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Comparison between the breast preserving surgery and the ordinary breast surgery on breast oncoplastic surgeries in National Cancer Institute\ Misurata- Libya

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ABSTRACT

Objective: to determine the breast cancer recurrence rate, complications, and aesthetic outcome of breast oncoplastic surgery among patients managed in National Cancer Institute\Misurata-Libya (NCI) that they underwent breast oncoplastic surgery(BOS) also to analyze the results between two patients groups underwent breast reconstruction with Lattissimus Dorsi(LD) flap in 1st group and Transverse Rectus Abdominus Myocutaneous(TRAM) flap in 2nd group .

Methods: Retrospective study of 56 patients in oncological surgery department In the NCI between 1st January 2014 to 30th December 2018, have been included. In the study period, a total of 56 cases of breast cancer underwent BOS. 11 patient underwent modified radical mastectomy (MRM) with LDMF reconstruction and 17 case underwent modified radical mastectomy(MRM) with TRAM flap, 26 case underwent breast preserving surgery(BPS), 2 cases presented with phyllodes tumor and managed by subcutaneous mastectomy and implant reconstruction. Early results show acceptable cosmetic results of these cases.

Results: The most occurred complications in both groups (LD&TRAM) are wound infection, hematoma & partial flap necrosis. In conclusion, we find that LD flap is a safe and low-morbidity technique with a relatively low complication rate.

Conclusion: Oncoplastic breast surgery combines the principles of surgical oncology with those of plastic and reconstructive surgery and our initial experience shows that BOS leads to aesthetically pleasing and oncological sound results.

Key words : breast cancer, breast oncoplastic surgery, breast preserving surgery.

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INTRODUCTION

A hospital-based registry of cancer patients records from oncology center in Misurata from 2012 up to 2017 indicated that the most common recorded malignancies in women was the breast cancer [1]. Breast cancer can occur in both men and women, but it's far more common in women. Breast cancer is sometimes found after symptoms appear, but many women with breast cancer have no symptoms. Therefore, regular breast cancer screening is so important. Finding breast cancer early and getting state-of-the-art cancer treatment are the most important strategies to prevent deaths from breast cancer. Breast cancer that detected early, at early stages, is easier to treat successfully. Getting regular screening tests is the most reliable way to find breast cancer early. A diagnosis of breast cancer presents the patient facing not only with physical challenges but emotional concerns about body image and sexuality. With improved screening and early detection, approximately 80% of these women present with small tumors that are amenable to breast conservation. Stage I and II breast cancer is thought to be operable cancer. Possible surgical methods for such breast cancer could be grossly divided total mastectomy and breast preserving surgery (BPS) with axillary node dissection. Until the 1970s, breast cancer was treated with radical mastectomy involving removal of the breast, axillary lymph nodes, and pectoralis muscle. This was extremely disfiguring for patients and did not lend itself to optimal reconstructive options. In the 1970s, modified radical mastectomy was introduced, which increased the reconstructive possibilities. In the 1980s, a large randomized study conducted by the National Surgical Adjuvant Breast and Bowel Project (NSABP) was able to prove that breast conservation plus radiation had equivalent outcome to mastectomy [2,3,4,5]. Oncoplastic surgery is tumor specific immediate breast reconstruction. It is based on three surgical principles: ideal breast cancer surgery with free tumor margins, immediate breast reconstruction, and immediate symmetry with the other breast [6]. Autologous breast reconstruction offers patients the option of having their own tissue, avoiding the need for prosthesis placement and associated complications [7]. Although autologous reconstruction includes the drawback of an additional donor site morbidity, it still carries the advantage of increased patient satisfaction while eliminating prosthesis complications [7,8,9,10]. It is necessary to obtain clear surgical margin after performing BPS. However, it is difficult to know preoperatively the exact resected margin which is either clear or not. In order to select the cases performing BPS, we intended to compare the degree of coexisting intraductal component with histologic types and some factors such as DNA ploidy. ER and expression of cerb B-2 which is concerned in the malignant potential of breast cancer. Intraductal component is more frequently seen in papillotubular carcinoma. Diploid tumor is increased with increasing intraductal component in breast cancer. Precise postoperative microscopic study of resected specimen and tight observation of the patients received PBS for long period should be emphasized. According to that the aims of this study is to comparing between PBS surgery and ordinary breast surgery in breast oncoplastic surgery (BOS), by evaluating the aesthetic outcomes of breast oncoplastic surgery and estimating the complications of autologous reconstructive Methods.

METHODS AND STUDY DESIGN:

Retrospective analysis of patients data with breast cancer who underwent breast oncoplastic surgery (BOS) managed in National Cancer Institute\Misurata-Libya (NCI), in the period between 1ST January 2014 to 30th December 2018 divided into 4 groups; the 1st group patients underwent MRM and breast reconstruction with Lattissimus Dorsi(LD) flap, while the 2nd group patients include MRM and Transverse Rectus Abdominus Myocutaneous (TRAM) flap, the 3rd group patients considered breast preserving surgery (BPS), finally the 4th group patients presented with phyllodes tumor and managed by subcutaneous mastectomy and implant reconstruction. The selected patients were healthy (no chronic illness) with mean of age of 40 years old. At the time of initial breast examination, the selection of reconstructive method was chosen depending on tumor site and size; tumor to breast size ratio; degree of breast ptosis and position of nipple areolar complex (NAC) in relation to tumor. All procedures were done under standard general anesthesia.

RESULTS:

A total of 56 cases of breast cancer underwent BOS were included on this study. Eleven of them were considered in the 1st group that involves patients whose had surgery with underwent MRM with LDMF reconstruction. 18% of patients developed partial flap necrosis which Need surgical intervention, that lead to cosmetic disfigurement of the final result of the operation, while of 27% cases developed seroma where recurrent aspiration needed on the other hand 18% of cases developed wound infection which need surgical debridement and finally lead to hypertrophied scaring , which aesthetically not desired (figure1). The 2nd group subjected to surgery with MRM with TRAM flap because the biopsy scar was away from the areola, therefore large area of skin have been to be excised, seventeen case underwent on this group. Complication with this method considerably higher than the 1st group, where 47% of patients eight cases developed partial flap necrosis, one of them complicated by total loss of the flap. Regarding seroma, it was associated with only 18% of patients, which lower than the incidence of the 1st group (see figure1). Unfortunately, 35% of 2nd group patients Shaw surgical site infection, while 29% of them developed long term complication of TRAM operation which is incisional hernia that need another surgical procedure (figure1). About all the above included cases no cancer recurrence registered among 1st and 2nd groups

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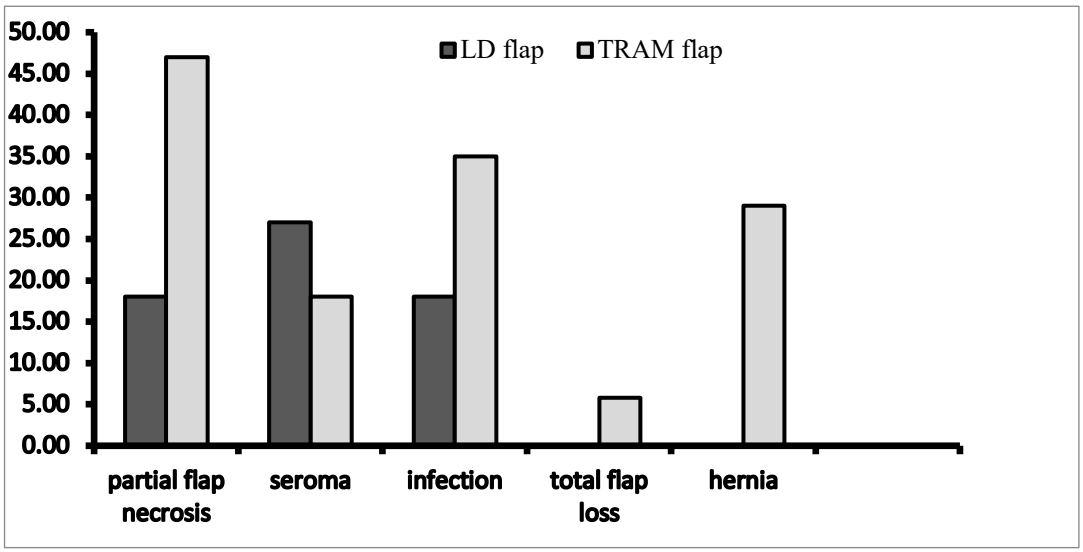


Figure1 : Complications among 1st and 2nd group

Breast preserving surgery (BPS) with different techniques for reconstructions breast preserving surgery (BPS) and followed by radio-chemotherapy was carried on 26 case. BPS have been done with different techniques (superior based flap, inferior based flap, and rotational advancement flap) for reconstructions and with good cosmetic results , out of these, five patients (19%) show mild surgical site infection), and four patients (15%) complicated by recurrence and managed by total mastectomy (figure 9,10).

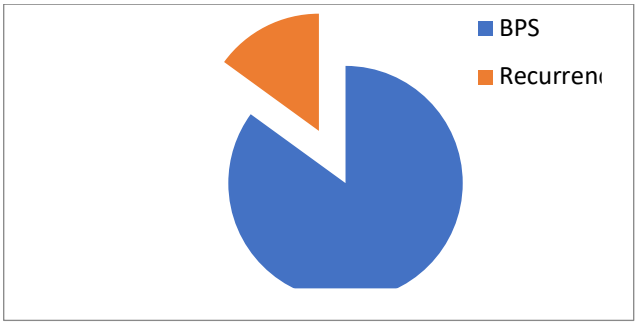
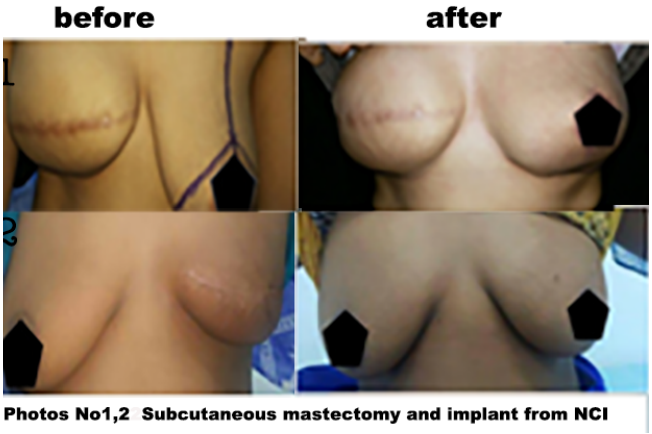


Figure 3: incidence of recurrence in BPS 15%

Only two cases (4th) presented with phyllodes tumor and managed by subcutaneous mastectomy and reconstruction by sub muscular breast implant (photos NO.1,2). One out of these two patients develop recurrent mass and managed by local excision without removing the implant with satisfying result.

Figure 2: surgical site infection in BPS 19%



Photos No1,2 Subcutaneous mastectomy and implant from NCI

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DISCUSSION:

In practice, the margins of resection with hemoclips was marked in patients who underwent BOS. to serve as a guide to radiologist for radiation therapy. Radiation causes involution and edema of the breast so, the treated breast will become firmer and often rise up on the chest wall. For this reason, the contralateral symmetrizing reduction was performed as delayed procedure. It is well documented that oncoplastic surgery is more successful than standard wide local excision , lumpectomy or MRM in obtaining wider radial margin, especially in some cases of locally advanced breast cancer (LABC) with extensive skin involvement [4,5], In our study, 28 (50% from total NO.) case managed by skin and volume replacement for this reason.

Generally Up to 30% of patients who have undergone Lumpectomy or quadrentectomy end up with a poor cosmetic outcome [11,12], Where In our study most the of cases (26 case) managed by BCS achieved good breast shape (5,6). The oncological outcomes in terms of local recurrences, and disease free in this study (15%) are equivalent to worldwide results from standard wide local excision or lumpectomy plus radiation (recurrence 3-15%) [11,12,13]. In comparison between the first and second groups it clearly that the complications in 2nd group patients are more except seroma, also in 2nd group there are two more complications occurred, which are total flap loss and incisional hernia that adding another morbidity to the patients [4]. Finally, one of the limitations of the present study was the small number of participants, combined with the discontinuity of follow up for some patients.

CONCLUSION:

BOS is superior to standard breast surgery in terms of early and late cosmoses, These results are similar to clinical trial "Oncoplastic surgery in the treatment of breast cancer" [4]. Also The oncologic outcomes in terms of local recurrences, disease free and may be overall survival have been documented to be equivalent to MRM. [6,13]. In general, breast reconstruction by LD flap was associated with lower rates of complications in comparison with those of TRAM, also These results are similar to clinical trial " Latissimus dorsi myocutaneous flap for breast reconstruction" [10], It is well documented that oncoplastic surgery is more successful than standard wide local excision , lumpectomy or MRM in obtaining wider radial margin, especially in some cases of locally advanced breast cancer (LABC) with extensive skin involvement [4,5], In our study, 28/56 (50%) cases under went skin and volume replacement for this reason. Up to 30% of patients who have undergone Lumpectomy or quadrentectomy end up with a poor cosmetic outcome [10,11].

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