

Galactorrhea in Breast Augmentation

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INTRODUCTION

Augmentation mammoplasty is one of the most used procedures in breast surgery and its complications have been very well studied. However, periprosthetic galactocele after prosthetic breast augmentation surgery is a very little-known complication.

Galactorrhea is a rare complication after breast plastic surgery. Its cause is still unknown, although it is most likely that its appearance has a multifactorial origin. Our casuistry consists of 40 cases whose ages range from 18 to 40 years, occurring in nulliparous and multiparous women.

Postsurgical galactorrhea often follows a benign and self-limited course, culminating in spontaneous resolution. Depending on the severity of the symptoms, its treatment can be medical and / or surgical, with drainage or even removal of breast implants.

It is a disorder characterized by the emission of milk outside the period of pregnancy and the puerperium. It is a late and rare complication when associated with breast surgery. It is believed that the blockage of the milk ducts may be one of the causes of the formation of galactoceles during pregnancy in previously operated patients (1).



3 Weeks After Surgery

However, it can present acutely in the immediate postoperative period of cosmetic breast surgery, being more frequently associated with breast reduction (3-12), where the drainage of milk through the wound can interfere with the healing process.

Regarding breast augmentation, its association with galactorrhea is not well documented in the literature and few articles are devoted to this topic. However, many surgeons report how some of their patients have experienced episodes of self-limited galactorrhea during surgery and after breast augmentation surgery with implants, which resolved spontaneously after several weeks without the need for treatment (2).



Transoperative Pictures, Before Implant Placement the Patient Present Milk

Among the common factors associated with patients suffering from this disorder, the most frequent is having had children, and no association was found for any other factor.

Different etiologies have been described to explain galactorrhea (13,14):

By default, in hypothalamic inhibition of PRL secretion or by increasing it in serum by decreasing its elimination from the circulation influenced by dopamine or dopamine agonists:

Drugs:

Neuroleptics (butyrophenones, phenothiazines, risperidone, olanzapine, sulpiride), antidepressants, antihypertensives (methyldopa, reserpine), opiates (codeine, morphine, methadone), antiemetics (metoclopramide, domperidone, lansopramide), cimetidine, domperidone, lansopramide.

Due to Hypothalamic Involvement:

Tumors (craniopharyngioma, pinealoma, meningioma, metastasis). Histiocytosis X, sarcoidosis, lupus. Irradiation, meningitis, encephalitis, hydrocephalus, vascular lesions.

Due to Involvement of the Pituitary Stalk:

Section of the stalk (traumatic, surgical). Tumor compression.

Increased PRL-Releasing Factors:

Primary hypothyroidism. Some herbs such as anise, fennel, nettle, holy thistle, or fenugreek seeds. Addison's disease, adrenal involvement, or Cushing's disease.

PRL-Producing Tumors:

Prolactinomas (PRL-producing pituitary tumors and sometimes also GH). The most frequent cause (25% of cases). Chromophobic adenomas. Ectopic production of PRL or HPL. Bronchogenic carcinoma. Hypernephroma. Hydatidiform mole, choriocarcinoma, ovarian teratoma.

Local Causes:

Repeated mechanical stimulation. Thoracic trauma such as major surgery, thoracotomy, breast surgery. Local infections (mastitis, herpes zoster).

Others:

Chronic renal failure (50% have elevated PRL, although galactorrhea is rare), empty Sella turcica, liver cirrhosis, polycystic ovary, feminizing adrenal carcinoma, hyperthyroidism, spinal cord injury.

Idiopathic:

It is a diagnosis of exclusion and can account for up to 50% of cases.

The mechanical stimulation of the breast, mastitis, trauma and thoracic surgery, as well as herpes zoster of the chest, trigger a reflex nervous irritative mechanism that ascends through the thoracic nerves, affecting the release of the factors that regulate PRL and can produce galactorrhea.

This may be the most founded etiology in the case of galactorrhea associated with breast surgery; However, we must indicate that in most of the patients in whom this complication develops, no change in prolactin values was detected in laboratory studies, they remain in normal values, so the placement of silicone prostheses does not it is related to an increase in PRL levels or an increase in lactation (15). A bilateral breast ultrasound, head CT, and thyroid and adrenal hormone analysis are also recommended.

Some cases have been treated with oral bromocriptine, at an initial dose of 1.25 mg, 3 times a day. After a week of treatment and when there is no response, the dose can be increased to 2.5 mg. 3 times a day. The treatment would be maintained until 2 weeks after cessation of discharge. Long-lasting synthetic alkaloids derived from ergotamine can also be used with good results, the recommended dose is 10 mg orally once a week for 4 weeks.

The presence of abnormal discharge from the nipple or wound after breast surgery should lead to suspicion of infection; however, it presents with pain, inflammatory symptoms and purulent discharge, while in galactorrhea the discharge is opalescent and there are no inflammatory signs in the breast.



Skin Erythema



Nipple Discharge 3 Months Later

Germ from the normal flora of the skin may appear in cultures of milk secretion and may confuse the diagnosis. When in doubt, a microscopic examination of the discharge showing the presence of fat globules would confirm the diagnosis of galactorrhea.



In these cases, the evolution is unpredictable, concluding that in cases of galactorrhea without associated complications, the natural tendency is to spontaneously end the condition in a variable period of time (17), our attitude should be conservative, but warning the patient that the chances of developing a capsular contracture in the future may increase. On the contrary, fistulization causes notable control difficulties and complicates both the treatment and the evolution of the condition, eventually causing significant aesthetic alterations in the breast (18).

The recommendation in case of galactorrhea with fistulization is the removal of the implants without proceeding to their repositioning (3 to 6 months) until the inflammatory activity in the breasts does not subside. Replacing implants in the short or medium term does not ensure that capsular contracture does not form. If fistulization does not occur, we can adopt an expectant attitude, reserving surgical treatment for those cases in which a significant degree of capsular contracture is established.

It is important to note that these complications were associated to a greater extent with the choice of the peri areolar route as an access for augmentation mammoplasty, a route in which there is a greater risk of damaging the milk ducts. The incidence is lower but not impossible in the case of using the sub mammary route, since these ducts remain intact in most cases. Therefore, another important recommendation would be to use the sub mammary route as the route of choice for breast augmentation with implants in those patients with a history of galactorrhea or who have been breastfeeding for long or recent periods.

CONCLUSIONS

Galactorrhea after breast augmentation with implants is a rare complication. In most cases no cause is found to explain it. In the same way, the resolution of the picture occurs spontaneously in several weeks, sometimes without the need for any treatment in most patients. However, in some cases, the appearance of a fistula and the intensity and duration of the galactorrhea complicate the clinical picture, giving it a different dimension, having to remove the implant (s) depending on the evolution of the patient.

It is important to assess the evolution of the symptoms that the patient presents, with the affectation that it entails both from the physical and psychological point of view, being able to recommend that in the event of abundant galactorrhea after a breast augmentation, that they are complicated with the formation of galactocele and on All with fistulization, a correct attitude could be to remove the implants and wait for the resolution of the picture to reassess the increase through another access route or even advise against it in the future depending on the evolution of the patient.



Erythema in Right Breast

Patient 3 Months Later Prior to the Release of Milk.



Patients Before and After Pictures Treated with Long-Lasting Synthetic Alkaloids

References

1. Acartürk S, Gencil E, Tuncer I.: An uncommon complication of secondary augmentation mammoplasty: bilaterally massive engorgement of breasts after pregnancy attributable to postinfection and blockage of mammary ducts. *Aesth. Plast Surg.* 2005;29(4):274.
2. Chun YS, Taghinia A.: Hyperprolactinemia and galactocele formation after augmentation mammoplasty. *Ann Plast Surg.* 2009;62(2):122.
3. Inguenault C, Capon-Degardin N, Martinot-Duquennoy V, Pellerin P.: Galactorrhea after mammary plastic surgery. *Ann Chir Plast Esthet.* 2005;50(2):171.
4. Arnon O, Mendes D, Winkler E, Tamir J, Orenstein A, Haik J.: Galactorrhea complicating wound healing following reduction mammoplasty. *Aesthet Surg J.* 2006;26(3):300.

5. Majdak-Paredes EJ, Shafighi M, During V, Sterne GD.: An unusual case of galactorrhea in a postmenopausal woman complicating breast reduction. *J Plast Reconstr Aesthet Surg*. 2009;62(4):542.
6. Gundeslioglu O, Altundag O, Altundag K, Bilen BT, Borman H.: Lactation, galactorrhea, and timing of reduction mammoplasty. *Plast Reconstr Surg*. 2006; 117(2):701.
7. Bentley M, Ghali S, Asplund OA.: Galactorrhea causing severe skin breakdown and nipple necrosis following breast reduction. *Br J Plast Surg*. 2004;57(7):682.
8. Schuurman AH, Assies J, van der Horst CM, Bos KE.: Galactorrhea after reduction mammoplasty. *Plast Reconstr Surg*. 1993;92(5):951.
9. Menéndez-Graño F, Pena Fernández C, Burrieza PI.: Galactorrhea after reduction mammoplasty. *Plast Reconstr Surg*. 1990;85(4):645.
10. Song IC, Hunter JG.: Galactorrhea after reduction mammoplasty. *Plast Reconstr Surg*. 1989;84(5):857.
11. Bronson DL.: Galactorrhea after reduction mammoplasty. *Plast Reconstr Surg*. 1989;83(3):580. [Links]
12. Bruck JC.: Galactorrhea: a rare complication following reduction mammoplasty. *Ann Plast Surg*. 1987; 19(4):384.
13. Vance ML, Thorner MO.: Prolactin: hyperprolactinemic syndromes and management. En: Degroot LY, ed. *Endocrinology*. Philadelphia: W.B. Saunders, 1989, Pp:408-18. [Links]
14. Basil HY: Etiology and treatment of hyperprolactinemia. *Semin Reprod Endocrinol* 1992;10:228. [Links]
15. El-Hassan ND, Zaworski RE, Castro A, LeMaire WJ.: Serum prolactin levels following augmentation mammoplasty. *Plast Reconstr Surg*. 1981;68(2):215. [Links]
16. Bedinghaus JM.: Care of the breast and support of breast-feeding. *Prim Care*. 1997;24(1):147. [Links]
17. Caputy GG, Flowers RS.: Copious lactation following augmentation mammoplasty: an uncommon but not rare condition. *Aesth Plast Surg*. 1994;18(4):393. [Links]
18. Mason T C.: Hyperprolactinemia and galactorrhea associated with mammary prostheses and unresponsive to bromocriptine. A case report. *J Reprod Med*. 1991;36(7):541. [Links]