

Postmastectomy breast reconstruction with latissimus dorsi flap. A case report

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Case Report

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Background

Breast cancer is the most common malignant tumor in women and the leading cause of death in developed countries. Its incidence is increasing but its early diagnosis has managed to reduce mortality. Sometimes breast cancer is due to inherited genetic mutations. Treatments for breast cancer in advanced stages are usually radical treatments. This involves the resection of large amounts of tissue, sometimes associated with radiotherapy or procedures such as intra-arterial chemoembolization, which usually results in a large skin coverage defect that involves not only the breast but also the entire hemithorax. This is a challenge for the reconstructive plastic surgeon, since they have to resort to more complex reconstructive techniques. In this case we present a 47-year-old female with sequelae of left breast cancer, which was managed with breast reconstruction with a latissimus dorsi flap. A one-month postoperative follow-up showed no complications, with adequate aesthetic results. Reconstruction through the association of a pedicled latissimus dorsi flap proved to be a good aesthetic and functional option to resolve these cases.

Keywords: Latissimus dorsi flap, breast reconstruction.

Breast cancer is the most prevalent neoplasm in women worldwide, and it is also the cancer with the highest mortality in this population; In developing countries, the age group with the highest prevalence is the one between 40-49 years old, unlike developed countries, where the greatest condition is found in postmenopausal women, and occurs in a ratio of 100 to 1. between female and male sex. Approximately, each year, 1.38 million new cases and half a million deaths are reported in the world derived from this pathology. In developed countries such as the United States, a drastic reduction in mortality of 30% has been seen from the increase in timely detection through the use of mammography screening, and the establishment of standardized detection systems. Meanwhile, in developing countries such as Mexico, a constant upward trend is shown (calculated incidence of 38.4 per 100,000 women and standardized mortality of 16.8 deaths per 100,000 women), a result of the limited availability of screening instruments. and cancer registry methods.

Within the etiopathogenesis of this disease, it is known that it is caused by the interaction of genetic, environmental and lifestyle factors, as happens in most neoplasms, showing its multifactorial origin. Breast cancer, like most oncological pathologies, has a multifactorial origin. These include: exposure to radiation, age over 50 years, female sex, high lipid

consumption, sedentary lifestyle, alcohol consumption, early menarche and late menopause, nulliparity, history of having had this condition, immunosuppression, smoking, viral infections (hepatitis B and Epstein-Barr). However, the most related risk factors are family history of breast cancer, the presence of genes such as BRCA1 and BRCA2, and obesity. On the other hand, the main protective factors that have been studied are: breastfeeding (decreasing by 4.3% for each year of breastfeeding), phytoestrogens and physical activity, although they are a source of controversy in the current literature.

The most effective way to reduce mortality due to breast cancer is to find the cancer at an early stage and receive the appropriate treatment to combat the disease. Mammography is the basis of breast cancer screening, since it allows us to detect tumors before they are palpable or any symptoms begin to appear. Treatment for breast cancer is mainly composed of local (surgery and radiotherapy) and systemic therapies (chemotherapy, hormonal therapy and targeted therapy), these therapies have their precise indications depending on the patient. The ultimate goal of treatment is cure.

Case report

This is a 47-year-old female patient, originally from La Paz, Baja California Sur, and a housewife. Within her pathological history, she reported cardiac arrhythmia of 14 years of evolution, hypothyroidism

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Figure 1. Front view. Postmastectomy.

of 20 years of evolution, diabetes mellitus of 1 year of evolution, left breast cancer diagnosed 5 years ago, history of left radical mastectomy in 2018, managed with neoadjuvant chemotherapy. and radiotherapy in 2019 for EC IIIB breast cancer. She attended a consultation at the plastic surgery service referred by the surgical oncology service with a diagnosis of triple negative left breast cancer, since the patient wanted breast reconstruction, after a 5-year disease-free period. On physical examination, the patient was of apparent chronological age, oriented in space, time and person, with surgical absence of the left breast, surgical wound in the left hemithorax with skin retraction, without peripheral lesions, without damage to the skin, adequate adipose panniculus in the region.



Figure 2. Latissimus dorsi flap.

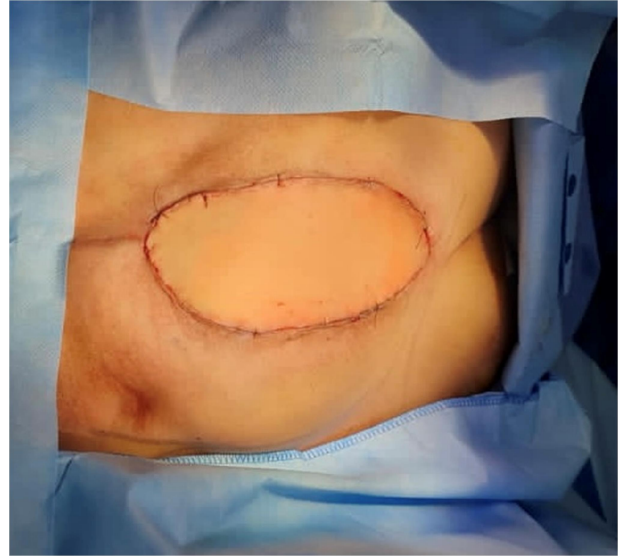


Figure 3. Immediate post-surgical result.

ipsilateral thoracic, no regional lymph nodes palpable, abdomen without apparent alterations (Figure 1). A surgical protocol was carried out, and it was decided to reconstruct the left breast with a latissimus dorsi flap for the management of breast cancer sequelae (Figure 2).

Discussion

Breast reconstruction is an increasingly present element due to the increase in the performance of risk-reducing or prophylactic mastectomies in patients carrying BRCA1/2 mutations. A multidisciplinary approach is necessary to make decisions about the most appropriate therapeutic



Figure 4. Front view. Postoperative result after reconstruction at one month of follow-up.



Figure 5. Back view. Postoperative result after reconstruction at one month of follow-up.

options for each patient, and it is also important to know the benefits and risks derived from each reconstructive technique and the best time to carry them out. The decision on the ideal technique and timing for reconstruction depends fundamentally on the need for adjuvant radiotherapy, since this increases the risk of complications in both autologous reconstructions and implant-based reconstructions. In general, immediate reconstruction is the preferable option whenever possible, as it offers good aesthetic results and avoids a greater number of surgical interventions. When this is not initially feasible, there is the intermediate possibility of placing expanders that allows achieving greater breast volume through the progressive expansion of the tissues, as a bridge therapy to the implantation of a definitive prosthesis. Among the deferred reconstructive techniques, there are everything from the latissimus dorsi myocutaneous flap to microsurgical variants such as the DIEP. To select one of these techniques, the patient's morphology, skin remnant and vascular status must be taken into account, as well as risk factors that may interfere with the viability of the flaps (smoking habit or diabetes). mellitus, among others) and, what is even more important, the individual preference of each patient within the best options available in their oncological and clinical situation, to achieve an optimal surgical plan.

The use of the latissimus dorsi musculocutaneous flap in breast reconstruction is a highly versatile, safe technique with few sequelae in the donor area. It is mainly indicated in patients with irradiated breasts, with the advantage of encompassing adjacent adipose reserves for immediate or delayed

reconstruction, offering good aesthetic results. On the other hand, it allows a prosthesis to be safely associated to adapt the final reconstruction volume to the patient's wishes when the dorsal volume is insufficient. Its main advantage is the safety of the technique from a vascular point of view and, in addition, being an autologous procedure it adapts to the patient's weight changes over time, giving the breast a very natural appearance. It is the flap of choice in patients whose vascular irrigation may be compromised (smokers, diabetics). The use of autologous tissue for breast reconstruction is considered the gold standard treatment by many authors. This is because autologous reconstruction with flaps allows greater adaptation of the soft tissue to the patient's body over the years, greater durability and better capacity for symmetrization with the contralateral breast. Furthermore, it is proven that this type of reconstructive techniques improve the quality of life and the level of patient satisfaction compared to the use of reconstruction using expanders and prostheses.

Conclusion

Although breast cancer is the most prevalent neoplasm in women, it has been seen that developing countries have not implemented an efficient strategic plan, based on international guidelines on screening, for a timely diagnosis of the condition. negatively influencing the prognosis. To achieve a decrease in breast cancer cases in Mexico, it is necessary to improve early detection strategies, along with a combination of a comprehensive medical approach, to be able to face this great challenge. In advanced stages of breast cancer, large tissue resections occur and, on some occasions, these procedures are associated with radiotherapy, resulting in a large skin coverage defect. The latissimus dorsi musculocutaneous flap is a very safe technique, with little chance of tissue necrosis. It is relatively quick to execute, and a very well vascularized tissue is achieved, which is why it is indicated in mastectomy sequelae with poor skin quality, such as after radiotherapy. With this technique we provide good quality muscle and skin on the back, but it is almost always necessary to add a prosthesis to achieve the appropriate volume. If the patient has enough fatty tissue in the back, the breast could be reconstructed without the need for a silicone prosthesis.

Conflicts of interests

There was no conflict of interest during the study, and it was not funded by any organization.

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