

# A CASE OF MASSIVE BREAST CANCER TREATED WITH RADICAL SURGERY

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**ABSTRACT.** Invasive ductal carcinoma (IDC) is the most common invasive breast cancer. The patient was a 58 years old woman with a massive left breast tumor developed on a large left mammary gland with a parceled invasion of pectoralis major muscle, skin dimpling and nipple retraction accompanied by large left axillary lymphadenopathies. We performed a radical surgical intervention including left radical modified mastectomy (Madden 1965) with left supraclavian and axillary lymph nodes dissection. We expected to have difficulties closing the skin defect so we had in the surgical team from the beginning of the operation a plastic surgeon to help with it. The wound finally was closed without skin grafting, sliding, after a minimal dissection, the upper, lower and lateral left skin flaps. The pathological exam of the resected specimens revealed invasive ductal carcinoma IDC NOS, moderately differentiated (intermediate grade), with tumoral infiltration of 15 axillary lymph nodes and their surrounding fatty tissue. Her postoperative course was uneventful being discharged in the tenth day following to start the oncological treatment.

**KEYWORDS:** massive, breast cancer, IDC, radical intervention.

## INTRODUCTION

The first symptom of breast cancer is typically a lump localized at the level of the mammary gland showing a modification of the breast tissue. Also lumps can be located in the armpit indicating enlarged lymph nodes representing another sign of breast cancer (Davidson's principles-2010). Clinical signs like modifications of breast positioning or shape, nipple retraction (becoming inverted), nipple discharge, skin dimpling, rash around the nipple can get us thinking to a malignant process. In breast cancer the patient most commonly feels a lump at self-examination (palpation) and realizes the need to contact a doctor (Merck Manual - 2008). Women or men with significant breast signs should address to a specialized clinic where the diagnostic process is carried out followed by the correct treatment. The differential diagnoses of a breast lump include breast cancer, benign solid and cystic lumps, inflammatory conditions and should be performed as soon as possible, after its discovery, using investigations techniques (mammography, fine needle aspiration, excisional biopsy) initially by a surgeon with a specific

interest and training in breast diseases (Saslow et al., 2004). It is very important for the patient, particularly for the evolution of his illness, the moment of his presentation at the doctor, early diagnosis, the following of the recommended treatment. An early presentation of the patient at the doctor can avoid extreme mutilating solutions and become a step forward a fast and accurate diagnosis and treatment. Some patients do not present themselves at the doctor creating conditions for the advancement of the disease, locally and generally. In this way can occur patients with breast tumors reaching impressive sizes, invading pectoralis major muscles, ribs, suspensory ligaments of Cooper with skin retraction, nipple retraction; can appear also large ulcerated areas of breast tumor, which can become infected, having a high risk of bleedings.

The most common type of breast cancer is the ductal carcinoma and has two forms: invasive ductal carcinoma (IDC) and ductal carcinoma in situ (DCIS). IDC is the most common invasive mammary cancer, representing 65%-85% of all cases (Farid Moinfar 2007). IDC starts in the breast's milk ducts and invades

surrounding breast tissues, having a high capacity of local and lymphatic dissemination. The (IDC) breast tumor grows in size, increasing angiogenesis and lymphangiogenesis process. Lymphatic vessels in primary tumor tissue play a significant role in lymphatic metastasis. (El-Gendi S et al., 2009). Increased intra- and peritumoral lymphatic microvessel densities (LVD) represent a high capacity of lymphatic invasion (LI). In this way patients with advanced breast cancer disease can present axillary, supraclavian, parasternal, lymphadenopathies on the same side or on the opposite one.

### CASE REPORT

58 years old female patient was admitted for a massive left breast tumor developed on a large mammary gland (Fig 1,2,3,4) with a quick development in the last 5 months and pain at the level of the left upper limb. The medical history revealed hypertension grade II controlled by medication for the last 5 years (angiotensin-converting-enzyme inhibitor, ramipril) and diabetes mellitus type II controlled by oral medication with Metformin. Eight months earlier the patient underwent an incisional biopsy at the level of the breast tumor in the superior-external quadrant of the left mammary gland. The histopathological examination of the tissue sample from the breast tumor revealed invasive ductal carcinoma (IDC) NOS (no otherwise specified). The patient did not follow any other surgical or oncological treatment for the disease after the biopsy and she did not consult a doctor until a few days before when she presented herself to the emergency room for pain at the level of the left armpit and left arm.

The clinical exam showed at the level of the left mammary gland a huge tumor (20 cm diameter) (Fig 1,2,3,4). The left breast was larger, with slightly cranial retraction losing the normal shape and symmetry, with nipple retraction (inverted), orange peel skin, rash around the left nipple, swellings beneath the left armpit, left supraclavian fossa observed at palpation. The tumor was relatively mobile on the underlying planes at the pectoral contraction maneuver. The clinical exam also showed obesity (body mass index-BMI of 34,6 Obese Class I - Moderately obese).



Fig.1, 2 Left breast tumor with redness of the skin, nipple retraction



Fig 3,4 Massive left breast tumor developed on a large mammary gland

The biochemical parameters revealed normal values with the exception of glycemia (hyperglycemia-236 mg/dL, normal range below 110mg/dL).The diabetes mellitus condition of the patient was balanced by the diabetologist in the first days of hospitalization ,time in which the patient underwent a thoracic and abdominal CT scan investigation, abdominal ultrasound investigation. The scan showed a giant left breast tumor

18 cm in diameter with a parceled invasion of pectoralis major muscle, accompanied by large left axillary lymphadenopathies in close relations with the axillary vein , left supraclavian lymphadenopathies without any kind of distant metastases, in other organs or other pathological modifications.

The patient was submitted to a surgical intervention. It was performed a left radical modified mastectomy with left supraclavian and axillary lymph nodes dissection. A large oblique elliptical incision was made that included a long extension laterally up toward the axilla to ensure a better exposure for the axillary dissection. The resection was large extending from the clavicle superiorly ,the sternum medially, laterally to the anterior axillary line and to 1 cm lower than inframammary fold. The fascia over the pectoralis major muscle as well as the breast was resected as a subfascial dissection starting near the clavicle (Fig 5). Also was performed a parceled superficial resection of the pectoralis major muscle invaded by the breast tumor (Fig.6). The tumor weighed 5.26 kg and was 19x15x15 cm large. (Fig.7, 8).The axillary 's lymph nodes resection and supraclavian fossa 's lymph nodes resection was then completed. ( Fig. 9 ). It was difficult to perform it due to their size and axillary vein adhesions. Three suction catheters were inserted for drainage: two in the left axilla and one in the supraclavian fossa. We expected to have difficulties closing the skin defect so we had in the surgical team from the beginning of the operation a plastic surgeon to help with it. The wound finally was closed without skin grafting ,sliding, after a minimal dissection ,the upper ,lower and lateral left skin flaps.(Fig.10,11,12.).



Fig.5 The breast was resected as a subfascial dissection starting near the clavicle

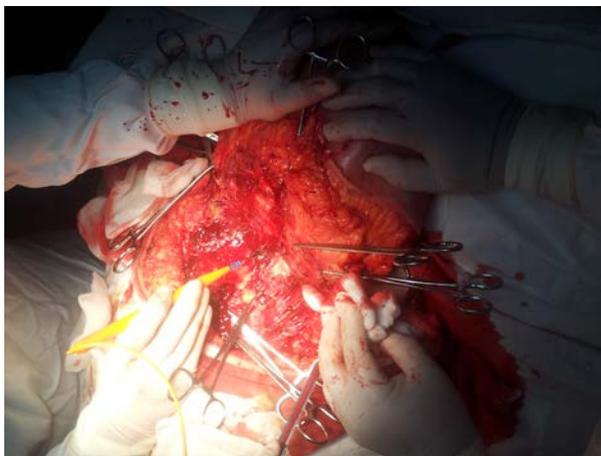


Fig.6 A parceled superficial resection of the pectoralis major muscle invaded by the breast tumor



Fig.7,8 The tumor weighed 5.26 kg and was 19x15x15 cm large



Fig 9 The aspect of the wound after the resection and lymph node dissection

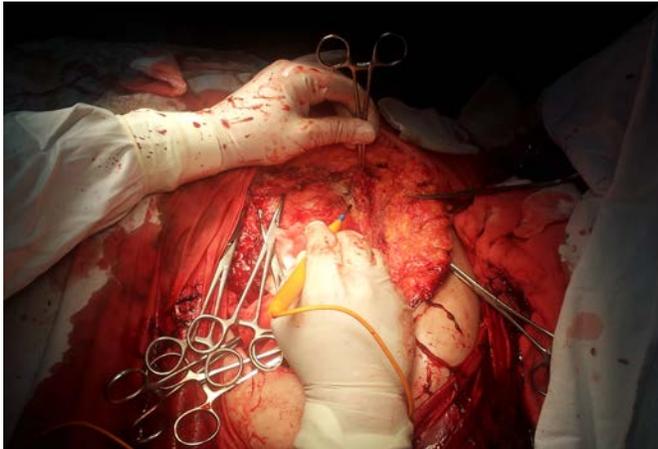


Fig.10 Dissection of skin flaps



Fig. 12 The final aspect of the mastectomy wound and supraclavian drainage



Fig.11 The wound after subcutaneous suture was performed

The postoperative evolution of the patient was without events. She was discharged after 7 days ,with one drain tube in the axilla with a daily leakage around 20mL of lymph. In the 14<sup>th</sup> day the skin sutures had been removed together with the drain tube. The anatomopathological examination revealed invasive ductal carcinoma IDC NOS, moderately differentiated (intermediate grade), with tumoral infiltration of 15 axillary lymph nodes and their surrounding fatty tissue.

## DISCUSSIONS

The surgical treatment of invasive breast cancer is much less controversial than the treatment of noninvasive disease. In the early stage breast cancer should be treated with breast conservation , lumpectomy and radiation therapy (Mastectomy vs. Lumpectomy -2013). Because of the local recurrence's high rate, there are rare patients with invasive breast cancer treated with conservative surgical technique. One of the relative contraindications to breast conservation include the large breast cancer relative to a small breast size. Our patient with the anatomopathological diagnosis of invasive ductal carcinoma IDC NOS moderately differentiated (intermediate grade), had a massive tumor which included the entire mammary gland ,one also large sized. The tumor size to breast size ratio and the diagnosis and the stage of the disease were the factors which imposed the radical surgical intervention, radical modified mastectomy with axillary lymph node dissection. When a mastectomy it is performed it is very important to consider simultaneously the cosmetic and oncologic principles. The surgeon must excise the tumoral gland

and also to adapt the resulting wound limits according to the constitution of the patient. This becomes a real challenge in terms of a massive mammary tumor in a breast already voluminous as in this case. A great care should be taken to preserve the viability of the skin flaps and the thickness of the flaps. In this cases it is very useful an intraoperative multidisciplinary approach . The surgical team from the beginning must have a plastic surgeon to offer solutions in the move depending on the findings detected intraoperatively.

Our patient also had a clinically positive left axilla with large lymphadenopathies extended till the supraclavicular region. An axillary and a supraclavian dissection was performed , hampered by size and tight adhesions to the axillary vein, needing a meticulous and careful dissection. The long thoracic nerve , thoracodorsal and intercostal nerves were preserved. Drain tubes were used for the axilla and the supraclavian fossa. We expected to have difficulties closing the skin defect so we had in the surgical team from the beginning of the operation a plastic surgeon to help with it. The wound finally was closed without skin grafting ,sliding, after a minimal dissection ,the upper , lower and lateral left skin flaps.

There are only three methods of treatment for carcinoma of the breast that have a proved value: the surgical removal, irradiation and medications (hormonal therapy and chemotherapy) . Surgical removal and irradiation are both local methods of treatment and the hormonal attack/chemotherapy is a systemic one and has an effect upon carcinoma throughout the entire body. The three together are effective but the most important role is played by the surgery like in this advanced case. It is better when the surgeon succeeds in entirely removing the massive carcinomatous tumor than when firstly is treated by irradiation hoping to stop the carcinoma from its growth (Breast cancer treatment - 2013). The surgeon's success is permanent while from irradiation are chances of the disease escaping , growing again or spreading. The role of the surgery in the breast cancer remains the most important with all the changes in the diagnosis, staging and treatment of the disease.

## COCLUSIONS

In cases of massive breast cancer developed on a voluminous mammary gland with invasive carcinoma type the surgical intervention is the first option. Mastectomy is preferred instead of breast conservation

surgery. In case of a clinically positive axilla it is performed a lymph node dissection. The surgical intervention is a challenge in large breast tumors rising different oncological, cosmetical problems which are requiring a multidisciplinary approach . The breast cancer became a very complex disease to treat. Many aspects has changed regarding the diagnosis, staging and treatment. That's the reason why the treatment of this disease needs a tight collaboration between surgeons of different specialities, oncologists, anatomopathologists with the goal to decide the best therapeutic course adapted individually for each case.

## REFERENCES

- "Breast Cancer Treatment". National Cancer Institute. Retrieved 23 October 2013.
- Davidson's principles and practice of medicine. Edinburgh: Churchill Livingstone/Elsevier. (21st ed. ed.) 2010. ISBN 978-0-7020-3084-0.-274-275
- El-Gendi S, Abdel-Hadi M Lymphatic vessel density as prognostic factor in breast carcinoma: relation to clinicopathologic parameters. J Egypt Natl Canc Inst. 2009 Jun;21(2):139-49
- Farid Moinfar MD Springer-Verlag Berlin Heidelberg- Essentials of Diagnostic Breast Pathology- Infiltrating Ductal Carcinoma (NOS Type) 978-3-540-45120-4 2007 pp 179-189
- "Mastectomy vs. Lumpectomy". Breastcancer.org. 9 June 2013. Retrieved 23 October 2013
- Merck Manual of Diagnosis and Therapy (February 2003). "Breast Disorders: Breast Cancer". Retrieved 2008-02-05.
- Saslow, D.; Hannan, J.; Osuch, J.; Alciati, M. H.; Baines, C.; Barton, M.; Bobo, J. K.; Coleman, C.; Dolan, M.; Gaumer, G.; Kopans, D.; Kutner, S.; Lane, D. S.; Lawson, H.; Meissner, H.; Moorman, C.; Pennypacker, H.; Pierce, P.; Sciandra, E.; Smith, R.; Coates, R. (2004). "Clinical breast examination: practical recommendations for optimizing performance and reporting". CA: a cancer journal for clinicians 54 (6): 327–344.

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