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Prophylactic Mastectomy with Latissimus Dorsi Flap : One Case Report

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Abstract : Mastectomy is a complete excision from skin to muscle. Three main techniques : autologous flap, implants, and expander. Among these methods, autologous flap reconstruction tends to result in fewer postoperative complications, which are typically minor, such as infection, hematoma, skin necrosis, or lymphocele. The psychological impact of breast loss is significant and constitutes a major source of emotional vulnerability, often affecting the patient's overall quality of life.

Keywords : *Autologous Flap, Invasive Carcinoma, Oncoplastic Surgery, Axillary Dissection*.

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I. INTRODUCTION

Total mastectomy is currently the most commonly used surgical technique. The main indications for this procedure include: a tumor mass larger than five centimeters, inflammatory skin, tumor recurrence, Li-Fraumeni syndrome, sarcoma, or a history of thoracic irradiation [1].

Detection of colorimetric methods using patent blue dye, indocyanine green, and the isotopic method, which remains the gold standard today for primary lymph node [2].

Lymphadenectomy is indicated if positive fine-needle aspiration, T3 or T4 tumors, or when three or more sentinel nodes are positive on intraoperative frozen section. This dissection must respect critical anatomical landmarks, such as the axillary vein. Lymphedema remains the primary complication associated with axillary dissection [3].

Oncoplastic surgery includes contralateral breast symmetrization and is indicated in large tumors, bifocal lesions.

➢ *Patient Observation*

61-year-old patient, nulligravida, presented with an ulcerated, proliferative tumor over two years.

➢ *Clinical Examination :*

- Left breast: site of a necrotic, ulcerated, and exophytic mass measuring 10 × 8 cm
- Right breast: no palpable nodule
- Lymph node areas: palpable lymphadenopathy

Fig1 Clinical Examination

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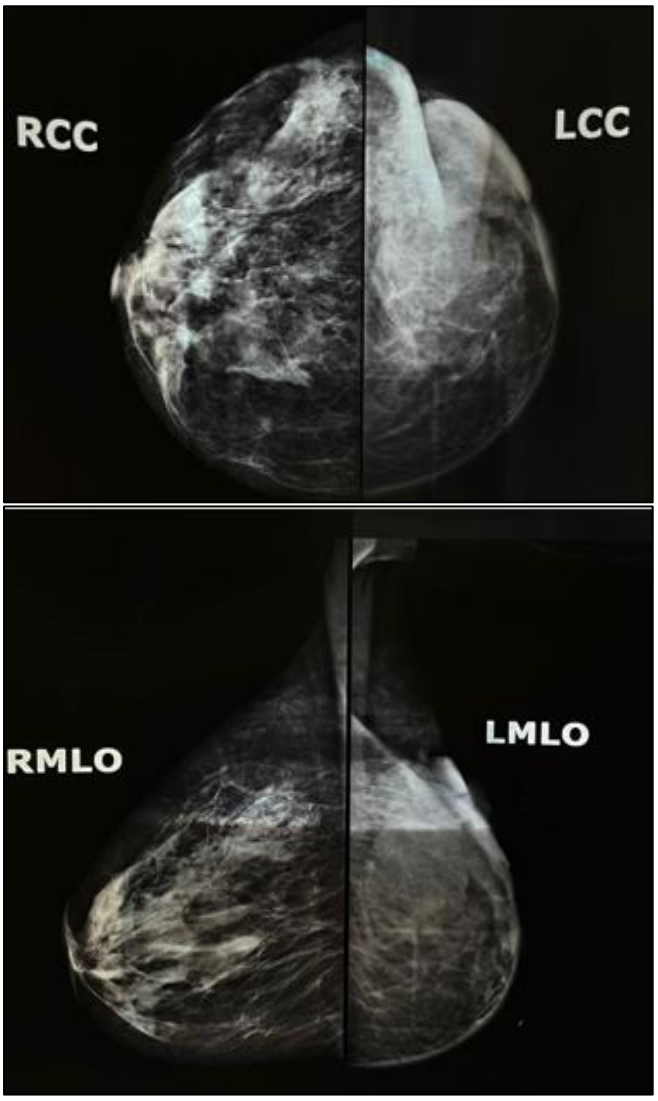

Fig 2 Mammography

➢ *Spiculated Opacity Containing Amorphous, Dust-Like Microcalcifications.*

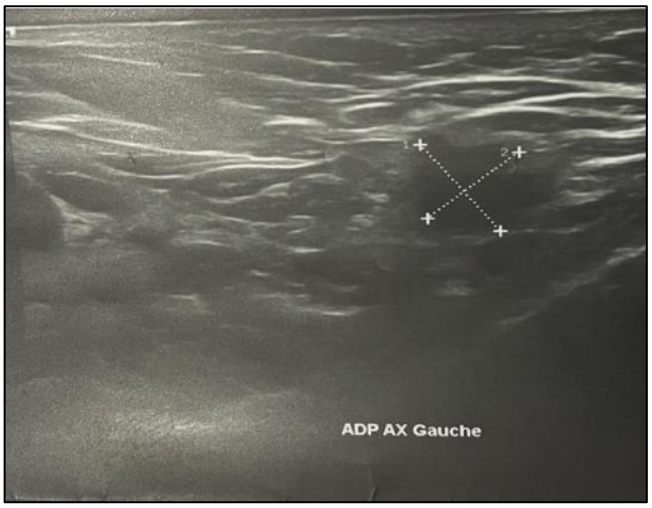

Fig 3 Breast Ultrasound Findings

Presence of a tissue lesion spiculated margins, hypoechoic with posterior acoustic attenuation, oriented perpendicularly to the skin, measuring 26 × 24 mm, with cutaneous fistulization.

- **Left axilla**: Ipsilateral hypoechoic axillary lymph node measuring 10 × 9 mm.
- **Right breast**: No abnormalities detected.

➢ *Histopathological Examinatio*n:

Invasive ductal carcinoma, luminal B subtype, Nottingham histologic grade (SBR) 3, poorly differentiated, Ki-67 at 25%, HER2 positive.

- *Fine Needle Aspiration Cytology (FNAC):*
  Presence of metastatic cells.

- *Staging Workup:*
  No tumoral cells.

Our patient has received 11 cycles of neoadjuvant chemotherapy.

➢ *Left Breast Radical Mastectomy with Ipsilateral Axillary Lymph Node Dissection:*

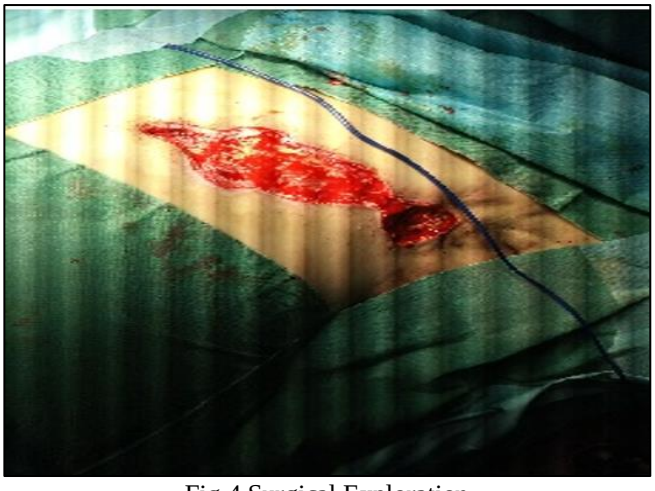
Fig 4 Surgical Exploration

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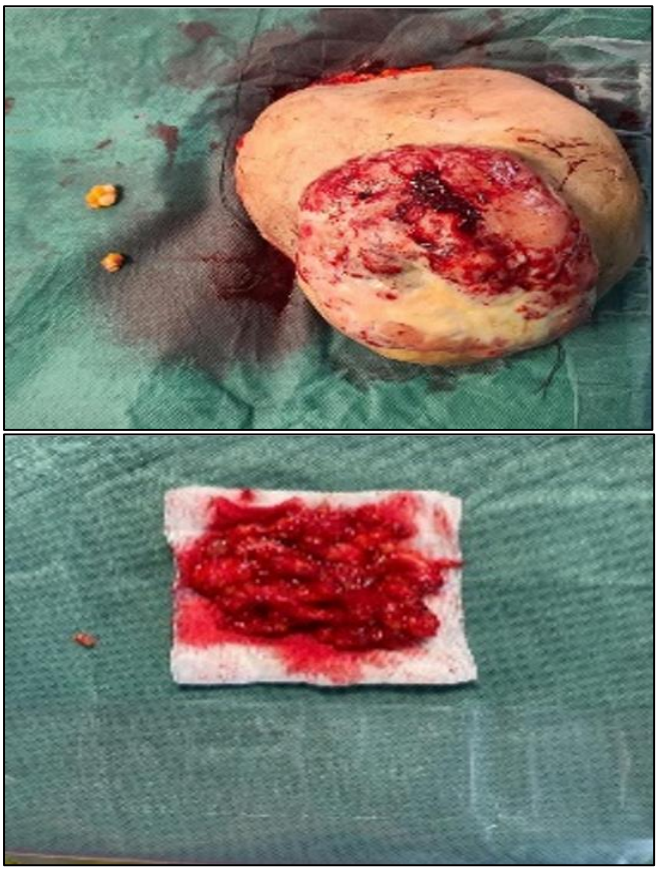

Fig 5 Operative Specimens

Fig 6 Results of the Latissimus Dorsi Flap Reconstruction.

➢ *Histopathological Examination :*

Invasive ductal carcinoma, grade III, high-grade differentiation. Presence of vascular emboli. Hormone receptors were positive ; HER2 was positive. Numerous tumor emboli were noted. thirteen nodes were positive from lymph node dissection. The postoperative course was uneventful.

II. DISCUSSION

Breast cancer is a public health issue affecting young women, which justifies the need for breast reconstruction. Factors influencing the choice of incision include tumor location, multifocality, adjuvant treatment [4], breast morphology, and comorbidities.

➢ *There are Four Main Indications for Mastectomy:*

- Ductal carcinoma in situ (DCIS) [5].
- BRCA1 and BRCA2 gene mutations.
- Tumor recurrence after conservative treatment [6].

➢ *There are Three Types of Mastectomy:*

- Classic mastectomy with an oblique scar. This technique was suitable for our clinical case.
- Mastectomy without skin preservation but with nipple-areola complex conservation, indicated for breast cancers with BRCA1 or BRCA2 mutations : also called prophylactic mastectomy.
- Mastectomy with skin preservation but without nipple-areola complex conservation, indicated for tumors located more than two centimeters[7].
- The under breast incision is highly favored due to the scar's invisibility [8].
- autologous flap has shown better outcomes and greater tolerance to adjuvant radiotherapy compared to implant or tissue expander reconstruction [9].
- In our patient, during postoperative follow-up, we observed less morbidity, consistent with a 3-year study on autologous breast reconstruction [10].
- Lymphedema is a fairly common complication after mastectomy compared to lumpectomy; its risk is increased by obesity, infection, and lymph node sampling exceeding 20 nodes [11].
- It is essential to emphasize that functional rehabilitation is a crucial step in postoperative care, given the functional morbidity affecting the shoulder and back [12].

In our patient, no functional sequelae were noted after therapeutic rehabilitation of the shoulder and back.

III. CONCLUSION

The latissimus dorsi flap is a surgical technique that promotes better quality of life with reduced morbidity. Moreover, this technique has demonstrated an improved response to adjuvant treatment. Postoperative monitoring constitutes a fundamental step in the therapeutic approach to prevent functional sequelae. Functional rehabilitation

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sessions have yielded significant improvements in shoulder stiffness and postural adaptations of the back.

- *Ethics Commitee Authorization :*

Our institution does not find any conflict of ethics commitee.

- *Author Contribution :*

Maha LHALOUI, Hassnaa SARHANE, Kawtar BAHIDA, Fatima zahra BELOUAZZA, Nouhaila YARTAOUI : performed surgery, paper writing and picture editing.

Nisrine BENOUICHA, Amina ETBER, Aziz BAYDADA : Bibliography, written direction.

- *Guarantor*

Maha Lhaloui.

- *Research Registration Number*

No applicable data.

- *Conflicts of Interest Statement:*

No conflict of interest have been announced by the authors for to this research.

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