Shapes, Proportions, and Variations in Breast Aesthetic Ideals

The Definition of Breast Beauty, Analysis, and Surgical Practice

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KEYWORDS

• Aesthetic • Augmentation • Beauty • Breast • Ideal • Natural • Perfect • Proportion

KEY POINTS

- Few studies in the plastic surgical literature are useful in planning an ideal breast.
- Simplicity is key to obtaining consistently beautiful and natural results.
- There are 4 key features that define an attractive breast geometrically.
- The lower pole is critical in determining breast beauty.
- The ICE principle can be used as a template to reliably achieve beautiful breasts.

INTRODUCTION

Many sculpted, painted, and photographed women with beautiful natural breasts have adorned the history of art. However, until recently there have been few objective data in the plastic surgical literature to define an aesthetically pleasing template for breast shape and proportion. An essential part of aesthetic surgery is an understanding of the aesthetic ideals of the body. Such guidelines allow for interpretation, manipulation, and modification to create or recreate a determined aesthetic outcome. The Greeks and the Romans first set out to define ideals of beauty and proportion. Plato compared human proportions with the ideal columns of a Greek temple, while Vitruvius, a Roman author and architect, also spoke of ideal human and facial proportion, and his writings formed the basis of Leonardo da Vinci's Vitruvian Man in the late fifteenth century. In the latter, the division of the face into thirds and fifths form part of the iconic da Vinci images correlating ideal human shape with geometry.

More recently much has been written about such norms, particularly in the face,[1–3] and with regards to orthognathic angles and proportions,[4] which act as guides in facial reconstruction and craniofacial surgery. Similarly, in the nose the precise establishment of nasal proportion by Gunter and colleagues[5] has led to a template for basic nasal ideals: a "map" for aesthetic rhinoplasty. In addition, Burget and Menick[6,7] have described aesthetic units of the nose to serve as a guide for nasal reconstruction.

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Although much has been written on breast form, it has not been subject to such precise definitions of beauty. Vague terms have often been used to describe desirable characteristics such as proportion, harmony, shape, and flow.[8,9] However, these are not objective or measurable parameters. Others have applied measurements to certain criteria but not as identifiers of beauty or aesthetic ideal. The often referred to "Penn triangle" described an equilateral triangle based on nipple distance from the suprasternal notch observed in a selected group of women with attractive breasts.[10] It does not, however, define shape or form, or any other key components that might be responsible for the attractiveness of those breasts. Indeed, it is perfectly possible to have the Penn dimensions and still have an unattractive breast.

Hauben and colleagues[11] examined breast-nipple-areola proportion in 50 randomly selected female volunteers. Their group included women aged between 24 and 64 years in addition to women with body mass indices ranging from 20.4 to 30.8 kg/m^2. This observational study on a random population showed no correlation of the findings with breast attractiveness.

Fabié and colleagues[12] examined breast proportions in photographs of 70 volunteer women and 1 mannequin, and selected the 10 women who obtained the best scores given by a panel of 20 people including plastic surgeons and lay people. The findings highlighted that nipple position was significant in determining aesthetic proportion in the breast as determined by sternal notch to nipple distance, relative to trunk height. However, the initial population of women included in their study was not selected for the attractiveness of their breasts.

A small study by Hsia and Thomson[13] examined breast profile through hand-drawn line drawings analyzing differences in preference between surgeons and patients, suggesting that the latter prefer a less natural look than the former. Although the numbers are too small to draw any real conclusions, the importance of breast profile was highlighted as a parameter for assessment.

ANALYSIS OF BREAST BEAUTY

The authors previously identified key objective parameters defining the aesthetic ideal of the breast in 2 studies: an observational analysis of 100 models with natural breasts,[14] and a population analysis with 1315 respondents.[15]

In the first of these articles, 100 consecutive topless models with natural breasts were studied. These models were chosen from the Sun newspaper Web site (published in the United Kingdom by News International Ltd). This publication has the tenth greatest circulation in any language in the world, and exclusively photographs topless models who have not had aesthetic breast procedures. The models' breasts were analyzed to establish whether a pattern of identifiable features was common to all of them as clear indices of their attractiveness. Four key features were identified and are shown in **Box 1** and **Fig. 1**.

Perhaps the most significant observation was of the upper pole to lower pole (U:L) distribution, the so-called 45:55 ratio, defining the lower pole as consistently slightly fuller than the upper pole. This observation is a fundamental one, and contravenes conventional notions of upper pole fullness as being a desirable end goal of breast augmentation.

Fig. 2 demonstrates a good result whereby the attractive 4 key features of the breast have been maintained after augmentation. Clinical examples of poor results in aesthetic breast surgery are shown in **Figs. 3** and **4**, illustrating that deviation from these norms yields a less attractive breast: the greater the deviation, the less attractive the breast (**Figs. 3** and **4**).

The importance of these findings lies in the ability to define an "aesthetic template" that might ultimately serve as a guide for surgical planning and implant selection through a better understanding of aesthetic goals.

POPULATION ANALYSIS

As a verification of their previous findings, the authors designed and conducted a population analysis to test the hypothesis that the observations made in the first study[14] were more widely recognized as markers of breast beauty.[15]

A total of 1315 respondents of all ages, sexes, social class, and ethnic backgrounds were asked to rank the attractiveness of images of 4 women with varying breast sizes. Each of the women's breasts were morphed into 4 different proportions: one of the key features was the U:L percentage proportion, corresponding to ratios of 35:65,

Box 1
Critical ideals of breast beauty

- Upper pole to lower pole ratio (U:L) of 45%:55% (ie, slightly fuller lower pole than upper pole): the "45:55 breast"
- Skyward-pointing nipple (20° mean angle)
- Straight/mildly concave upper pole slope
- Tight lower pole convexity