

Correction of Asymmetry of the Breasts

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ABSTRACT

This study was conducted on 23 patients with asymmetric breasts. Pre operative assessment of nipple areola complex, site, size, inframammary crease, base, size difference of both breasts was done. The use of seizers pre and intra operatively were used for estimation of breast size satisfactory for the patient. All patients were corrected surgically either by augmentation, reduction or a combination of procedures (e.g. augmentation with mastopexy to the other breast). The surgery for those patients carried out under general (8 patients) or local anesthesia (8 patients) or combined general and local (7 patients).

Methodology and Patients: The use of different size breast implants corrected moderate asymmetrical patients (17 patients). Reduction mammoplasty was done for correction of large asymmetric patients (4 cases). Complete reconstruction by expansion and mammary implant along with reduction or mastopexy of the other breast (2 patients).

Results: Were satisfactory in 19 patients (82.6%) and a re-touch was needed in 4 patients (17.4%).

The results indicated that the use of pre operative and intraoperative implant seizers together with careful pre operative linear assessment of the parameters mentioned proved to be excellent for treating patients with breast asymmetry.

INTRODUCTION

Humans show bilateral symmetry in paired morphological traits such as ear size, digit length and breast volume. Perfect symmetry may be disturbed by a number of intrinsic and extrinsic factors, including secretion of hormones such as estrogen [1,2]. Breast asymmetry usually occurs due to genetic changes or certain coincidence due to which these organs start to grow differently. The growth of the breasts is controlled by estrogen hormone in young females. Breasts start to grow about 2 years after the appearance of the first menstrual bleeding period. The duration of breast growth usually lasts from two to four years. During that time it is normal that breasts may differ from one another in size or shape [2-6].

Causes of breast asymmetry:

- A period of infection, breast trauma or surgery on the developing breast, which may ultimately cause a decrease in natural growth.
- An enlarging breast lump or mass may cause the breast to become larger.
- Hereditary or inherited tendencies from your family may also contribute to this condition.
- A congenital condition known as Poland's Syndrome also results in breast asymmetry. This condition consists of the underdevelopment of one breast and its underlying musculature along with disfigurement of the hand on the same side of the smaller breast.

Breast symmetry is considered an attribute of beauty and normality and normal sized breasts will usually relate a feeling of adequacy. That is why women with asymmetric small breasts don't perceive themselves adequate or even normal [1,5-8]. Such asymmetry may be exaggerated after breast surgery if preoperative differences are not thoughtfully and precisely taken into account [2,9-12]. This excited studies for breast measurement to assess symmetry. Each method was judged as incomplete [3,14,15,16].

It's a problem more common than most women realize. Still, while no woman has perfectly matched breasts, one is always larger, slightly higher, or shaped differently than the other; in most women these imperfections are barely noticeable. For others, the problem may be more extreme to the point where their self confidence is compromised [7].

Whichever option the patient chooses, it is wise to wait until breast development is complete before undergoing a surgical procedure to make the breasts more evenly sized. If that does not happen, it is not likely that the size and shape of the breasts

will change until pregnancy or the beginning of menopause.

Breast augmentation procedure:

Breast augmentation has become one of the most frequently performed cosmetic plastic surgeries. The first surgical procedure was introduced in 1890. Now more and more women resolve to have breast augmentation.

Many women choose to have their breasts enlarged in order to satisfy their own desire for a fuller bust line. Breast augmentation, technically is known as augmentation mammoplasty, is a surgical procedure to augment the size and shape of a woman's breast [8].

Breast implants size:

In breast augmentation, one of the hardest and most important decisions is to choose the right implant size. Women have different expectations from breast augmentation surgery. Some are certain that they want to be a C cup or even double D; others want the augmentation to be minimal so that others would not notice a dramatic change. First advice is for women, who want to have their breasts enlarged, to decide what cup they would like to be. Women should not be conservative about it and should not worry that some people might notice the change, since more covering clothes may be worn at first to cover the enlargement. Most important for the women are to get the result you really wanted, disregarding other people's attitude [9].

The aim of this work was to find out a simple, applicable and accurate protocol for assessment and treatment of patients with asymmetric breasts.

PATIENTS AND METHODS

This study started October 2007 at El Mataria Teaching hospital and Elaj Medical Center, Abu Dhabi and was conducted on 23 patients with asymmetric breasts. Pre operative assessment of nipple areola complex, site, size, inframammary crease, base, size difference of both breasts was done. The use of seizers pre and intraoperatively were used for estimation of breast size satisfactory for the patient. All patients were corrected surgically either by augmentation, reduction or a combination of procedures (e.g. augmentation with mastopexy to the other breast).

Preoperative precise measurements were done for the size of NAC (dimensions), volume, and base of the breasts, contour, and level of NAC in relation to ribs [17,18,19].

The (try on) technique [20,23,27] for correction of the asymmetry was done in front of a mirror by using different seizers and bra with good cup and not supported by steel.

The use of different size breast implants to correct moderate asymmetrical patients with or without a touch to the larger breast i.e. mastopexy (17 patients) was done. Reduction mammoplasty was done for correction of large asymmetric patients (4 cases). Complete reconstruction by expansion and mammary implant along with reduction or mastopexy of the other breast, was the choice for 2 patients. The surgery for those patients carried out under general (8 patients) or local anesthesia (8 patients) or combined general and local (7 patients).

RESULTS

Results were satisfactory in 19 patients (82.6%) and a re-touch was needed in 4 patients (17.4%). Symmetric satisfaction was found in 19 patients, in the other 4 patients there were slight asymmetry in NAC position and needed a re-touch. There were no haematoma, infection, scar problem or capsular contracture to the patients. There were no differences between patients in the term of mean pulse rate and mean oxygen saturation. However, there was a significant difference in the mean arterial pressure between the first and the third groups and the second group.

General anesthesia was associated with postoperative nausea and vomiting in 20% of the patients.

Postoperative analgesia requirements were greater in patients under G.A than in other patients. Patients expressed satisfaction with L.A combined with G.A.

DISCUSSION

The development of tender breast "buds" is usually the first sign of puberty in girls. Some girls notice breast growth as early as age 7 or 8, while others don't start until age 13 or so. The timing is determined by the biologic "clock" that tells the body to start producing high levels of female hormones. Breasts go through five "stages" of growth over the next five to six years, until their full maturity is reached by age 17 or 18. The final size of a girl's breasts is determined by heredity and can range from very small (bra size AA) to very full (such as size EE). Breast size varies greatly among women, and all sizes and shapes are normal and healthy [3,4].



Fig. (1): Examples of breast asymmetry.
(Patient 1)

Fig. (2-A): Preoperative asymmetric
small breasts.



Fig. (2-B): Postoperative views.

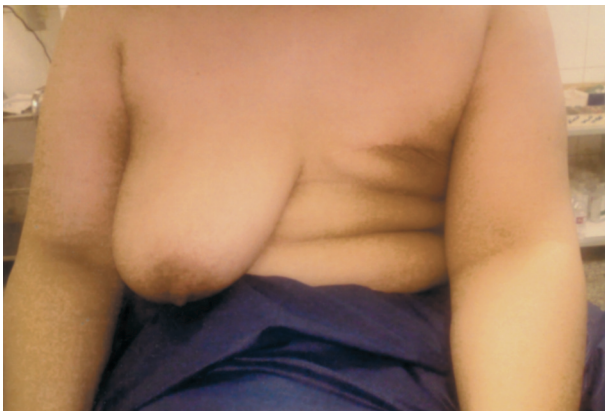


Fig. (3-A): Post left mastectomy.

(Patient 2)



Fig. (3-B): Expander in place.



Fig. (3-C): Immediate postoperative results.



Fig. (4-A): Post infection atrophy.



Fig. (4-B): Expander in place.

(Patient 3)



Fig. (4-C): Post operative view.

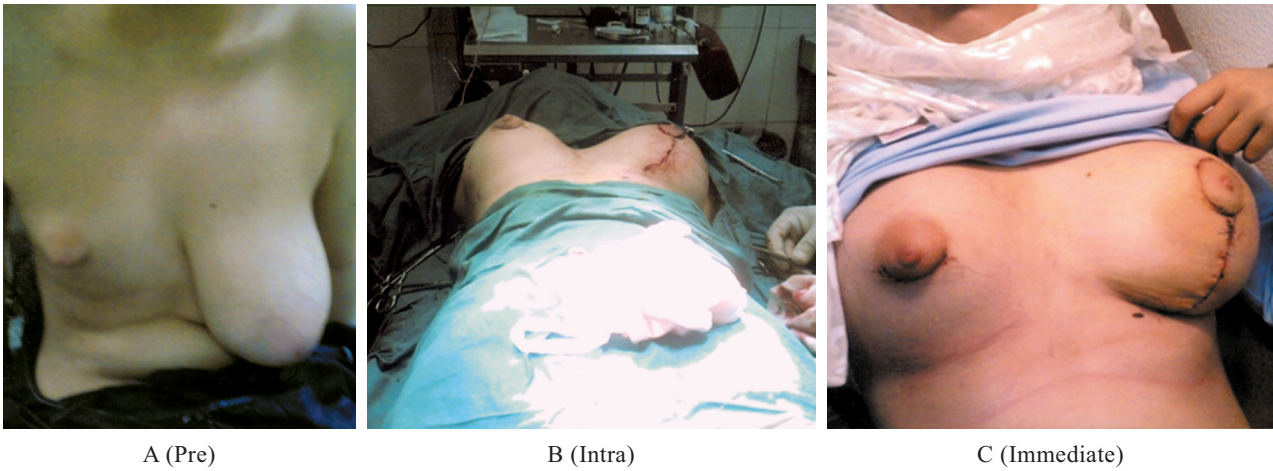


Fig. (5): Patient 4, Poland's syndrome

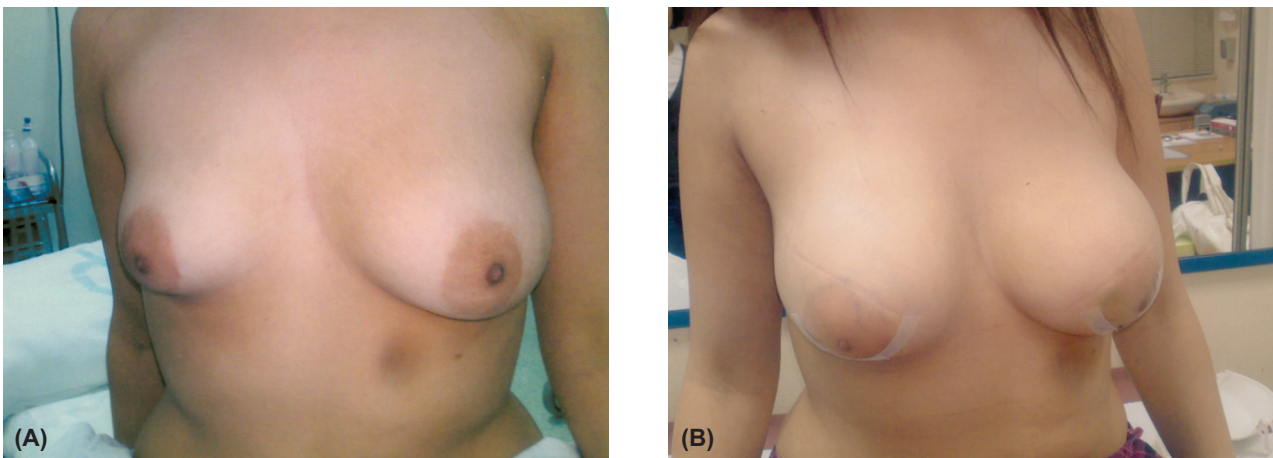


Fig. (6): Patient 5, Poland's syndrome (Pre and Post).

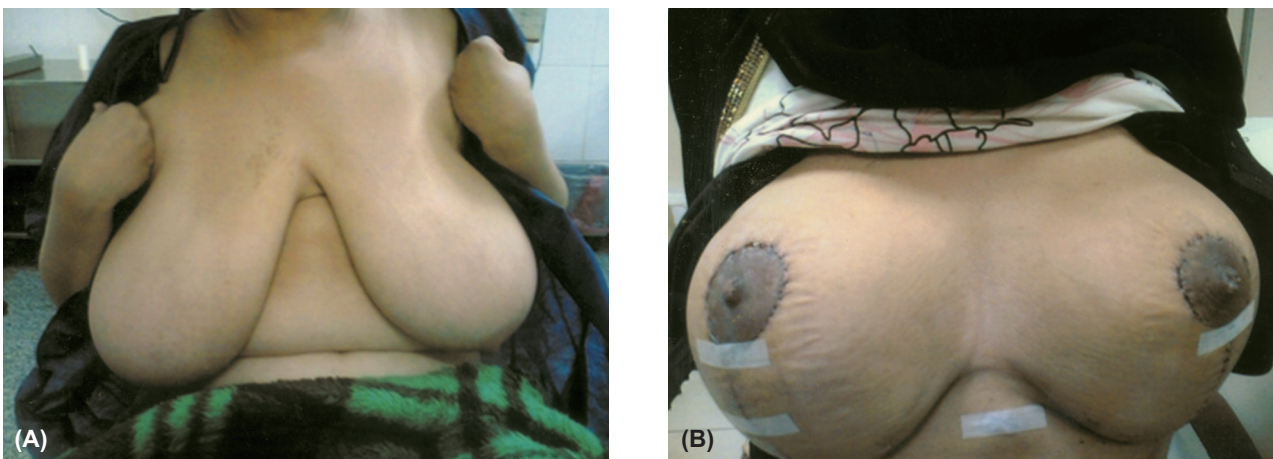


Fig. (7): Patient 6, reduction of asymmetric breasts.

The breast made up of milk glands and ducts, connective tissue and fat. In teenagers and young women the breast tissue is firm and dense, and then becomes softer and fattier with age [4]. There is no muscle tissue in the breast, which is why

there are no exercises to make them bigger. However, the pectoral muscles that lie underneath the breasts can be firmed up to provide lift and shape (think of the "pecks" on male body builders). Since the breasts do contain lots of fat cells, women

will notice their bra size increases with weight gain. Nature designed a woman's breast to produce milk for her baby. In our society however, the breast is often viewed as a symbol of femininity and sexual attractiveness [9,10,24,25].

Poland's syndrome:

Sometimes, mismatched breasts are evident simply by looking into a mirror. In many cases, such obvious discrepancies are the result of Poland's Syndrome.

Poland's Syndrome is caused by a restricted embryonic blood supply which can result in extremely asymmetrical breasts (as well as deformed arms or even a missing pectoral muscle) [7].

Tubular breasts:

Tubular breasts are the most complex form of breast asymmetry. They are commonly associated with a drastic mismatching of the breasts. The major challenge is the tight and usually inflexible inframammary fold. Correction for this type of breast is typically to increase the width of the affected breast.

Patients who are considering correcting the asymmetry of the breasts may do so by either undergoing a breast augmentation procedure or a breast reduction procedure [16-20]. In the case of an augmentation, the smaller breast will be enhanced; while in reduction will involve removing fat or breast tissue from the larger breast. The patient will have to make the decision to undergo an augmentation or a reduction and will likely make the choice based on which breast size is proportional to the body. But we have to mention that whatever efforts of correction still perfect symmetric breasts need more precise efforts to achieve.

Surgeons consider breast asymmetry that needs to be corrected surgically, when breasts differ from each other in a bra cup size in volume. If breasts differ from each other in less than one bra cup size, it is not thought to be in need for surgery [21-24,26].

Besides, there is a pathology called virgin hypertrophy. It means that breasts become extremely large during the years of adolescence, and they are bigger than cup D. Often this also leads to breast asymmetry. In such case, plastic surgery can be done even to girls younger than 16 and this assures better outcome results [25,26].

Breast asymmetry correction is achieved by breast augmentation of one or both breasts. Also, breast reduction can be performed on both or one

breast. Sometimes a surgeon chooses to perform breast augmentation on one breast and breast reduction on another to achieve perfect symmetry. In case of virgin hypertrophy, modified liposuction of breasts may be performed at a younger age, which could lead to better healing and almost unnoticeable scarring [22,28].

Surgical breast asymmetry correction is successful in most cases, and women are satisfied with the results. Results of cosmetic breast surgery are usually better when there is only difference in size of the breasts.

Breast augmentation can correct size, shape and asymmetry of breasts, for a number of reasons:

- To enhance the body contour of a woman who, for personal reasons, feels her breast size is too small.
- To correct a contraction in breast volume after pregnancy.
- To balance a difference in breast size.

By inserting an implant behind each breast, surgeons are able to increase a woman's bust line by one or more bra cup size [17,18,21,24].

Bra cup size is not a good parameter to use for determining the size of a breast implant. Different styles and types of bras have different sizes. So, what is a C cup with one bra may be a D cup on the other.

In addition, women wear their bras differently. Some wear them the way that breasts bulge out at the top, other wear loose bras leaving more space for their breasts. Hence, a bra size is not a criterion [9,10,13].

The largest legally available implant size is 1200cc. However, there are very few women who would choose such a size. Most frequently women choose the size of a breast implant from 250cc to 675cc [13].

There is currently no standard objective method for assessment of breast asymmetry. The linear measurements have yielded conflicting results [21,22,26,27].

Fluid displacement, cone measurements, anthropomorphic, three dimensional. And Cavalieri principles are all methods for breast volume measurements, they proved to be accurate but share a major drawback of requiring special apparatus and being not portable [17,18,21,22,24-27].

Our results indicated that the use of preoperative and intraoperative implant seizures together with careful pre operative linear assessment of the parameters mentioned proved to be excellent for treating patients with breast asymmetry.

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