CLINCAL CASE

TOILET MASTECTOMY - CURRENT PERSPECTIVES, CASE PRESENTATION

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Abstract

Although significant progress has been made in the last decade in the prevention, diagnosis and early treatment of breast cancer, late presentation to the physician continues to be a common scenario, especially in developing countries. The discussion focuses on the role of palliative mastectomy in improving the quality of life and increasing the survival rate, which continues to be an important adjunct in metastatic and locally advanced breast cancer. It remains a challenge for the physician to decide in advanced disease situations what is best for the patient and what is technically possible to achieve. We present the case of a patient who seeks medical attention late, when the tumor invades the entire breast and there are local complications such as hemorrhage.

Keywords*: toilet mastectomy, advanced breast cancer, quality of life, anterior chest wall reconstruction*

Introduction

A rising health problem and a challenge for the current health system, breast cancer has an incidence (11.6% -2,088,849 cases diagnosed annually) and a growing mortality (6.6% - 626,679 deaths each year). It is estimated that 1 in 4 new cancers diagnosed in women worldwide is breast cancer [1].

According to the International Agency for Research on Cancer of the World Health Organization through the Global Cancer Observatory platform (GLOBOCAN 2018), in 2018, breast cancer occupied in Romania the first position with a share of new cases of 25.1%, being the first cause of cancer mortality [2]. In the EU, breast cancer is the most common type of cancer among women, with over 400,000 new cases diagnosed annually [3].

With a poor prognosis, ranking 4th in mortality from neoplasia, advanced breast cancer is a common clinical occurrence, especially in developing countries, probably due to low socio-economic status, lack of awareness, of reluctance and lack of education [4].

For management purposes, breast cancer is classified into operable cancer and advanced cancer: locally advanced or metastatic. Approximately 6-10% of newly diagnosed cases initially fall into stage IV. The 5-year survival of metastatic breast cancer is reduced by 28.1% [5].

Toilet mastectomy is known to be part of the techniques of advanced breast cancer surgery. Used in the case of local complications of primitive tumor, the oncological benefit secondary to such a technique is considered insignificant, although the controversy in this direction is continuously sustained by the inhomogeneous results of clinical trials.

The main problem after the radical oncological resection of the malignant tumor is represented by the adequate reconstruction of the anterior chest wall. For this purpose, skin grafts, local flaps of the skin (bilateral, thoraco-abdominal, thoraco-epigastric advance) or fasciocutaneous, omental flaps or myocutaneous flaps using the pectoralis major, right abdominal, latissimus dorsi and external oblique or alloplastic procedures with overlying vacuum devices [6-9].

Constantly, retrospective studies suggest a potential oncological benefit following tumor excision in patients with metastatic breast cancer, but they have important ambiguities in the selection of the patient group, which certainly affects the results presented [10].

Case presentation

We present the case of a 66-year-old, non-smoking lady, known with active HBV infection and hypertension, is hospitalized in the clinic accusing marked physical weakness and weight loss. The clinical examination reveals a transformed breast as a tumor, immobile in relation to the chest wall, with a cauliflower appearance, friable, with diffuse active hemorrhage (Figure 1). Laboratory tests show significant anemia (Hb 4.7 g/dL with hyposideremia of 9 µg/dL).

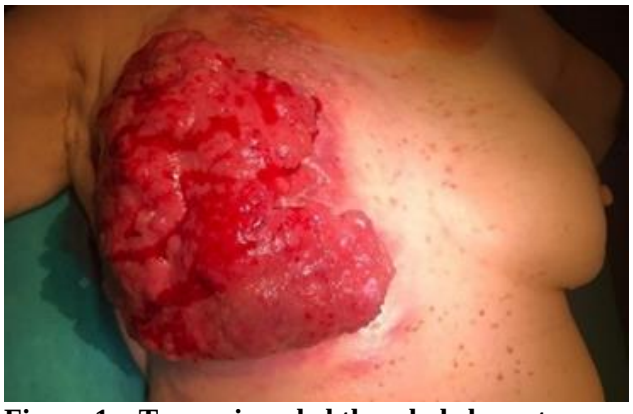

Figure 1 – Tumor invaded the whole breast

Balance computed tomography shows straight breast proliferative process with infiltration of the skin taking on a vegetative appearance, extending to the chest wall, pectoral muscles, internal and axillary mammary ganglia, forming tumor blocks that encompass the right axillary vascular bundle, as well as the presence of pulmonary metastases and bilateral pleurisy probable malignant pleural effusion (Figures 2-4).

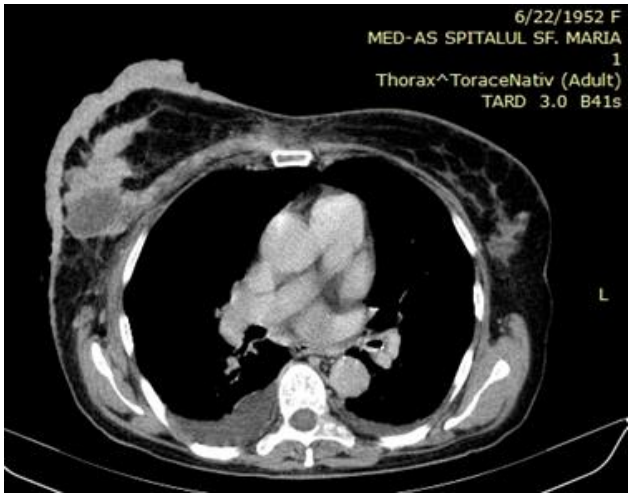

Figure 2 – Chest CT. Tumor extension in the right breast

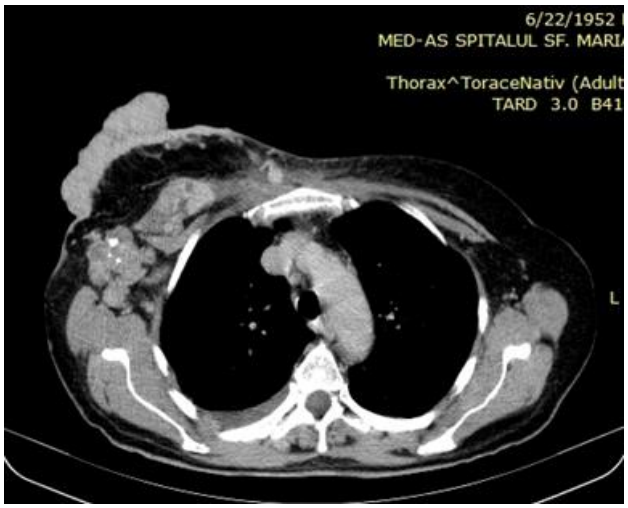

Figure 3 – Chest CT. Tumor infiltration in the right axillary lymph nodes

Tumor biopsy performed reveals invasive ductal carcinoma. The case was discussed in a multidisciplinary meeting with team including surgeons, plastic surgeons, radiologists, radiotherapists and oncologists, and biological rebalancing was instituted (including the administration of isogroup BIII, Rh positive blood), with bleeding difficult to control, blood reserves being limited. The massive tumor

extension and the precarious status of the patient make palliative surgery imperative, in order to improve the quality of life and especially for the local control of hemorrhage.

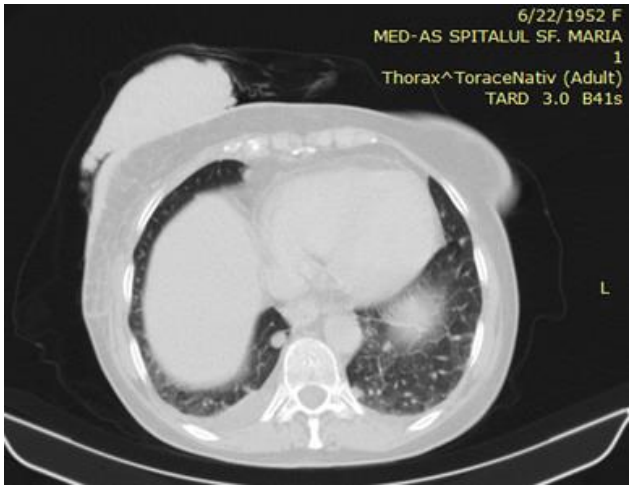

Figure 4 – Chest CT. Pulmonary metastases

The complexity of the surgery and the associated risks, life expectancy and postoperative functional and aesthetic outcome were explained to the patient, after which an informed consent signed in handwritten for the operation was obtained.

After preoperative preparation, surgery is performed under AG-IOT, in a multidisciplinary team and a right toilet mastectomy and right radical axillary clearance are performed, using the abdominal flap to cover the skin defect of the anterior chest wall. The surgery began with an elliptical incision that circumscribed the tumor formation. En-bloc toilet mastectomy including the prepectoral fascia was performed with a partial excision large of pectoralis muscle. The incision of the mastectomy at the abdominal level was distally prolonged with the dissection and mobilization of an important skin flap, in order to cover the large chest skin defect (Figures 5-8). Tactical right axillary lymphadenectomy was performed in order to optimize the application of the skin flap at this level, with its suture at the edges of the operative wound.

The postoperative evolution was difficult, marked by the persistence of pulmonary complications, manifested by respiratory failure, and the complications of surgical wound (postoperative wound hematoma that required surgical reoperation with hemostasis at 7 days postoperatively, infection of postoperative wound with dehiscence) (Figures 9-11). Postoperative complications increased the length of hospitalization (40 days).

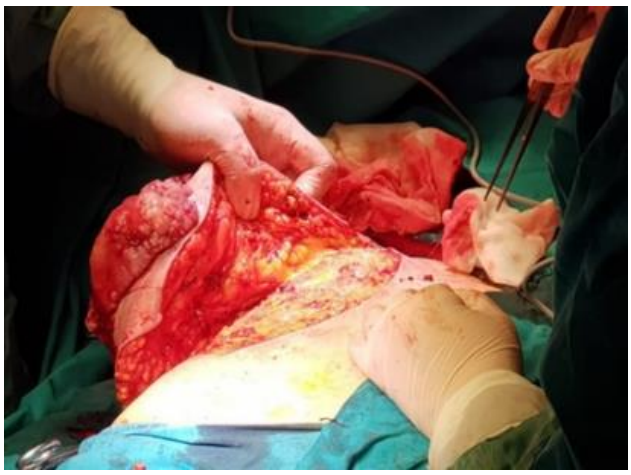

Figure 5 – Intraoperative aspect. Toilet mastectomy

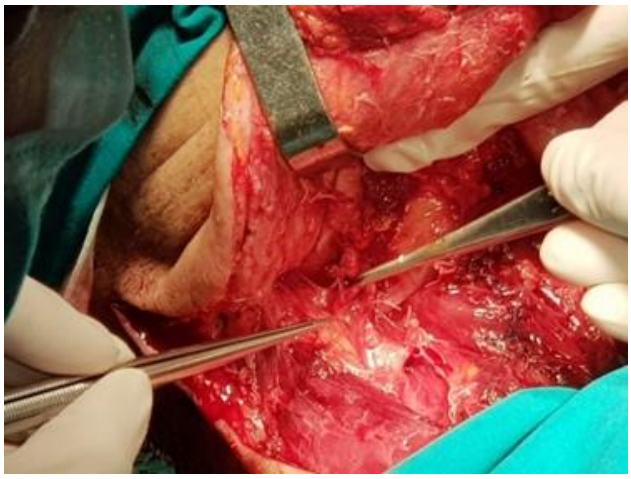

Figure 6 – Intraoperative aspect. Right axillary lymphadenectomy

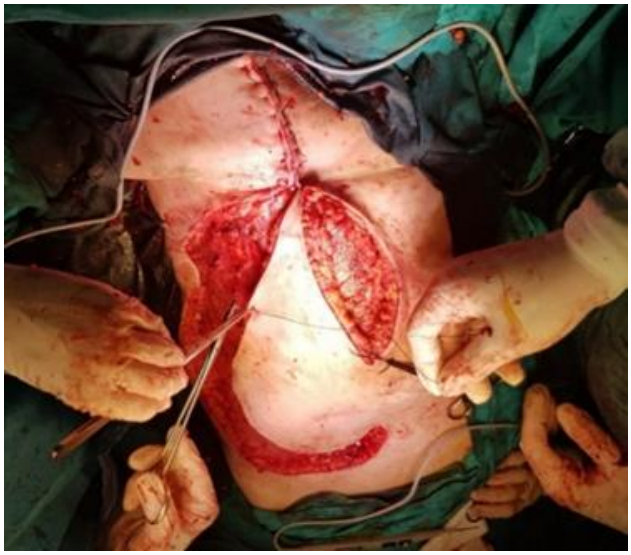

Figure 7 – Intraoperative aspect. Creation of the skin abdominal flap

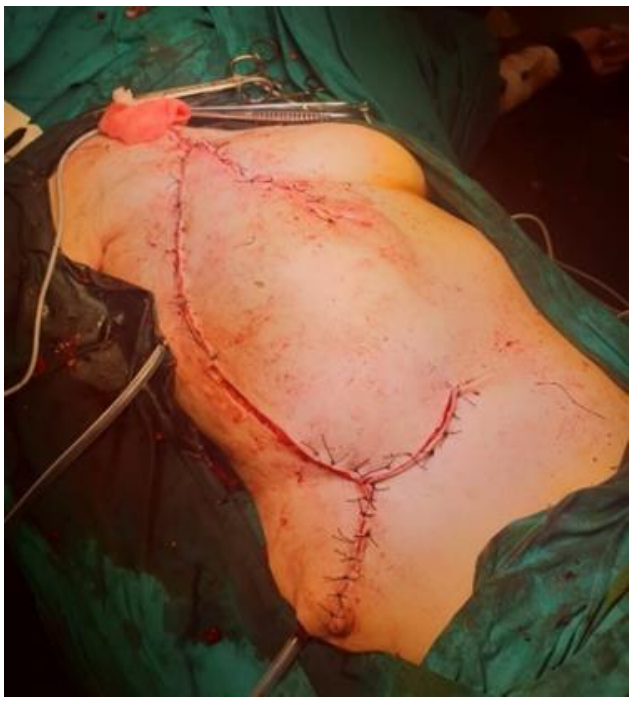

Figure 8 – Postoperative aspect

The anatomopathological result showed the presence of a mixed invasive breast carcinoma with moderately differentiated NST ductal areas and mucinous carcinoma areas (on 60% of the examined surface), angio-lympho-neuroinvasion present with minimal desmoplastic reaction. 5 lymph nodes with marked mucinous carcinomatous infiltration with capsule effraction and invasion in adipose tissue were identified. The final diagnosis was stage IV pT4apN2aM1 breast cancer. Immunohistochemical tests indicated ER negative immunophenotype, PGR negative, HER2 positive (3+), Ki67 positive (+ 20%).

Completion of the oncological assessment required a scintigraphic evaluation that raised the suspicion of the presence of a metastasis in the left T8 costovertebral joint, as well as in the right clavicle. Tumor markers CA 15.3 in the value of 41.2U / ml and CEA of 152.45ng/ml were evaluated. The patient underwent adjuvant chemotherapy with Pertuzumab, Trastuzumab, Paclitaxel, Zoledronic Acid, Docetaxel. Tomographic monitoring revealed the persistence of pulmonary mediastinal lymph nodes metastases with slightly reduced dimensions, as well as osteolytic lesions with a stationary appearance. The patient's comfort and general condition improved significantly.

Discussion

Several studies have evaluated the benefit of primary tumor excision in breast cancer patients with metastases. The results of the studies showed that the ablation of the primitive tumor in the case of stage IV breast cancer does not bring a benefit regarding survival [11-13].

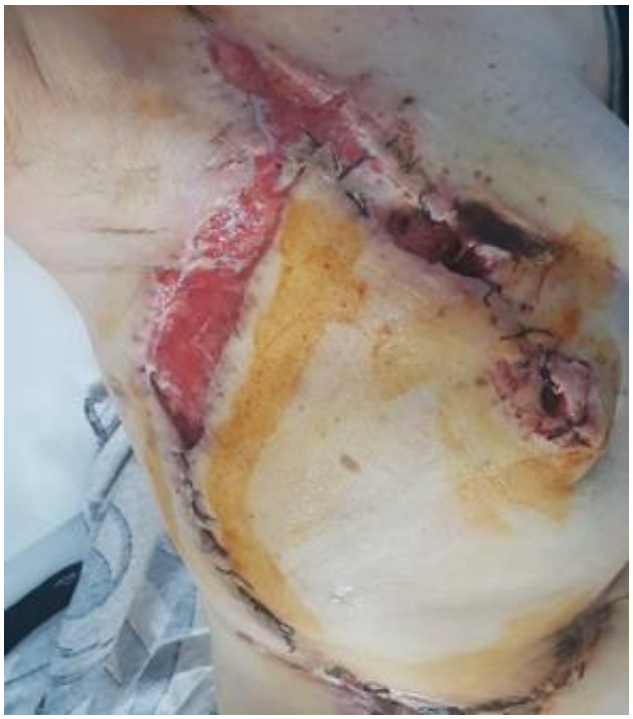

Figure 9 – Anterior chest wall aspect at 3 weeks postoperatively

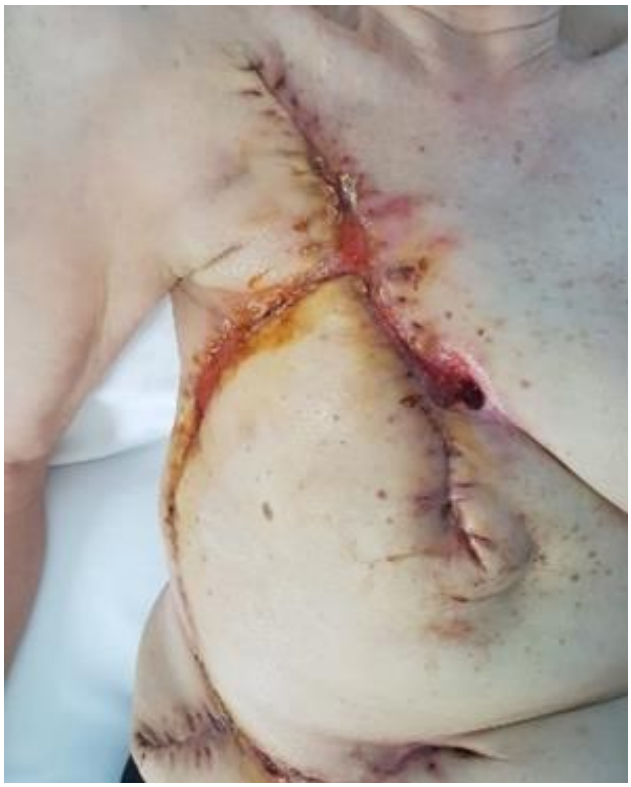

Figure 10 – Postoperative appearance at discharge

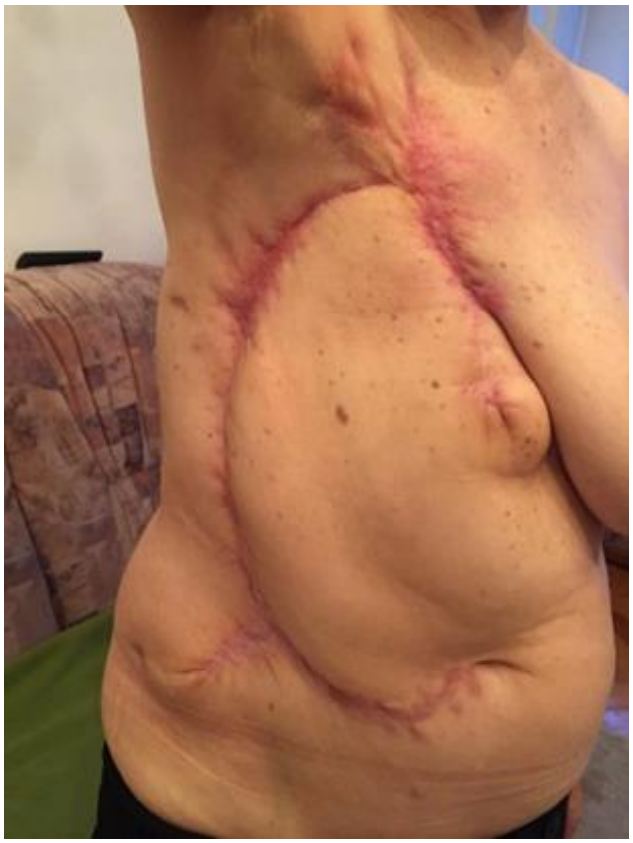

Figure 11 – Postoperative appearance at 3 months

However, some authors have found a significant reduction in the risk of mortality at 3 years and 5 years in patients with negative surgical margins [14, 15]. On the other hand, in certain cases (as in the one presented), the ablative technique is required quickly to control local complications such as hemorrhage, regardless of the oncological objective.

The line of treatment recommended by oncological guidelines for women with metastatic breast cancer with primitive tumor without local complications is systemic therapy, considering the surgical approach of the primary tumor after systemic treatment in patients requiring palliation of local complications such as skin ulceration, local bleeding and pain [16], [17].

Radiotherapy may be an alternative in cases where, from a surgical point of view, the ablation of the primitive tumor causes a chest wall defect that cannot be covered, but radiotherapy for hemostatic purposes involves a long installation time with an uncertain result from this point of view [18].

If you opt for a surgical approach to the primary tumor, it is recommended to assemble a complex surgical team, including plastic surgeon, for optimal control of excision time and optimization of wound healing, in the event of a significant skin defect, caused by high tumor volume [19], [20].

Obtaining non-infiltrated tumor resection margins is an important goal, especially in the case of local pain relief, as important as the destruction of possible tumor cells remaining in the surgical wound, some authors recommend abundant intraoperative lavage with hypersaline solution. Local recurrence, which can occur within a few weeks of toilet postmamectomy, often causes local pain with greater intensity than preoperatively. Obviously, this goal may be secondary in the case of large tumors that require palliative mastectomy to control local bleeding [21-24].

Conclusion

Advanced breast cancers are treated today with neoadjuvant therapy followed by curative surgery, but late presentation at a complicated stage may require initial palliative mastectomy to control local complications.

The benefits of toilet mastectomy include marked improvement in general condition, patient comfort, and control of local tumor complications. The improvement of comfort and biological status offers the patient the possibility of performing an aggressive systemic oncological treatment, an aspect described in the case of the presented patient, almost 18 months after the surgery.

The complexity of the surgical intervention requires the inclusion in the team of the plastic surgeon for the optimal choice of the type of incision in order to cover the skin defect and to manage the local postoperative complications. The cosmetic result goes into the background, in front of the need to control severe complications such as severe bleeding. Postoperative care is thorough and complications are difficult to manage. The oncological prognosis is invaluable at this stage of patient management.

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