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LETTER TO THE EDITOR

Breast Reduction: An Unexpected Event—A Case Report

Innocenti Alessandro[1] · **Pizzo Andrea**[1]

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Introduction

Reduction mammaplasty is a widely performed cosmetic and functional surgery procedure for addressing macromastia. It ranks as the seventh most common operation carried out by plastic surgeons globally. According to the 2019 statistics from the International Society of Aesthetic Plastic Surgery, there was a 12.3% rise in the number of these procedures compared to 2018, and a notable 41.9% increase since 2015. In the United States alone, more than 80,000 procedures were conducted in 2021, according to the Aesthetic Plastic Surgery National Databank Statistics for 2020–2021, reflecting a 49% annual surge in the post-pandemic period.

Macromastia can lead to debilitating symptoms for patients. These symptoms include neck, back, and shoulder pain, intertriginous dermatitis, respiratory issues, limitations in sports activities, and others. Additionally, women with macromastia may experience psychological distress and low self-esteem due to dissatisfaction with the appearance of heavy and sagging breasts [1, 2].

In this paper, we want to highlight how even one of the most popular procedure in plastic surgery can potentially present an unexpected event that must be promptly identified and managed.

Presentation of Case

The patient was a 65-years-old woman, obese (BMI 33.6 kg/m^2), with a history of smoking habit. Her medical background includes hypertension, early-stage diagnoses of Sjogren's syndrome and systemic sclerosis dating back to 2000. In 2020, she was diagnosed with a left atrial myxoma arising from the fossa ovalis. Subsequently, she underwent successful surgical excision of the myxoma via an anterolateral mini-thoracotomy at the fifth intercostal space from the right inframammary groove. The postoperative course was regular. The total-body CT investigation, for the long-term follow-up for the systemic sclerosis, did not report any pulmonary hernia. Pulmonology consultations didn't report any respiratory disorder or surgical sequelae.

Due to the presence of a severe breast hypertrophy, the patient underwent a breast reduction surgical procedure. During the operation, at the level of the 5th intercostal space, on the anterior axillary line, an intermittent pulmonary herniation, undiagnosed at the preoperative radiological screening, was observed. No abnormalities during mechanical ventilation were observed by the anesthesiologist during the procedure.

The hernia was manually reduced and two muscle-fascial local flaps were advanced to repair the hernial opening. No respiratory disorders were reported after the procedure

✉ Innocenti Alessandro
a.innocenti@unifi.it

[1] Plastic and Reconstructive Microsurgery, Department of Surgery and Translational Medicine, Careggi University Hospital, Viale Giacomo Matteotti 42, 50132 Florence, Italy

and no recurrence of hernia at 12-month postoperative chest X-ray follow-up.

Discussion

Lung hernias are uncommon occurrences. They are characterized by the displacement of lung tissue through a defect in the chest wall. Traditionally, a distinction is made between supraclavicular, thoracic intercostal, or diaphragmatic hernias, as well as congenital and acquired hernias. The acquired type can be further classified by cause as post-traumatic, postoperative, or pathological, though they can also occur spontaneously, primarily due to coughing efforts.

Intercostal lung hernias account for approximately 60–80% of the total, resulting from a protrusion of the lung parenchyma through a zone of weakness in the chest wall between the ribs. This is often due to trauma and can occur either immediately or years after the event.

Even surgical procedures with access to the rib cage, such as cardiac or thoracic surgery, can generate residual weakness at the access point, as likely happened in the case in question [1, 3, 4].

Clinically, a pulmonary hernia typically presents with severe chest pain, which may be accompanied by dyspnea or hemoptysis. This condition can lead to the secondary development of a noticeable subcutaneous bulge in the chest wall, particularly noticeable during coughing or physical exertion. It is uncommon for a pulmonary hernia to be asymptomatic, and it can sometimes be discovered incidentally or appear later.

In the presence of a "*locus minoris resistentiae*," the particular consistence of the adipose tissue, especially in an adipo-macromastia, can allow a progressive herniation of pulmonary parenchyma, which can progressively increment over time maintaining the integrity of the pleural layers without any respiratory disorders.

Conclusion

The authors want to highlight this uncommon and asymptomatic intraoperative finding that must be strictly recognized and managed to avoid serious complications.

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Declarations

Conflict of interest The authors declare that they have no conflicts of interest to disclose.

Ethical Approval All the procedure performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The patient's consent was obtained for the case report. This case report is compliant with the SCARE Guidelines

Informed Consent Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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