

Breast Enlargement - How to Correctly Choose an Implant Size?

AZHAR ASLAM

Breast enlargement is the most popular cosmetic surgery procedure in the UK. The increasing popularity and accessibility of cosmetic surgery has seen a significantly increased demand for this operation. Despite this, very few patients truly understand the nature of the operation, the risks involved, the limitations of the surgery and the long-term effects. Although the past few years has seen a lot of media hype associated with the good effect of breast augmentation, the level of good information available is less than satisfactory.

However, an even more disturbing fact is that, due to lack of proper training, very few surgeons who are beginning their practice really understand the different factors and variables that are paramount in achieving a good, long term result. Everyone knows that a breast augmentation involves adding an implant onto a pre existing breast. However, relatively few surgeons and hardly any patients grasp the relationship of patient desire, expectations and the physical aspects of volume enlargement.

Cosmetic surgery is unique in that unlike other surgical specialties, it is performed in a five dimensional framework. To undertake any successful cosmetic surgery operation understanding of this framework is a basic requisite. Breast enlargement is no exception to this rule. By this we mean that there is three-dimensional framework of the (physical) body. In addition, a cosmetic surgeon has to take into account the fourth dimension of Time. This means that a cosmetic surgeon has to look into the future to visualise the desired final result after the healing process is complete, taking into account the physical characteristics that are unique to each individual. Even more importantly a cosmetic surgeon has to delve into the patient's mind and ascertain the nature what the patient dreams of and wants, what the patient desires and what the patient expects. Understanding this desire is fundamental to a successful cosmetic surgery operation. In performing breast augmentation, all these principals are illustrated beautifully.

In this article we shall endeavor to outline the basic parameters that a surgeon must take into account, based on the principles outlined above. In this respect, the most important element is understanding what a patient wants. Most patients try

Correspondence to Mr. Azhar Aslam, Consultant Plastic Surgeon, 10-Harley Street, London. Tel. 020 7436 7408/0796 756 8120 Email: azhar1302@yahoo.com

to describe their desired result in vaguely defined concepts and unquantifiable terms. In our experience, many female patients are even unaware of what a breast cup size means and how cup sizes are measured. Without this basic understanding achieving patient expectations may be impossible. Hence, the patient education, to make a patient understand her own desires and relate them to the limitations imposed by their own body and tissues is the most significant contributor towards a patient satisfaction.

For many surgeons and patients, proper implant selection is an art rather than a science.

No single method has been proven to predict what size or shape will provide long-term patient satisfaction. With detailed patient education, discussion, and counseling and respect for implant-soft tissue dynamics the rate of dissatisfied patients can be reduced significantly. The goal of augmentation is to improve the size and the shape of breasts. And while this creates, a more positive self-image, the only predictable change is larger breasts. Positive psychological effects are common, but are not necessarily predictable.

At the beginning of each consultation, we enquire from the patient about two element of what they seek. First, why do they want breast enlargement and second, what do they want to achieve. Understanding the answer to the first gives a clearer picture of the motivation behind seeking surgery and makes it easy to root out excessive or wrong expectations and to filter out obsessive element the patient desire. The answer to the second question helps the surgeon to define and quantify the patient desire in physical and measurable terms.

Patients seeking breast augmentation fall into three broad categories:

- 1) Young patients whose breasts have not grown to achieve 'normal fill'
- 2) Patients, mostly in their 30's who have suffered the effects of pregnancy related changes and changes related to weight fluctuations
- 3) Middle aged patients, late 40's onwards, who started with small breasts and have changed further due to ageing process.

Quantifying the patient desire : the myth of cup size

All practicing surgeons have come across situations when patients have complained that their desired cup size has not been achieved. This has been despite

the fact that the desired volume was inserted and anesthetically good results has been achieved!

This discrepancy between a cup size and the volume arises due to the fact that cup size is not a scientific measurement and means different things to different people. In this regard, patient education is crucial, as almost all patients will indicate a desired cup size they want to be. However, if at this stage one enquires from the patient what they mean by it, almost always it is the case that a patient does not specifically know what they mean by that cup size. Cup size is extremely variable and inconsistent from one brand of bra to another and it should be pointed out and explained that a cup size is only a general guideline that can't be ordered or delivered.

It is important to understand that the cup size is not a measurement of a particular volume. It rather takes into account the volume as well as the dimension of the breast. Of these, the two important dimensions are discussed below. Hence the same amount of volume placed in two different women, will create a different amount of tissue stretch during the period of healing and settling. This means that the same volume can achieve different dimensions in different bodies and hence, the importance of tissue characteristics as well as difference of the cup size.

We always point out to the patients that they will be measured to be different cup sizes by different shops. As well as there is the fact that if they pick up the same size bras from different manufacturers these will be different in terms of proper fitting. Hence, the most crucial piece of information that a surgeon must pass to the patient before the surgery. The precise cup size cannot be guaranteed.

It is however, not as despairing as it sounds. With proper measurements and accurate assessment of tissue characteristics, it is almost always possible to choose an implant volume which will match the patient desire. The fact that we do not guarantee this to the patient does not mean that we do not endeavor to achieve it.

Defining an Implant Volume

Once the surgeon has quantified the patient desire, defining the implant volume is the most important decision. This decision is the most single important determinant of failure or success of the operation.

The answer to the questions how much breast is enough, depends on two major factors:

1. Breast size in proportion to body size
2. The characteristic of each woman's breast skin and breast tissues.

The number of variables that affect the final breast size is a numerous, but following are the most important ones.

The body frame

A breast cannot be seen in isolation as if hanging in the air. It always has to be seen in relation to the body. Hence, assessing the patient build in terms of height and weight and assessing the shoulder and hips provides a basic measurement.

The dimensions of the breast

The base width of the breast is the most important dimension. In this regard, a second important measurement is the distance between the nipple (NAC) and the inframammary crease (IMC). Other dimensions which are important are distance between both anterior axillary lines and the distance of nipples from standard notch.

The breast tissues

In this regard, the most important element to measure is the thickness of the breast tissue. This will determine whether there is adequate cover for an implant. However, most surgeons make the mistake of taking absolute thickness as the important measurement. Thickness of the tissue should always be judged against the intended volume of the implant, i.e. the bigger the volume, the more the desired thickness.

Quality of breast tissue

Thickness of tissue is not enough to provide adequate cover if the quality of these tissues is not good. By quality we mean the adherence between skin and breast tissue, to act as single unit and envelope. If the skin is dehisced from underlying tissue, the thickness needed to provide cover to the implant will have to increase significantly.. Every woman's breast skin can only stretch and enlarge a certain amount without sustaining damage such as excessive stretching and thinning that allows the breast to sag or cause tearing of the skin under surface that produces stretch marks.

Strength of ligaments

It is crucial to understand that any implant adds volume into the breast. This is extremely important in groups two and three since their breast tissue and ligaments have already been damaged. The stronger the breast ligaments the more volume they can hold.

Preexisting Volume

It is important to remember, as well as to remind the patient, that the final volume achieved is the total of pre existing breast volume plus the volume of the implant inserted.

Patient desire

Although this is being listed as the last of the factors, it is actually the most important of them all. Trick is to

reconcile the patient desire with the appropriate volume taking into account all the factors above. This reconciliation may involve patient desire to modify and to create realistic expectations which will lead to patient satisfaction.

For example, a patient may desire to achieve a D cup. However, a surgeon may assess that the volume needed to achieve patient desire, in adding to the pre existing volume may cause tissue damage. In such a case, a detailed explanation is necessary to change the patient desire or to explain the consequences, in terms of changes in the future and what other corrective surgery may need to be performed, if the patient was to fulfill their desires and go ahead with what is seen to be a larger implant.

NO SURGICAL OPTION IS PERFECT. No surgical option is without tradeoffs.

The question is how to pick the option that maximises the benefits and minimises the tradeoffs. Perfection or change to a different breast is never an option. Improvement in the existing breast is the only realistic alternative. No surgeon can totally predict what a patient's tissues will do over time, but every surgeon and patient should consider these issues when making implant choices. **No implant will produce the same result in two different patients as explained above.**

It is crucial to understand that a range of volumes, instead of a specific volume will result in a specific cup. For example, in patients with a height range of 5'2 to 5'7 and the weight range of 8.5 to 9.5 stones, the chest measurements generally are 29 to 32cm. To achieve a C cup in such patients, a volume range of 265 grams to 330 grams is generally needed. The precise volume depends upon the pre existing breast volume, the thickness of tissue, expected tissue stretch and the strength of the holding ligaments.

Similarly, the distance between the NAC and IMC influences the cup size. In the frame range mentioned above, a distance of 9 to 11cm will achieve the basic dimensions of a C cup requirement. This means that if the distance between NAC and IMC is less than that, it will need to be increased in addition to an adequate volume. On the other hand, if this distance is more, then the patient should be informed (it will be a rare situation when they don't already know this) that the cup size dimension are already bigger than the desired (in this example C) cup. In such cases, the loss of volume has resulted in the loss of cup size but the dimensions are still intact. Hence, a smaller volume, compared to the dimensions is needed to reduce the cup size. This relationship of dimensions and volume

is crucial to the understanding of cup sizes as generally spoken by the patients.

How to choose the correct implant volume?

For most surgeons, choosing the correct volume is less of a science and more of an art based on their personal experiences. Crude methods such as rice test, in which a patient is asked to try a certain volume of rice in their bras, are commonly used to assist in deciding the correct volume. In our view, the main advantage of such tests is not their accuracy but the onus they place on the patients, to contribute in the decision making and in helping them understand the limitations that a surgeon faces.

Identifying critical variables and decisions and creating a framework of simple system to provide surgeons with guidance is desirable. More elaborate systems such as bio-dimensional system and high five measuring systems have been described. To us, such systems suffer from the problems of rigidity and uniqueness to the surgeon who created them. Many surgeons in busy practices find it difficult to adopt such system one hundred percent, due to their encumber-some nature. Any practical and adoptable decision process must focus on the few critical parameters that most affect outcomes. However, study of such systems can help the surgeon decide the implant volumes more easily than otherwise. But these are guidelines only and the wishes of the patient still stay paramount, whatever system a surgeon applies.

We use a much simpler guideline essentially based on all factors discussed above. For the sake of simplicity, this description is only based upon the round silicone implants, which are most commonly used in the UK. First, the distance between two anterior axillary lines (AA) is measured. Then we measure the NAC to IMC distance and Sternal Notch to NAC distance.

Then an implant with the base size of half the AA measurement is chosen. The base size of such an implant will be only slightly larger than the base size of the breast, hence, creating fullness both medially as well as laterally. The medial fullness gives cleavage and the lateral fullness balances the shoulder and hips and creates the female curviness.

The volume of this implant is noted and based upon patient desire, the breast tissue and expected stretch with resulting change in dimensions and finally the desired shape, this volume is increased or reduced in the increments of 20 grams. Almost always it is possible to make adjustments and find ideal implant volume in +/- 40 to 50 grams range.

Achieving the cup size desired

As described above the second important measurement is NAC to IMC distance. In an aesthetically appealing breast, the wider the breast, the longer this distance. Determining optimal inframammary fold position at the end of breast augmentation is a major factor that affects the aesthetic result and achieves a certain cup size.

We take the following general guideline to achieve proper cup size. NAC to IMC 7 cm or less provides A cup. B cup is 8-9 cm. C cup is 9-11 cm. D cup is 10.5 to 12 cm. DD cup is 12-13 cm and so on. This is a very simple and effective method.

As mentioned, the concept behind this is that by performing breast enlargement, the whole figure is

enhanced. It is important to explain this to the patient so that she may understand the breast sits on the body and the operation is being performed to enhance the whole body. Each individual has her own special needs and desire and once the volume has been determined, the shape, choice, the feel of implant and the projection should be explained. Lastly, the issue of the cup size and impossibility of guaranteeing precise cup size should be emphasized.

The main aim of doing cosmetic surgery is to make a patient happy and this aim should never be ignored for any surgical procedures. The description above provides a guideline only and each patient should have their own tailored operation.