Solving the Dilemma of Congenital and Pathological Breast Asymmetry Using Modified Supine Oblique Sitting Marking Technique

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ABSTRACT

Background: The female breast is one of the most attractive aesthetic areas in female anatomy. The size, shape, and symmetry of the breasts can have a dramatic effect on the women's well-being, poor self-esteem, altered self-image, and other psychological effects. All surgical techniques was done based in the presurgical marking. However it is of little value if symmetry procedure will be done in other breast.

Material and Methods: We retrospectively reviewed 41 patients admitted to our multi-disciplinary team breast clinic in Ain Shams University Hospital, between July 2015 and September 2019. Patients’ age ranged from 14 to 63 years. Congenital and pathological breast asymmetries were included e.g.: Chronic granulomatous mastitis, burns, and tumors of the breast (benign and malignant masses). Physiological breast asymmetry were excluded from the study.

Patients were operated upon using the modified SOS marking technique and followed-up for a mean of 13.24 months post-operatively (range 3-30 months). All patients were photographed before and after the surgery. Post-operative photographs of these patients were examined by five plastic surgeons (3 men and 2 woman). We compared both breasts using a 5 point subscale consisting of volume, contour, placement of the breast mound, scar and the inframammary fold and all patients were asked to complete a satisfaction questionnaire based on the Harvard scale.

Conclusion: It is a novel marking technique solved the dilemma of changing the pre-operative plane according to the intraoperative judgment and altering the amount of tissue to be excised or reconstructed in patients suffering from congenital and pathological breast asymmetry. It is technical easy to learn, reliable with satisfactory aesthetic outcome especial in congenital asymmetries, with acceptable complication rate.

Key Words: Breast asymmetry – Poland syndrome – Breast conservative treatment – Breast marking technique – Breast reconstruction – Aesthetic breast evaluation – Oncoplasty.

INTRODUCTION

Breast asymmetry present an aesthetic challenge to plastic surgeons as it is a symbol of female beauty; thus congenital and pathological breast conditions affect women lives to a great extent. Physiological asymmetry exist in normal female breasts. However, different cultures, the modern beauty parameters led women to look for perfection.

Nahai classified breast asymmetries into three groups: (1) Primary (congenital) breast asymmetry as Poland’s Syndrome (PS) (2) Secondary (developmental) breast asymmetry (3) Patients with tertiary (acquired) breast asymmetry [1].

Improving the body image and breast symmetry is associated with better quality of life. To get good patient satisfaction, pre-operative examination and planning are considered main predictors of the aesthetic outcome. However clearly discussing with patient to achieve perfect symmetry is almost impossible and that it may take several procedures to achieve the goal [2-6].

Contra lateral symmetry following oncoplastic breast conservation is limited regarding patient decision-making and a systematic analysis of patients’ views regarding this topic is lacking [7-12]. Smeele et al., 2019 ran an interview study to explore the factors involved in patient decision making about contralateral reduction mammoplasty [13].

All the surgical techniques described in the literature is based on the presurgical marking [14-23]. However it is of little value if immediate symmetry carried on the contralateral breast and the
amount of breast tissue to be excised is judged or altered according to the intraoperative findings as in: oncoplastic procedures, recurrent multiple fibro adenoma, juvenile hypertrophy of the breast, application of breast implant which chosen according to the intraoperative assessment as in Poland syndrome, nipple areola sparing mastectomy (NASM), Skin Sparing Mastectomy (SSM), and reconstruction with autologous tissue.

The aim of the study is to present our technique solving the dilemma of breast marking for managing congenital and pathological breast asymmetry.

**PATIENTS AND METHODS**

It is a cohort retrospective study included 41 patients with congenital and pathological breast conditions offered immediate contralateral mastopexy or reduction mammoplasty as well. It was done between June 2015 and June 2019 in Ain Shams University Hospitals, Cairo, Egypt “The Breast multidisciplinary teams MDT”. Patients age ranged from 14 to 63 years (mean 39.36 years). Informed consent was obtained for all patients to be include in any study and for medical photography documentation as well.

Demographic, oncologic, operative, and photographic data were obtained for each patient. Patients were followed at 3, 6 and 12 months post-operatively (range 3-30 months). Criteria for inclusion were a complete demographic and oncologic history and photographic follow-up of at least twelve months (minimum 12 months, max 29 months). The variables include: Age, BMI, smoking, hypertension, diabetes, post-mastectomy radiation, adjuvant chemotherapy, and history of unilateral reconstruction or other breast procedures. See (Table 1).

Pre-operative assessment, medical and surgical plane was done by the breast MDT. In the present study, the modified SOS procedure was done to treat the pathology and achieve symmetry in the contralateral side. If there is a plan for radiotherapy, the symmetry procedure was delayed for at least 9 months. Patients were subdivided into three groups [24,25]. (1) Primary (congenital) breast asymmetry caused by Poland’s Syndrome (PS) (2) Secondary (developmental) breast asymmetry caused by unilateral breast hypertrophy, and (3) Tertiary (acquired) breast asymmetry caused by burns, granulomatous mastitis, and we added in our study the benign: Recurrent fibro adenoma and malignant breast tumors and post mastectomy reconstruction as well. See (Table 2).

Tumor excision procedures was done by the two breast surgeons and reconstruction were performed by the two plastic surgeons. Post-operative photographs were assessed by 5 plastic surgeons (3 men and 2 woman). We used the same method previously described by Visser et al., [26]. Pre and post-operative standardized photographs of the breast area was done using a wide-angled digital camera. The breast region included the shoulder region level and the level of the umbilicus. Patients are were instructed to place their hands beside their body touching their buttocks and with a uniform background. 4 different views were taken to each patient: Frontal view, lateral and with an angle of 45 degrees between frontal and lateral views. Assessment was done as regard the breast volume, shape, symmetry, scars, and nipple areola complex. For each of these items a 5-point Likert scale is used for scoring. This scale ranges from “very dissatisfied,” “dissatisfied,” “neutral,” “satisfied,” to “very satisfied”.

Patients were asked to complete a satisfaction questionnaire based on the Harvard scale, introduced by Jay Harris in 1979. It classifies the overall aesthetic results in four categories from excellent, good, and fair to poor [27-29]. See (Table 3).

Post-operative complications such as prolonged pain, hematoma, seroma, infection, flap necrosis, compromised nipple and areola complex vascularity, altered nipple and areola sensation, hypertrophic scar formation and secondary symmetry procedure were recorded. Informed consent was obtained from all patients included in the study.

**Technique used:**

In the modified SOS technique, the patient is marked pre-operatively as originally described by Fahmy et al., 2006 [30] and the epsilateral breast is treated as shown in (Table 2) and the marking is repeated while the patient is under general anesthesia.

While the patient is under general anesthesia, surgical stables were applied in the epsilateral breast e.g.: After tumor excision and before changing patient’s position. The sitting position is adopted to mark the midline, the midclavicular point, and the breast meridian. It is marked as a straight line joining the midclavicular point to the current nipple-areola complex extending down to the inframammary fold.

The supine position is used to mark the inframammary fold incision and the medial limit of the vertical markings. The inframammary fold is
marked, with a very gentle pressure on the breast mound, the breast will naturally fall laterally. A straight line is drawn joining the superior limit of the vertical limb to the meridian. This marks the lateral limb of the right breast. The same is done for the other side.

Finally, the patient is returned to the sitting position. The medial and lateral vertical limbs are measured at a length of 7 cm from the superior limit of the vertical limbs. The two vertical limbs are then joined to the medial and lateral ends of the inframammary fold marking. See Fig. (1).

Table (1): Patient’s data summary.

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DM : Diabetes Mellitus.
RT : Radiotherapy.
RMFA : Recurrent Multiple Fibro Adenoma.
JH : Juvenile Hypertrophy.
PMR : Post Mastectomy Reconstruction.
SSM : Skin Sparing Mastectomy.
NASM : Nipple Areola Sparing Mastectomy.
TRAM : Transverse Rectus Abdominis Myocutaneous flap.
TE : Tissue Expander.
Table (2): Patient’s categories and type of surgical intervention.

<table>
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<tr>
<th>Classification of breast asymmetry (Nahai system)</th>
<th>No. of patients</th>
<th>Treatment</th>
</tr>
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<tbody>
<tr>
<td><strong>Primary breast asymmetry (congenital) (n=3):</strong></td>
<td></td>
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<tr>
<td>- Poland syndrome</td>
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<td>- LD flap, tissue expander, prosthesis, fat grafting, contralateral SOS technique mastopexy.</td>
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<td></td>
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<td>- Tissue expander, prosthesis, NAC transposition, contralateral SOS technique mastopexy.</td>
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<td><strong>Secondary breast asymmetry (developmental) (n=3):</strong></td>
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<td>- Juvenile breast hypertrophy</td>
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<td>- Reduction mammoplasty using superior pedicle and SOS marking technique.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>- Reduction mammoplasty using inferior pedicle and SOS marking technique.</td>
</tr>
<tr>
<td><strong>Tertiary breast asymmetries (acquired) (n=35):</strong></td>
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<td></td>
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<td>- Infection “following granulomatous mastitis”</td>
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<td>- Tissue expander, prosthesis, NAC reconstruction, contralateral SOS technique mastopexy.</td>
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<tr>
<td>- Burn</td>
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<td>- Scar revision, Z-Pasty, SOS technique mastopexy.</td>
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<td>- Recurrent multiple Benign tumor excision n=4</td>
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<td>- Tumor excision, superomedical pedicle and SOS marking technique mastopexy.</td>
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<td>- Malignant tumor excision:</td>
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<td>1- Oncoplastic procedure (n=8)</td>
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<td>- Superior pedicle, SOS marking technique in both sides.</td>
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<td>- Superior medial pedicle, SOS marking technique in both sides.</td>
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<td>2- Nipple areola sparing mastectomy N=4</td>
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<td>- Inferior pedicle, SOS marking technique in both sides.</td>
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<td>3- Skin sparing mastectomy N=3</td>
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<td>- Mastectomy, LD, prosthesis, contralateral SOS mastopexy.</td>
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<td>4- Post modified radical mastectomy reconstruction:</td>
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<td>- TRAM flap, immediate contralateral SOS mastopexy, NAC reconstruction.</td>
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<td>- TRAM N=7</td>
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<td>- TRAM flap, immediate contralateral SOS mastopexy.</td>
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<td>- LD, tissue expander and prosthesis N=5</td>
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Table (3): Patient satisfaction score “Harvard scale”.

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<th>Patient satisfaction</th>
<th>Description</th>
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<td>Excellent</td>
<td>• Treated breast nearly identical to untreated breast.</td>
</tr>
<tr>
<td>Good</td>
<td>• Treated breast slightly different than untreated.</td>
</tr>
<tr>
<td>Fair</td>
<td>• Treated breast clearly different from untreated but not seriously distorted.</td>
</tr>
<tr>
<td>Poor</td>
<td>• Treated breast seriously distorted.</td>
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Table (4): Percentage of complications in the three groups of patients.

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<th>Group 2</th>
<th>Group 3</th>
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<td>0%</td>
<td>5.3%</td>
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<td>Seroma</td>
<td>66.7%</td>
<td>0%</td>
<td>21%</td>
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<td>Prolonged pain</td>
<td>0%</td>
<td>21%</td>
<td>5.3%</td>
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<td>Infection</td>
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<td>0%</td>
<td>5.3%</td>
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<td>Delayed healing and flap necrosis</td>
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<td>Compromised NAC vascularity</td>
<td>0%</td>
<td>5.3%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Altered NA sensation</td>
<td>0%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Hypertrophic scarring</td>
<td>33.3%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Secondary procedure</td>
<td>33.3%</td>
<td>5.3%</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

RESULTS

This cohort retrospective study included 41 patients suffering from breast asymmetry and underwent breast reconstruction surgeries and immediate symmetry procedure in the contralateral breast, with age range (14-63 years) and mean age (38.3±12.5 years). Among these 41 patients; 3 patients (7.4%) were due to congenital cause (Poland syndrome) with mean age (18±2 years), 19 patients (46.3%) were due to developmental causes with mean age (35.3±12.2 years), while 19 patients (46.3%) were due to iatrogenic causes with mean age (44.5±8.9 years).

Operative time varied among each group: (3±0.6) in congenital group (group 1), (3.3±0.5) in developmental group (group 2) and (4±0.8) in iatrogenic group, see Diagram (1).

Follow-up time varied among groups: (10.6±7.2 months) in group 1, (12.3±7.6 months) in group 2, and (14.6±6.4 months) in group 3.
Post-operative patient's assessment was done objectively by using the 5 point subscale. Data analysis showed highest score in group 1 (8±0.9), then group 2 (7.6±1), while the lowest one was in group (7.1±1). See Diagram (2).

Patient satisfaction score “Harvard scale” was used for subjective evaluation. Data conducted from this scale showed the same sequence as 5 point subscale; highest score was in group 1 (7±1), followed by group 2 (6.8±1) and the lowest score was in group 3 (6.7±0.9), see Diagram (3).

In this current study, the mean of overall 5 point scale assessment for all 41 patients (objective method) was (7.4±1) while the mean of overall Harvard satisfaction scale for all patients (subjective method) was (6.6±0.9). The overall correlation between the objective assessment “5 point subscale” and the subjective assessment “Harvard scale” was done showing significant correlation with a p-value <0.01, see Diagram (4).

Post-operative complication rate for all groups of patients were recorded and analyzed. All recorded complications were analyzed and tabulated including hematoma, seroma, prolonged pain, infection, delayed healing and flap necrosis, compromised NAC vascularity, altered NA sensation, hypertrophic scarring, and the need for secondary procedure, see (Table 4) and Diagram (5). Some of our patient’s pre and post-operative photos are shown in Figs. (2-11).
Fig. (1): Pictures showing the SOS marking technique, the (upper left) patient lying in supine position under general anesthesia and the yellow arrows point on the infra mammary fold while the red ones point on the medial limb which continues with the breast median. (The upper right) patient lying in oblique position under general anesthesia and the blue arrows point on the lateral limb which continues with the breast meridian. (Lower left) showing the pre-operative marking, (lower right) showing the meeting of both meridians while using a stapler to imagine an tailor the amount of skin and tissue to be excised.

Fig. (2): Patient with Poland syndrome. The 1st row of photos showing the deformity, marking the anterior chest wall and the trans axillary approach for harvesting the LD flap and application of tissue expander. The 2nd row shows the post-operative result after inflation of the tissue expander. The 3rd and 4th rows shows the pre and post-operative clinical picture after definitive reconstruction with silicone implant and contralateral reduction mastopexy.
Fig. (3): Patient with Poland syndrome, severe deformity of the chest wall and spine, frozen shoulder, and history of trauma over the back treated with split thickness skin graft and midline lower abdominal incision. (1st raw) showing the pre-operative clinical picture. (2nd raw) after application of tissue expander, and the CT scan showing the deformity of the chest wall and spine. (3rd and 4th rows) showing the pre- and post-operative result after definitive reconstruction with silicone implant and reduction mastopexy off the contralateral side.

Fig. (4): Patient with bilateral post burn contractures and scarring. (Upper raw) showing the pre-operative clinical picture. (Lower raw) after release of the contractures by multiple Z pasties and reduction mastopexy off both breasts using the modified SOS marking technique.
Fig. (5): Patient with unilateral juvenile hypertrophy of the breast. (Upper raw) showing the pre-operative clinical picture. (Lower raw) post-operative result after definitive reconstruction with the inferior pedicle and wise pattern skin closure by using modified SOS marking technique.

Fig. (6): Patient with bilateral recurrent multiple fibro adenomas of the breast. (Upper raw) showing the pre-operative clinical picture. (2nd raw) post-operative result after reconstruction with inferior pedicle and wise pattern skin closure by using modified SOS marking technique. (3rd raw) showing the pre-operative marking. (4th and 5th rows) showing the left side pre and post mammography result and unfortunately missing the pre-operative mammography on the right side.
Fig. (7): Patient with malignant breast cancer (duct carcinoma in situ) underwent oncoplastic breast conservation. (Upper photo) showing the pre-operative marking and the lesion is at 12 o’clock on the left breast (2nd and 3rd rows) post-operative result after reconstruction with inferior pedicle and wise pattern skin closure by using modified SOS marking technique.

Fig. (8): Patient with malignant breast cancer (duct carcinoma) underwent oncoplastic breast conservation. (Upper photo) showing the pre-operative marking and the lesion is at 11 o’clock on the right breast (2nd and 3rd rows) post-operative result after reconstruction with superior medial pedicle and wise pattern skin closure by using modified SOS marking technique.
Fig. (9): Patient with post mastectomy breast deformity. (Upper row) showing the pre-operative clinical picture. (Lower row) post-operative result after reconstruction with TRAM flap and mastopexy of the contralateral side using modified SOS marking technique.

Fig. (10): Patient with post mastectomy breast deformity. (Upper row) showing the pre-operative clinical picture. (Lower row) post-operative result after reconstruction with TRAM flap, Lipofilling the upper pole of the right breast, nipple and areola reconstruction with skate flap, full thickness skin graft from the contralateral breast and mastopexy of the contralateral side using modified SOS marking technique.

Fig. (11): Patient with post mastectomy breast deformity. (1st row) showing the pre-operative clinical picture and scaring of the right side of the lower abdomen “previous appendectomy”. (2nd row) post-operative result after reconstruction with TRAM flap; the contralateral breast was operated previously operated upon in another hospital. (3rd row) showing failed previous two attempts to reconstruct the breast using the LD flap and anterolateral thigh flap in another hospital.
DISCUSSION

Aesthetic parameters of the breast affect greatly the entire female beauty; therefore, congenital, developmental and iatrogenic breast asymmetry affect significantly patient’s self-esteem [31,32]. Physiological breast asymmetry is a common and achieving symmetrical breasts require different strategies [33,34].

Reliable assessment for the aesthetic outcomes are scarce. It could be done through questioners answered by the patient, photograph to be assessed by other plastic surgeons, or by other professional e.g. nursing staff [35,46]. However, methods varies widely between studies and often they are ill defined. It is important to have standardized scoring system, to objectify the subjective aesthetic outcome.

The subjective assessment is the most commonly used method for breast aesthetic evaluation undertaken by one [47-58] or several observers [59-73]. The most commonly, simple and cost effective is evaluating the static photograph and using the digital video has been proposed [74]. Potter 2011 stated the introduction of the 3-dimensional and 4-dimensional breast scanning. In our study we used both the subjective method in the form of questioner and the objective method as a standardized scoring system [75]. Patients were asked to complete a satisfaction questionnaire based on the Harvard scale, introduced by Jay Harris in 1979 and we used the scoring method described by Visser et al., [26]. To assess the breast volume, shape, symmetry, scars, and nipple areola complex. For each of these items a 5-point Likert scale is used for scoring.

Patients were classified in our study into three groups: Congenital breast deformities comprised the first group. Sir Alfred Poland in 1841 enumerated the anomalies and Patrick Wensley Clarkson in 1962 who named the associated anomalies as Poland Syndrome. The incidence is 1:20,000-1:32,000, three time more common in males than females and it is more commonly affecting the left than the right side. Intrauterine fetal insult occurs between the fifth and eighth weeks of gestation, and genetic predisposition is not proven yet [76,77]. The clinical picture mandate the absence of the pectoralis major muscle “sternal head “, but a wide variety is mentioned in the literature [79].

We included three patients in our study. Two patients treated with trans axillary harvesting the latismus dorsi muscle flap and application of rounded tissue expander with an internal valve (450, 500cc) as a first stage, inflation was done exceeding the volume of the expanders and waiting for three months. The second stage was delivery of the expanders and application of breast implants and simultaneous mastopexy and or mastopexy was done in the contralateral side. A third stage was in the form of Lipofilling in the takeoff area of the breast. The third patient was treated in the same sequence without doing a latismus dorsi muscle transfer because of its atrophy, nor Lipofilling, however nipple and areola transposition was carried.

Data analysis showed the highest 5 point subscale in this group of patients (8±0.9), and highest patient satisfaction score “Harvard scale” (7±1). The operative time was the high in this group due to changing from lateral to supine the position during surgery and matching the best breast volume when choosing the breast implant. Seroma rate was high on the donor site, managed by adhesive compression taping and multiple cessions of drainage by syringe. One patient had trans axillary hypertrophic scar in the trans axillary approach which entailed scar revision under local anesthesia.

The second group of patients included three patients with juvenile hypertrophy of the breast. It is a benign condition where rapid, and continued breast hypertrophy occurs [80]. It is also described as virginal hypertrophy, juvenile gigantomastia, and juvenile macromastia [81,82]. Neinstein 1999 stated its rarity (2% of all breast lesions) after reviewing 15 publications over 40 years period [83]. Hoppe et al., 2011 reported 65 cases between 1910 and 2009 [82]. Additional nine cases from 2010 till 2017 [86-90]. The most challenging aspect in the management of JHB is the difficulty in effecting a definitive treatment. Using reduction mammoplasty techniques is ideal, reported recurrence rate is high which might necessitate secondary intervention [80-82].

Three patients with unilateral juvenile hypertrophy of the breast were included in our study. Wise pattern reduction mammoplasty utilizing the superior pedicle in one patient and inferior pedicle in two patients and SOS marking technique in the contralateral side. No recurrence were reported with an average follow-up time (12.3±7.6 months). The operative time was high due to the time needed for excision of the huge size breast, adequate hemostasis and symmetry reduction and mastopexy on the contralateral side. Patient's satisfaction and the objective 5 point subscale analysis was (6.8±1), (7.6±1) respectively denoting above average aesthetic outcome. Post-operative complication rate
was high as regard prolonged breast pain due to the skeletal neck and shoulder pain which takes few months to recover. Altered nipple and areola sensation and vascularity due to the extensive dissection and excision of the pathological breast tissue. Secondary sutures was done in one patient had delayed wound healing over the meeting point between the horizontal and vertical incision.

In our study the third group of patients included: Infection, post burn scarring, benign and malignant tumor excision and post mastectomy asymmetry. Granulomatous mastitis and post burn scarring significantly affects both the size and contour of the breast with variable degrees of nipple areola complex affection. If the insult occurs before puberty breast development will be affected. If it is after puberty breast shape will be altered due to the presence of scar contractures which alter the parenchyma of the breast [91-94]. One patient with post granulomatous mastitis asymmetry included in the study managed by: Tissue expansion (rounded expander 450cc, over inflated 600cc and left for three months) followed by prosthesis reconstruction and symmetry SOS mastopexy on the contralateral side. Three months later skate flap and full thickness skin graft were used to reconstruct the nipple areola complex. Post burn scarring of the breast included three patients managed by scar revision, Z-Pasty and bilateral SOS mastopexy.

Breast-Conserving Therapy (BCT) is one of the most effective and commonly used surgical oncological therapy for breast cancer, however it but it significantly affect breast symmetry. This depend on the balance between the volume of tissue to be excised “lumpectomy” and the total breast volume [95-103]. Patients with ptotic and hypertrophic breasts with a relatively large lumpectomy volume, immediate oncoplastic reconstruction could be done by means of reduction or mastopexy pattern techniques, at the time of the lumpectomy. The aim is to obliterate the lumpectomy dead space and reduce the potential breast asymmetry and distortion that will follow after radiation therapy [104].

Oncoplastic reduction mastopexy procedures are safe, showing high patient satisfaction and favorable aesthetic outcome. This procedure can be done immediately, at the time of the lumpectomy or delayed, after the radiation therapy [104-119]. Each protocol has its advantage and disadvantage regard the tumor margins, complications (radiated tissue), secondary intervention, and aesthetic results [119].

Weichman et al., retrospectively studied patients undergone BCT without immediate oncoplastic reconstruction looking for improving the aesthetic outcome after completion of the oncologic therapy. He concluded that irradiation and previous surgical intervention is a surgical challenge to correct the breast deformity asymmetry with four to ten time's higher risk of delayed wound healing, infection, and scarring in breast reduction after BCT [114].

Others demonstrated lower complication rates in post irradiated breast asymmetry management when surgical patient education and surgical refinement in the form of: Avoiding excessive skin undermining [114-120], wide nipple areola complex pedicle [115-117], and thick skin flaps dissection [115-117,120]. A major drawback is the limited number of patients included in these studies [114-120]. Barnea 2019 studied 25 patients with post irradiated breast deformity looking for breast symmetry procedure. The main outcome of the study was the complication rate and reoperations but no aesthetic evaluation were provided [121].

In our study the third group of patients included patients with recurrent multiple benign tumor, oncoplastic procedures, nipple areola sparing mastectomy, skin sparing mastectomy and post modified radical mastectomy reconstruction, see (Table 2). The operative time was maximum in this group of patients (4±0.8) which explains the complexity and the surgical challenge in such patients. Oncoplastic procedures entails intraoperative frozen section biopsy, changing the operative position when latismus dorsi is used for post mastectomy reconstruction, and matching symmetry in patients with TRAM flap reconstruction. The longest period of follow-up was noted (14.6±6.4 months) with no recurrence of malignancy. Objectively by using the 5 point subscale was the lowest as compared to the other groups (7.1±1). Patient satisfaction score “Harvard scale” was lowest score as well (6.7±0.9).

Out of 35 patients in the third group of patients, one patient with post mastectomy deformity and history of radiotherapy, reconstructed with LD flap and application of tissue expander developed post-operative hematoma (after 24 hours), at the anterior chest wall (recipient site) required evacuation and hemostasis under general anesthesia. One patient with history of smoking treated with nipple areola sparing mastectomy, application of breast implant and contralateral SOS mastopexy, developed subcutaneous seroma over the anterior chest wall and ultrasound guided aspiration was used for drainage. Compromised NAC vascularity which managed
with daily dressing. Patient complaint of altered nipple and areola sensation which is a normal squeal in this type of mastectomies. And lastly 53 years old patient with history of radiotherapy and hypertension having post modified radical mastectomy deformity, reconstructed with TRAM flap and immediate contralateral SOS mastopexy, and developed fat necrosis followed by wound infection and disruption of the recipient site, which required debridement of the necrotic fat and 2ry sutures under general anesthesia.

The study has a number of week points. It is a cohort retrospective study with potential bias in patient selection and outcome, objective analysis using soft wear programs for accurate breast measurements could be used in further studies.

**Conclusion:**

It is a novel marking technique solved the dilemma of changing the pre-operative plane according to the intraoperative judgment and altering the amount of tissue to be excised or reconstructed in patients suffering from congenital and pathological breast asymmetry. It is technical easy to learn, reliable with satisfactory aesthetic outcome especial in congenital asymmetries, with acceptable complication rate.

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**REFERENCES**


