Aesthetic Surgery Training: The Role of Art Education

After initiating a trial series of art classes for plastic surgery residents, the authors recommend that art education, including hands-on training and art appreciation, becomes part of an aesthetic surgery training curriculum. (Aesthetic Surg J 2005;25:84-86.)

Aesthetic surgeons “mold” a patient’s features, much like sculptors mold clay or marble, to achieve an improved appearance. Although art-based concepts such as proportion, line, balance, harmony, dimensionality, and symmetry are the essence of aesthetic plastic surgery, there is no art education built into the formal training of plastic surgeons. Instead, plastic surgeons grapple with these aesthetic concepts as best they can when planning and executing treatment, and, over time, each surgeon develops his or her own aesthetic sensibility.

There is little research on the role of art education in plastic surgery training and no approved protocol for art courses in medical education, including plastic surgery. We decided to experiment by offering a brief art course at our institute. It is notable that none of our participants had ever received previous art education. Our goal was to address problems in symmetry, dimensionality, and other aspects of artistic creation applicable to the clinical work of our trainees and junior plastic surgeons.

Theories and Research on the Role of Art Education in Plastic Surgery Training

According to Thompson et al, the thinking and planning of a plastic surgeon must be similar to that of a painter or sculptor. Like the artist, a surgeon should be aware of the patient in 3 dimensions and be able to visualize the “finished product” in order to plan and execute a surgical treatment that will produce an optimal result. The early results of Thompson’s simplified art course for plastic surgeons were (1) improvement in judgment of proportion and symmetry; (2) improvement in notations of patient characteristics; and (3) familiarization with molding and casting techniques that might enable plastic surgeons to better plan their use of implant materials or prostheses.1

Dr. Morani, an esteemed pioneer in plastic surgery and a sculptor, advises that formal art education should have a place in plastic surgery training, stating that the study of art will help to develop a “trained eye.” She also believes that knowledge of art gleaned through courses in drawing, modeling, casting, and lectures or seminars on art appreciation can enhance the development of surgical skill. She advises that surgeons should increase their knowledge of 3-dimensional human anatomy to better replicate anatomic details and to achieve better artistic results. She also recommends that surgeons visit museums and study art collections.

Our Art Program

We arranged a study with the help of the Department of Art Education in our university. Six specialists and 7 trainees (13 plastic surgeons, 12 men and 1 woman) from the Division of Plastic and Reconstructive Surgery in Ondokuz Mayis University, Samsun, Turkey, were included in the study (1 participant was a visitor-trainee from Fireman Hospital, New Castle Upon Tyne, England). The art department conducted a pretest to determine general interests and abilities, formal art lectures, and practice courses.

Part of the pretest involved each student creating a charcoal drawing of a human face. Eight (62%) of these drawings were rated as poor (Figure 1); 3 (23%) were acceptable (Figure 2); and 2 (15%) were good (Figures 3 and 4). Five subjects (38%) admitted to having a marked symmetry problem, 6 subjects (47%) acknowledged mild perception difficulties, and 2 (15%) had no symmetry problem.
The curriculum consisted of 6 hours of general art courses including art history, light and shadow, symmetry and asymmetry, 3- and 4-dimensionality, and drawing techniques. In addition, there were 3 hands-on sessions in sculpture with clay, which included nasal sculpting (Figure 5).

**Results and Recommendations**

Everyone said they enjoyed the classes, and there was complete participation in each study session. In the clay sessions, teachers observed that the surgeons were able to mold the clay, but they were generally unable to execute details. It was observed that the surgeons’ drawing skills were generally poor. Many surgeons had problems creating symmetrical shapes.

Although no precise methods were developed to evaluate the results of this limited art education, a number of observations following the course of study were made.

**Figure 1.** Students were given a pretest to evaluate their skills before art education. An example of a drawing that was rated as “poor.”

**Figure 2.** An example of a pretest drawing that was rated as “acceptable.”

**Figure 3. A, B,** These pretest drawings were rated as “good.”

**Figure 4.** These drawings were executed by the lecturer.
and recorded by the authors. These include the following:

• Students’ ability to more precisely chart anatomical problems was improved.
• Students’ ability to predict end results of surgery was improved as demonstrated by their markings on preoperative patient photos.
• Students’ ability to apply high quality, meticulous dressings was improved.

Following the training period, the art instructors made the following suggestions:
1. Students should continue working on art projects, as frequent practice will yield improved results (Figure 5).
2. Students should use the principles learned through art education to more clearly define aesthetic surgical problems.
3. Students should frequently refer to art-based tools such as an anatomical poster template of the human face and a 3-dimensional anatomical model when considering symmetry, ratios, and proportions in surgical situations.

Conclusion

Instead of clay or marble, aesthetic surgeons use modern biocompatible materials and advanced techniques to enhance human beauty. Although face and body contouring is, in many ways, similar to sculpting inanimate art forms, it is, of course, limited by anatomy, available tissues, and patient safety issues.5

Our experience does not prove that art courses improve surgical technique, but our observations that students improved their attention to detail and developed a greater ability to predict surgical results are encouraging. Further, we believe that a surgeon’s ability to provide good quality illustrations as part of the medical record is important, not only for clear communication but to help avoid potential medico-legal problems. The uses of photographic analysis and computer-imaging programs can assist communication with patients, but a hand-drawn illustration of the problem and the treatment approach often may create a stronger connection between surgeon and patient.

With artistic training, subjective perception of anatomical details becomes grounded in a strong theoretical base.7 Judgment and taste can be refined by this knowledge; innate talent is important but not primary.8 For this reason, art education can be beneficial in the training of every aesthetic plastic surgeon.

References


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