plane technique three years prior, gave birth to a healthy infant. Five days postpartum, she experienced increased pain and nipple trauma. A lactation consultant instructed her to use a nipple shield and begin using an electric breast pump every 3 hours. Shortly after, she developed radiating pain and engorgement in the right breast, and her obstetrician prescribed 250 mg dicloxacillin four times daily (QID). Postpartum day 5 through 47, she experienced persistent symptoms and underwent two aspirations and four courses of antibiotics (Fig. 1). The second aspiration grew scant *Staphylococcus aureus* resistant to clindamycin. Postpartum day 47, the patient's plastic surgeon recommended removal of the right breast implant and cessation of breastfeeding. She deferred this recommendation, as she did not want to

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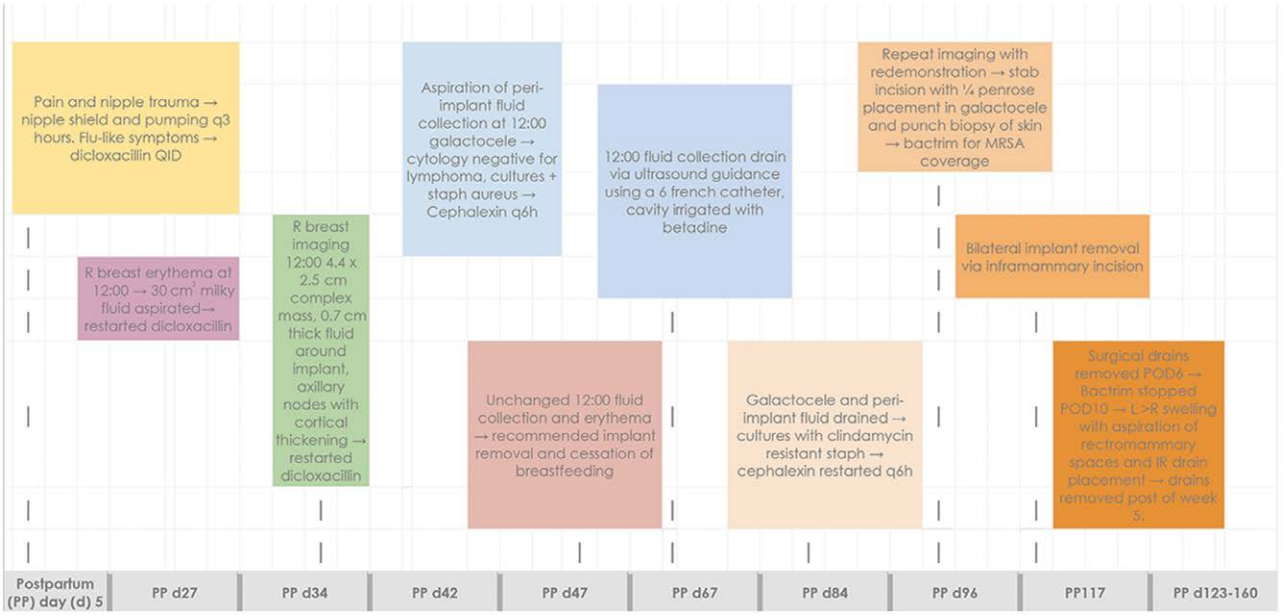

Fig. 1. Timeline of the patient's clinical course.

wean. On postpartum days 67 through 84, the patient again underwent two drainage procedures and continued antibiotic treatment (Fig. 1).

Postpartum day 96, the patient presented to a new breast and plastic surgeon. Bilateral mammogram and ultrasound showed the known 12:00 right galactocele and peri-implant fluid. The patient underwent stab incision and evacuation of galactocele fluid with a one fourth penrose drain placement in the breast surgeon's office. (**See Videos 1–4 [online]**, which show a demonstration of galactocele drainage and penrose drain placement in an office setting. Videos 1–4 demonstrate parts 1–4 of the process.) A 5-mm punch biopsy of the indurated skin showed morphea, fibrosis, and collagen deposition consistent with chronic 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.

On postpartum day 117, the patient underwent removal of her breast implants and capsulectomies via inframammary incisions. The anterior lactating breast was not violated and one 15 blake drain on each side was placed posterior to the breast fascia and pectoralis. The patient breastfed her infant in the preoperative and postoperative recovery rooms.

Her drains were removed on postoperative day six. She continued on Bactrim for ten days postoperatively. Postoperative day 13, she experienced worsened swelling of her left breast and underwent an ultrasound that showed fluid collections in bilateral retromammary spaces. Aspiration returned 1000 ml milky fluid from the left and 500 ml serous fluid from the right. Cultures were negative.

During postoperative week four, fluid reaccumulated and she underwent aspiration and drain placement bilaterally by interventional radiology. These drains were removed approximately 5 weeks later after they were draining minimal fluid. The patient continued to breastfeed more than one and a half years postpartum.

DISCUSSION

We present a case of iatrogenic hyperlactation, a persistent galactocele, and an infected textured silicone implant during the postpartum period. The patient underwent surgical removal of the infected implant and definitive drainage of the galactocele without interruption of breastfeeding.

Frequent pumping worsens engorgement and leads to iatrogenic hyperlactation (overproduction of breastmilk). Instead, patients should be instructed to use ice, anti-inflammatory medication by mouth, and feed the baby physiologically. If persistent idiopathic hyperlactation persists despite conservative measures, the patient should seek evaluation for treatment of hyperlactation, which includes block feeding and pseudoephedrine.[5–7]

Galactoceles are milk retention cysts that can regress spontaneously if small in size.[8] However, once palpable, they often continue to grow. Unlike simple cysts, galactoceles contain breastmilk and become loculated.[8] Stagnant breastmilk is difficult to aspirate, and cavities often refill with breastmilk. Aspiration also does not allow surrounding tissue edema to decompress, which is necessary to prevent re-accumulation. Our patient's course demonstrates the limitations of needle aspiration. We advocate that patients with galactoceles undergo stab incision and drain placement by surgeons, or drain placement by interventional radiology for definitive resolution of the galactocele.[9–11] Physicians may wish to utilize betadine for flushing an infected fluid cavity; however, this should not

used in lactating breasts because the levels that concentrate in breastmilk are unsafe for the infant.[12]

This patient developed her implant infection and abscess cavity surrounding the implant as a result of repeated instrumentation and incomplete drainage of her infected galactocele. This ultimately seeded the implant with bacteria. Although gentamicin and cefipime are often the empiric antibiotic of choice in infected implants, her infection was suppressed with Bactrim possibly due to improved methicillin-resistant *Staphylococcus aureus*.[3] Piperacillin-tazobactam and daptomycin are alternative antibiotics that are safe and effective during lactation.[13,14]

Explantation is the definitive treatment for implant exposure, purulent drainage of fluid, and infections resistant to antibiotics.[15] Given the degree of infection associated with a textured implant, a capsulectomy was performed for source control. However, if overly challenging, or if a nontextured implant, the capsulectomy can be deferred. In a lactating patient, an inframammary fold incision for explantation is preferred to avoid disruption of hypervascular parenchyma and provides adequate exposure for capsulectomy. This patient's need for additional drainage following explant and capsulectomy was a potential risk given the history of hyperlactation. This risk can be mitigated by treating hyperlactation aggressively and by avoiding nonphysiologic breastfeeding.

CONCLUSIONS

This case demonstrates management of iatrogenic hyperlactation, infected galactocele, and infected textured implant while maintaining uninterrupted lactation. Due to the viscosity of stagnant milk, aspiration of galactocele rarely provides definitive drainage and is rarely effective. Optimal source control includes a 2-mm stab incision, removal of loculated milk using a small instrument, and placement of a decompressive wick or French drain. Implant explantation and other procedural interventions can be performed safely during breastfeeding.

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