

Infected Galactorrhea after Augmentation Mastopexy: A Clinical Case

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Summary: We report the case of a 35-year-old female patient who presented with stabbing pain on inspiration and expiration, fever, and dyspnea. The patient had undergone breast augmentation with mastopexy and upper quadrant liposuction 5 days earlier. Seven days after hospitalization, a fistula ruptured in the left breast at the suture, and copious outflow of thick whitish fluid was observed. The breast implants were then removed. During surgery, a small amount of fluid was found, and bacterial culture revealed a *Cutibacterium acnes* infection, for which antibiotics were prescribed. Fifteen days after implant removal, the patient complained of uncomfortable tingling sensations, similar to breastfeeding. A dressing was applied, which resulted in the copious discharge of whitish, viscous fluid through the wound and nipple. The prolactin level was four times higher than the normal range. The patient was diagnosed with hyperprolactinemia and prescribed bromocriptine treatment, which restored her prolactin levels to normal within 4 days. After 4 weeks of hospitalization, the patient was discharged in good condition. This is the first case in the world to show that, in addition to infection, galactorrhea can be an extremely rare complication, which in our case was detected at a late stage at a similar clinic. (*Plast Reconstr Surg Glob Open* 2023; 11:e5286; doi: [10.1097/GOX.0000000000005286](https://doi.org/10.1097/GOX.0000000000005286); Published online 21 September 2023.)

Goulian and Conway proposed reconstructive mastopexy with breast implants for moderate breast ptosis.¹ Galactorrhea, as a complication, was first observed in 1990; however, it is very rare after augmentation mastopexy and has been described in only four clinical cases worldwide.²

Breast implant infection occurs in approximately 0.93% of cases and is mainly caused by bacteria from the human skin microbiota.³ The anaerobe *Cutibacterium acnes* (formerly *Propionibacterium acnes*) accounts for 5% of all implant-related infections, a common site of origin being the patient's skin or colonized milk ducts at the incision site.^{4,5}

We describe a patient who, after augmentation mastopexy, had an implant removed because of a suspected infection, in which *C. acnes* was detected. Subsequently, the patient was discovered to have accompanied undiagnosed galactorrhea.

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CASE

A 35-year-old woman visited our emergency department presenting with stabbing pain on inspiration and expiration, fever (<38.5°C), and dyspnea. An examination revealed tenderness on the lateral sides of both breasts, with no redness (Fig. 1). Blood tests revealed neutrophilia, leukocytosis, and elevated C-reactive protein levels. The mammogram was normal. Chest computed tomography (CT) revealed fluid bands around the implants, fluid-air surfaces in the medial margins, subcutaneous emphysema of the chest wall, stasis lesions in the lungs, and a small amount of fluid in the pleural cavity (Fig. 2). CT angiography revealed no thrombi in the pulmonary arteries. Intravenous amoxicillin/clavulanic acid 4000 mg daily was prescribed.

The patient had undergone breast augmentation (Mentor 350 cm³) with mastopexy and upper quadrant liposuction 5 days earlier (Fig. 3). She reported three pregnancies (the last pregnancy being 7 years ago), had no history of breast or gynecological disorders, and did not take any medication. The next day, the patient presented with fever and vesicular wheezing, with slight attenuation in the lower quadrants; cefuroxime 1000 mg daily was initiated.

Seven days after hospitalization, a fistula ruptured in the left breast at the inframammary suture, with a copious outflow of thick whitish fluid. The breast implants were removed. During surgery, a small amount of fluid

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Fig. 1. Frontal view of breasts 5 days after augmentation mastopexy. Tenderness on the lateral sides of both breasts, with no redness.

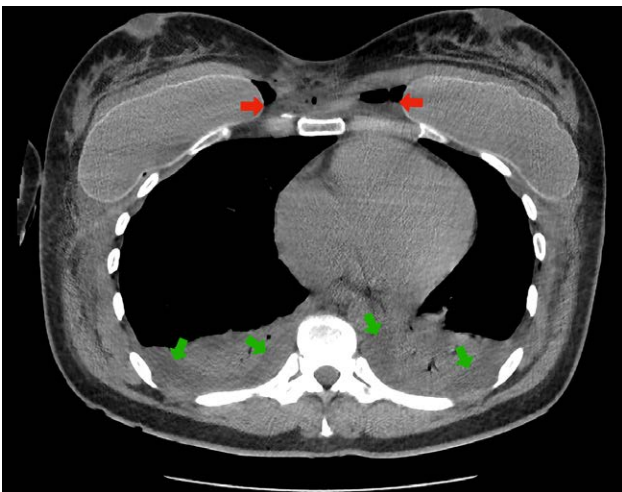


Fig. 2. CT scan of the breasts (axial view, soft tissue window). Fluid bands around the implants, fluid-air surfaces in the medial margins (red arrows), and a small amount of fluid in the pleural cavity (green arrows).

was found inside, and specimens were collected from the breast fossae. Culture revealed a *C. acnes* infection (sensitive to penicillin and clindamycin), and intravenous antibiotics (oxacillin 4g and gentamicin 240mg daily) were prescribed.

Ten days after implant removal, a revision was performed because of swelling, tenderness, tingling pain, visible reddening of the lower breast poles, infiltration of the left breast in the operative incision, and the presence of narrow fluid streaks (<0.5cm) at the fistulae, as observed on breast ultrasonography. During revision, the wound was opened, and no fluid accumulation or pus was observed internally; specimens were obtained. Penrose drains were aseptically introduced, followed by suturing



Fig. 3. Frontal view of breasts before augmentation mastopexy.

of the subcutaneous tissue and skin. No bacterial growth was observed.

Fifteen days after implant removal, the patient complained of an unpleasant tingling sensation in her breasts, akin to breastfeeding. A dressing was applied, which resulted in the copious discharge of whitish, viscous fluid through the wound in the breast and pressure on the nipples of both breasts. Prolactin levels were four times higher than normal (106.19 ng/mL; normal <25 ng/mL).

Hyperprolactinemia was diagnosed by an obstetrician-gynecologist and endocrinologist. Magnetic resonance imaging of the head excluded a pituitary adenoma. Bromocriptine (2.5mg) was prescribed twice daily for 2 weeks. Prolactin levels returned to normal (1.34ng/mL) within 4 days and remained stable. One year after the removal of the breast implants, the patient felt well, with only occasional tingling of the inframammary sutures (Fig. 4).



Fig. 4. Frontal view of breasts 1 year after implant removal. The swelling, tenderness, and whitish, viscous discharge in the left breast resolved without recurrence.

DISCUSSION

Galactorrhea is a rare complication caused by stimulation of the thoracic nerve endings, which mimics the suckling reflex. This impulse is transmitted via the thoracic nerves to the hypothalamic arcuate nucleus and inhibits dopamine release; the adenohypophysis releases prolactin, which stimulates milk production and secretion.^{2,6-9} Galactorrhea is treated with bromocriptine, a dopamine antagonist that blocks prolactin release.¹⁰ The main stimulating factors in our case were several surgical procedures, involving incision of the lobules and ducts of the mammary gland and cannula liposuction; direct irritation of the nerves; and temporary pressure on the implant and breast material (pus and milk).⁷

Galactorrhea usually resembles a postoperative infection. Infection is accompanied by an increased body temperature, increased levels of inflammatory markers, and positive bacteriological test results.¹⁰ In our case, the infection could have entered as a contaminant during augmentation mastopexy. Prolactin levels are elevated in galactorrhea; thus, surgeons should determine prolactin levels in patients with postoperative signs of infection, no fever, and normal C-reactive protein levels. Ultrasonography should be performed to assess milk accumulation around the implants. Implant removal is an appropriate treatment if milk accumulates around the implant and there are signs of infection. Alternatively, in the absence of any indications of infection, the implants may remain in situ.¹⁰ It is important to assess the presence of prolactinomas. Bromocriptine should be prescribed for at least 7 days to treat galactorrhea, and antibiotics should be prescribed to target the infection.^{7,10} In our case, we believe that infection was superimposed with galactorrhea; however, because of the rarity and similarity of these conditions, galactorrhea was not diagnosed at the time of implant removal but became apparent only after the infection was cured, and the discharge of pure milk was visible through the inframammary sutures and nipple.

In the four cases of galactorrhea reported after augmentation mastopexy, the average age was 38 years, and the onset of galactorrhea was at 16 days postoperatively. One patient was treated with bromocriptine, one with aspiration, and one with cabergoline, and one achieved resolution without intervention. Two patients had elevated prolactin levels. In neither case was liposuction performed, and no pathogens grew from the culture samples in any of the cases.^{2,8,9} In the present case, galactorrhea started after 12 days, and bromocriptine was prescribed. Once the infection and galactorrhea have been effectively treated, it may be deemed safe to consider implant replacement at a later date. However, it is noteworthy that no existing literature provides a precise timeframe to minimize potential risks.

CONCLUSIONS

This case demonstrates that infection after augmentation mastopexy and liposuction can be accompanied by rare complications, such as galactorrhea, with similar clinical conditions. Even the slightest signs of infection require thorough examination. In our case, whitish discharge and fluid around the implants were early signs of galactorrhea; therefore, early detection of elevated prolactin levels could have confirmed coexisting complications.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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