



## Post-mastopexy galactorrhoea with a prosthesis: a case report

### *Galactorreia pós-mastopexia com prótese: relato de caso*

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#### ■ ABSTRACT

Mastopexy is the plastic surgery responsible for correcting breast ptosis, a problem characterized by a discrepancy between the volume of the breast and its skin layer. The complications most commonly reported in the immediate postoperative period are suture dehiscence, seroma, edema and infection, while others such as galactorrhea are considered rare. The case in question consists of a 52-year-old patient who underwent bilateral mastopexy with prosthesis inclusion and developed galactorrhea with hyperprolactinemia 30 days after the procedure. The diagnosis was suspected of increased volume, associated with postoperative breast pain or discomfort, followed by milky discharge. Galactocele after mastopexy with a prosthesis may or may not be associated with hyperprolactinemia, but little is known about the real pathophysiology of the development of this condition. Treatment was done with cabergoline 0.5mg in two doses, improving the condition.

**Keywords:** Galactorrhea; Mammoplasty; Hyperprolactinemia; Breast implants; Postoperative complications.

#### ■ RESUMO

A mastopexia é a cirurgia plástica responsável pela correção da ptose mamária, problema caracterizado pela discrepância entre o volume da mama e sua camada cutânea. As complicações mais relatadas no pós-operatório imediato são deiscência de suturas, seroma, edema e infecção, enquanto outras, como a galactorreia, são consideradas raras. O caso em questão consiste em uma paciente de 52 anos, que realizou a mastopexia bilateral com inclusão de prótese e desenvolveu após 30 dias do procedimento galactorreia com hiperprolactinemia. O diagnóstico foi suspeitado devido ao aumento de volume, associado a dor ou desconforto mamário no pós-operatório, seguido de saída secreção leitosa. A galactocele pós-mastopexia com prótese pode ou não estar associada à hiperprolactinemia, porém pouco se sabe sobre a real fisiopatologia do desenvolvimento desse quadro. O tratamento foi feito com cabergolina 0,5mg em duas doses, com melhora do quadro.

**Descritores:** Galactorreia; Mamoplastia; Hiperprolactinemia; Implante mamário; Complicações pós-operatórias.

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### INTRODUCTION

Breast ptosis is characterized by the disproportion between the skin of the breast and its contents. This change has mastopexy as a surgical procedure aiming to correct the breast problem<sup>1</sup>. Its association with flaccidity and hypomania is common, which makes its surgical approach difficult<sup>2-4</sup>. In 1969, Goulian and Conway suggested placing breast implants next to

the mastopexy, aiming at a better aesthetic effect in these cases<sup>2</sup>. However, the combined procedure adds complications related to the presence of the prosthesis to complications related to the mammoplasty itself<sup>5</sup>.

For a better aesthetic result, the choice of the nipple-areolar pedicle, implant location, type of glandular resection, type of incision and implant format should be taken into account<sup>5,6</sup>.

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The most frequent complications of this surgical approach are ptosis recurrence, hypertrophic scars, keloids, flattening of the mammary cone, loss of sensation, inadequate positioning or distortion of the areola, nipple flattening, infections, hematomas, seromas and suture dehiscence<sup>7</sup>. However, some unusual outcomes can also occur, such as galactoceles or galactorrhea<sup>8</sup>. Little is known about the pathophysiology of these atypical results, but it is believed to be due to the manipulation of breast tissue during the surgical procedure<sup>8,9</sup>.

There are few reports in the literature about galactorrhea or galactocoele after mastopexy with the placement of breast implants, which is a rare complication of this procedure<sup>8,9</sup>.

## OBJECTIVE

In this sense, the present study aims to report and discuss a case of post-mastopexy galactorrhea with a prosthesis.

## CASE REPORT

The present study was approved by the Ethics Committee and has CAAE number: 40146720.7.0000.5549.

Female patient, 53 years old, G2P2A0 and two periods of previous breastfeeding, lasting 2 years each. She is undergoing hormone replacement treatment using dienogest and estradiol valerate—no other comorbidities. On physical examination, breasts with no scars and/or nodulations, ptosis classified as Regnault grade II.

On August 24, 2019, in the city of Patos de Minas (MG), he underwent bilateral mastopexy associated with the inclusion of 260ml, textured, round, high-projection prostheses of the Motiva brand, with an inverted “T” scar and positioned in the subfascial plane. In the same procedure, blepharoplasty was also performed. The surgical time was 4h30, and the patient was discharged within 24 hours.

In the immediate postoperative period, the patient reported pain and unilateral swelling in the left breast. Cefadroxil monohydrate 500mg and celecoxib 200mg 12/12 hours for six days, 1g dipyrone, 1g effervescent vitamin C and dextran and hypromellose eye drops were prescribed due to blepharoplasty. In addition to the medication, manual lymphatic drainage was also started to reduce the edema.

Nine days after the surgery, due to the maintenance of symptoms, an ultrasound of the breasts was requested, performed on 09/05/2019. The report confirmed a discrete peri-implant fluid collection (seroma) in the left breast. Control ultrasounds were

performed 7 and 14 days after the first one, confirming the presence of a discreet, anechoic, homogeneous fluid collection around the implant, better identified in the left breast's superolateral quadrant of the left breast.

On the 30th postoperative day, the patient developed galactorrhea. Cabergoline 0.5mg was prescribed, one tablet, single-dose, without improvement in one week. The treatment was repeated once more in a single dose. However, she continued to report mastalgia and edema on the left.

Follicle-stimulating hormone (FSH), ultrasensitive TSH, macroprolactin and prolactin tests were requested. The results were, respectively, 34.66mUI/mL, 3.25microUI/mL, 37.06ng/ml with a recovery percentage of 75% and 37.1ng/ml. Thus, alterations in the results of macroprolactin and prolactin are observed, which led to the confirmation of galactorrhea due to hyperprolactinemia.

After 15 days of using the second dose of 0.5mg cabergoline, galactorrhea was interrupted, evolving to an asymptomatic condition, with an improvement of pain and edema.

Control ultrasound corroborated the findings, showing only silicone breast implants without signs of peri-implant fluid collection and BIRADS-2. The patient evolved without any other symptoms.

## DISCUSSION

Like any other surgical approach, augmentation mammoplasties are subject to complications<sup>9</sup>. However, mastopexies have a higher degree of difficulty due to the characteristics of the patient's skin, greater sagging and little elasticity<sup>1,10</sup>. Among the different complications in the postoperative period of breast correction, galactorrhoea has few literary reports<sup>9</sup>.

In the clinical case presented, there is milky secretion after the surgical procedure and symptoms of pain, discomfort and unilateral breast enlargement, defining asymmetry. Different studies indicate that surgical techniques that manipulate the lactiferous ducts may be related to the phenomenon of galactorrhea<sup>11</sup>. To reduce the disturbance of these ducts, some surgeons opt for an inframammary incision when there is no need to perform a mastopexy<sup>9</sup>.

Galactocoele is not always associated with hyperprolactinemia. When serum prolactin concentrations are normal, galactorrhea is considered physiological and transient due to excessive stimulation of breast tissue. Patients undergoing augmentation mammoplasty have nipple stimulation by abrupt distension and compression due to the breast implant, becoming contributing factors for the secretion of prolactin<sup>12</sup>.

When we understand the physiology of lactation, we understand how sulpiride and other dopamine inhibitors that interact in this hormonal cycle can stimulate milk production and be involved in the formation of the galactoceles. On the other hand, dopamine agonists, such as bromocriptine and cabergoline, act by inhibiting prolactin and, consequently, lactation, essential in the treatment of galactoceles<sup>13</sup>.

The occurrence of lactation is a rare complication of breast plastic surgery. The pathophysiology of this complication may be associated with inadequate secretion of prolactin in the surgical context. Factors favoring this complication would be the number of pregnancies, a recent and extensive breastfeeding history, and the intake of certain medications, such as an estrogenic pill. The main symptom of this complication is the occurrence of unilateral or bilateral galactorrhea, on average 6 to 12 days after surgery. The main differential diagnosis is a postoperative infection.

Depending on the case, treatment may vary from simple surveillance to the association of dopamine agonists, antibiotic therapy and surgical revision. Dopamine agonists are the first choice, as long-term follow-up of patients has proven their effectiveness in reversing gonadal changes linked to hyperprolactinemia and reducing pituitary adenomas<sup>14,15</sup>.

Cabergoline - medication used in the case reported - is a dopamine agonist derived from Ergot (a common contaminating fungus of rye and other cereals, or by the excessive or misguided use of ergoline-derived drugs) with long action after oral administration, used in the treatment of hyperprolactinemia, in addition to idiopathic disorders, pituitary adenomas, amenorrhea, oligomenorrhea, anovulation and galactorrhea<sup>14</sup>.

The recommended starting dose of cabergoline is 0.5mg per week, given in one or two doses per week. The weekly dose should be increased gradually, preferably by adding 0.5mg weekly at monthly intervals, until an optimal therapeutic response is achieved. The therapeutic dose is normally 1mg per week but can range from 0.25mg to 2mg per week. Cabergoline doses of up to 4.5mg per week have been used in hyperprolactinemic patients<sup>14</sup>. In the case reported, cabergoline was used at a dose of 0.5mg, in two doses one week apart, totaling 1mg.

This therapeutic regimen was effective in inhibiting lactation after bilateral mastopexy associated with the inclusion of prostheses in the present case.

## CONCLUSÃO

Post-mastopexy galactoceles with prosthesis is a rare complication and may or may not be associated with hyperprolactinemia, but little is known about

the actual pathophysiology of the development of this condition.

When galactorrhea begins in the postoperative period of breast surgery, it is mandatory to carry out hormone measurements to identify the increase in prolactin. Lactation inhibitors are used as a treatment, with good results and established protocols. It was unnecessary to perform invasive procedures to control and resolve the case, only using oral medication.

## COLLABORATIONS

- LSA** Analysis and/or interpretation of data, Final approval of the manuscript, Data Collection, Methodology, Writing - Preparation of the original, Writing - Review and Editing.
- ALMAP** Analysis and/or interpretation of data, Final approval of the manuscript, Data Collection, Methodology, Writing - Preparation of the original, Writing - Review and Editing.
- BMC** Analysis and/or interpretation of data, Final approval of the manuscript, Methodology, Writing, Review and Editing.
- MLPB** Analysis and/or interpretation of data, Final approval of the manuscript, Methodology, Writing, Review and Editing.
- JCPA** Final approval of the manuscript, Writing - Preparation of the original, Writing - Review and Editing, Supervision.
- TAF** Final approval of the manuscript, Writing - Review and Editing, Supervision.

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