Evidence-Based Medicine in Aesthetic Surgery

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Two years ago this month, when I began my tenure as Editor-in-Chief following the official indexing of *Aesthetic Surgery Journal (ASJ)* in Medline/PubMed, I wrote about my goals for the Journal and my commitment to you, ASJ’s readers.1 At that time, I reaffirmed my belief that the Journal was “well-positioned to stay at the forefront of clinical, scientific, and technological advances and to bring you the information you need to stay ahead of the curve.” It remains my desire, as it was then, that ASJ be “the Journal to which you consistently turn for information that has real value to your aesthetic surgery practice.”

In keeping with that mission, it is with great excitement and pride that we begin a dialogue with you about integrating evidence-based medicine (EBM) into the pages of ASJ and into our daily clinical practices. In August 2010, I was privileged to participate in a two-day EBM Summit in Colorado Springs, during which leaders in the aesthetic surgery field, representatives from our sister specialties, and experts in the application of EBM came together to discuss how we might begin incorporating EBM principles to our clinical practices. A full summary of this meeting appears in this month’s issue as a Special Topic in on page 137; it will also appear in the pages of *Plastic and Reconstructive Surgery*. This demonstrates our cooperative efforts in ensuring that professional societies and scholarly Journals are speaking with one voice, working together to support you in your efforts to continually improve patient outcomes and satisfaction—which I know is of the utmost importance to all of us as practicing physicians.

I hope the background information on the EBM Summit will be as helpful, exciting, and encouraging to you as attending the meeting as it was to me. The article relays a great deal of information about the importance of EBM in our specialty. I would like to also say a few words about the history of EBM and why I believe a movement toward EBM is essential to the growth (dare I say, even the survival) of aesthetic surgery—and, furthermore, how I believe ASJ can play a role in helping to enhance this “culture change.”

THE HISTORY OF EBM

Although the official term EBM was coined much later by experts at McMaster University in Canada, the idea of adopting a new “clinical learning strategy” based more heavily on the best available evidence, rather than subjective expertise or instinct, began to take hold in the 1970s.2,3 Prior to that, many of us operated under the assumption that “through the rigors of medical education, followed by continuing education, Journals, individual experiences, and exposure to colleagues, each physician always thought the right thoughts and did the right things.”3 However, research consistently showed that there were “wide variations in practice patterns” among physicians and documented a significant gap between what the published clinical research showed and what physicians were actually doing.4 One article in 1985 estimated that only 15% of physicians’ decisions were based on information from validated clinical trials. This disconnect led to the idea of sanctioning EBM and educating physicians about how to apply it—in other words, how to officially engage in “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.”4

As intimidating as EBM can seem—especially in light of financial pressures from government institutions regulating care in our public institutions—many of you probably already incorporate evidence into your daily practice, at least subconsciously. As Rosenberg and Donald pointed out in the *British Medical Journal*, “the ideas underlying evidence-based medicine are not new. The difference with using an explicit, evidence-based medicine framework is twofold: it can make consulting and evaluating the literature a relatively simple, routine procedure, and it can make this process workable for clinical teams, as well as individual clinicians.”2

WHAT DOES EBM MEAN FOR YOU?

In essence, all clinical decision-making relies on a series of “if...then” statements5 such as: if a 60-year-old smoker who has a history of hormone replacement and a previous instance of venous thromboembolism (VTE) presents for lipoabdominoplasty, you know she is at increased risk for VTE and you will then be likely to prescribe chemoprophylaxis and take additional precautionary measures. How would you know to do this? You would likely combine your
knowledge of current literature, perhaps your experience with previous patients who had VTE, and/or your conversations with colleagues to come up with a best-available treatment plan for this patient. If you had never treated a patient with VTE, what would you do? As a consummate professional interested in the safety and satisfaction of your patients, you would likely search the available literature to determine what the “experts” have to say.

With EBM, you could be more confident in weighing each of these pieces of information, because you would be able to accurately assess the validity and reliability of each one. We can all agree that a long-term, randomized, blinded clinical trial with results from 500 patients has a greater weight than the subjective opinion of one colleague (although subjective expertise also has its place). It is perhaps this weight—this grading system—that makes EBM most valuable to us. The grading system agreed on by the American Society for Aesthetic Plastic Surgery (ASAPS) and the American Society of Plastic Surgeons (ASPS) is reprinted in the Special Topic article on page 137. Each article’s rank on the scale indicates “the extent to which we can be confident that the estimate of an effect [on the patient] is correct...[and] the extent to which we can be confident that adherence to the recommendation will do more good than harm.” To that end, I am pleased to say that we will begin providing you with the evidence ranking for each human-subject article that is a Level 1, 2, or 3, so you can be assured that the information presented is, to our knowledge and the authors’, a representation of current best-practices. In this issue, examples of such articles appear on pages 21, 47, 68, and 110.

**WHY IS THE ASJ THE PLACE FOR EBM?**

Although I hope I’ve already answered this question, you may ask why ASJ (or any Journal) is the best place to begin a global movement toward EBM in aesthetic surgery. One year ago in my editorial on the nature of peer review, I commented, “the obvious purpose of peer review is to identify or ‘weed out’ poorly-conceived or poorly-executed research, while exposing the scientific community to the best and most important new findings.” Kronick once wrote that peer review was “an essential and integral part of consensus building and is inherent and necessary to the growth of scientific knowledge.” Loyal readers confer a certain “seal of approval” on published articles and, as Editor-in-Chief and on behalf of our Editorial Board, I take this responsibility seriously. Therefore, when you are searching the pages of ASJ to help make decisions in the best interest of your patients, the evidence rankings help us to confer to you how much quantifiable weight is supporting the conclusions made by the authors. To that end, I am also proud to announce the addition of Dr. Andrea Pusic to our Editorial Board. Based on her expertise in conducting evidence-based studies in breast surgery and her familiarity with the world of EBM, we are pleased to have her serving as our new EBM Editor.

I want to make two things clear. First, a place remains for articles that subjectively confer technical refinements and experience (such as our Featured Operative Technique series), as well as for case reports and smaller series. Needless to say, we recognize that identifying endpoints and quantifying aesthetic results may be an elusive goal, so these types of articles are also integral to our practice as physicians. In an increasingly global world, these types of publications allow us to “talk” to our colleagues about what they’re doing (and perhaps to consider how or why that differs from what the evidence tells us). Second, the perpetuation of EBM in our culture will rely heavily on your willingness to study and publish your own results. It is in that spirit that I encourage you to consider closely the clinical questions that present themselves in your daily practice. You may have an opportunity to collect, analyze, and publish evidence that could change the way we all approach our patients! Without you as readers, reviewers, researchers—and hopefully authors—the EBM movement, both within the pages of the Journal and in our clinics and hospitals, cannot thrive.

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**REFERENCES**