Commentary

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Dr. Joiner's article makes an important contribution to the question of suicide risk in breast augmentation patients by identifying possible demographic, behavioral, and other differences that might distinguish augmentation patients from the general population. Recent reports of an increased risk for suicide among these patients[1-3] is certainly a cause for concern and deserves additional investigation.

Notably, the study from Sweden[2] did not examine patients' histories before breast surgery to determine the impact of variables known to be associated with an increased risk of suicide, nor did it conclude that there must be a causal association between implant surgery and suicide. Such a conclusion certainly cannot be supported by any existing scientific evidence. Dr. Joiner's conclusion, of course, the opposite—that implant surgery may be associated with a decreased incidence of suicide in patients who might otherwise have a greater-than-average risk. It is an interesting conclusion that would benefit from additional statistical support.

We agree with Dr. Joiner's analysis of risk factors such as age, race, and marital status in a calculation of suicide risk among breast augmentation patients; we have a good sense of these demographics among this patient population. As Dr. Joiner explains, these factors should raise the estimate of relative risk for suicide in breast augmentation patients in the United States. However, some of the behavioral and other variables he uses in his calculations require further investigation to that augmentation patients actually possess these characteristics. For example, evidence is lacking to support the claim that this patient group in the United States is more likely to smoke, though this connection seems more clear in Scandinavian countries.[3-5] There is also evidence to suggest that women with breast implants do *not* consume more alcohol than other women.[4-6] In fact, some studies have found that augmentation patients are healthier and more invested in health and fitness than controls.[4,7]

We must also be cautious about including variables such as mood, eating, or other disorders. Koot et al.[2] claim there is a "greater prevalence of psychopathology" among cosmetic surgery patients and a "well documented link between psychiatric disorders and a desire for cosmetic surgery." Such a link has never been well-documented, though this line of thinking gained almost stereotype status in the literature of the 1960s through

the 1980s regarding the psychology of cosmetic surgery patients. In some quarters this claim still persists.

More recent studies that rely on standardized psychometric measures have detected little evidence of psychopathology in augmentation patients. As an example, Rankin and colleagues used the Center for Epidemiologic Studies–Depression (CESD) scale in a prospective study of cosmetic surgery patients.[8] On this scale a score equal to or greater than 16 is diagnostic of depression. Before surgery, mean scores of cosmetic surgery patients were 11.2, comparable to those in the general population, but 6 months after surgery their mean scores were 6.3. Rankin's group also used the Ways of Coping Scale and found that patients' coping strategies focused on problem solving rather than escape; in particular, they gather information, organize it, and consider alternatives when solving problems.

In the clinical trial of Trilucent breast implants (soybean oil–filled), CESD scores were tracked preoperatively through 12 months postoperatively. These scores were well below the mean norm for control women in the same metropolitan area at all timepoints (unpublished data). In addition, the Temperament and Character Inventory (TCI) used in the Trilucent study revealed that augmentation patients—compared to the general population—scored in the 80th percentile for self-directedness (eg, actively directing their lives). Contrary to Dr. Joiner's assertation, the women also had lower levels of impulsivity than the general population controls. This is supported by a recent internet survey sponsored by the Aesthetic Surgery Education and Research Foundation and answered by 2500 augmentation patients that revealed 64% had thought about having surgery for at least 2 years before proceeding, with the largest concentration of responses in the 5- to 7-year range (unpublished data).

Using a questionnaire about depressive symptoms, Kjøller et al[4] found similar frequencies of a history of depression and treatment for depression in augmentation patients versus general population controls. Much more research using validated measures and longer follow-up periods is needed to determine whether women who choose breast augmentation are prone to depression or other psychological disorders that might increase their suicide risk. This is especially important because as many as 70% of completed suicides suffer from major depression, which is often undiagnosed and untreated.[9]

Additional research into the prevalence of disorders such as body dysmorphic disorder (BDD) among cosmetic surgery patients is also needed. Aesthetic surgery is probably contraindicated for these individuals because there is such a low likelihood they will be satisfied with the surgical result.

Another question worth pondering is whether women who got breast implants decades ago are somehow psychologically different from women who choose the procedure now. The mortality studies that found an elevated risk for suicide included women who had surgery between 1960–1988,[1] 1965–1993,[2] and 1970–2000.[3] Breast augmentation today lacks much of the social stigma it carried decades ago, and women who elected augmentation then probably had to overcome more imposing psychosocial hurdles than they do now, when women openly discuss the procedure with family and friends. It therefore seems plausible that augmentation patients decades ago had a much greater psychological need for breast enlargement, which may reflect an increased prevalence of body image dissatisfaction—and, consequently, more psychological distress. Because screening for troubled patients, while still imperfect, has markedly improved, we expect that patients with severe disorders such as BDD are now more readily identified and referred for appropriate treatment in lieu of surgery.

People most at risk for suicide possess a combination of cumulative and interacting risk factors.[4] Chief among them are major mental or physical illness, living alone, alcohol abuse, lack of social supports, a decline in social or economic status, and access to lethal means. Because of the complexity of factors that contribute to suicide, highly trained psychiatrists and psychologists have difficulty in identifying people who are at risk. Plastic surgeons are unlikely to do better. Nevertheless, we must be vigilant when screening patients for breast augmentation.

Dr. Joiner's estimate of the overall relative risk for suicide among implant patients is derived from individual realtive risk estimates for various risk factors that are highly correlated. There undoubtedly are differences of opinion as to whether such methodology is appropriate. Nevertheless, Dr. Joiner is to be congratulated for raising many interesting questions that should be investigated further before conclusions are reached, one way or the other, regarding the relative risk of suicide among breast augmentation patients. ■

References

1. Brinton LA, Lubin JH, Burich MC, Colton T, Hoover RN. Mortality among augmentation mammoplasty patients. *Epidemiology* 2001;12:321-326.
2. Koot VCM, Peeters PHM, Granath F, Grobbee DE, Nyren O. Total and cause specific mortality among Swedish women with cosmetic breast implants: prospective study. *BMJ* 2003;326:527-528.
3. Pukkala E, Kulmala I, Hovi S-L, et al. Causes of death among Finnish

women with cosmetic breast implants, 1971-2001. *Ann Plast Surg* (in press).

4. Kjøller K, Hölmich LR, Fryzek JP. Characteristics of women with cosmetic breast implants compared with women with other types of cosmetic surgery and population-based controls in Denmark. *Ann Plast Surg* 2003;50:6-12.
5. Fryzek JP, Weiderpass E, Signorello LB, et al. Characteristics of women with cosmetic breast augmentation surgery compared with breast reduction surgery patients and women in the general population of Sweden. *Ann Plast Surg* 2000;45:349-356.
6. Brinton LA, Brown SL, Colton T, Burich MC, Lubin J. Characteristics of a population of women with breast implants compared with women seeking other types of plastic surgery. *Plast Reconstr Surg* 2000;105:919-927.
7. Sarwer DB, LaRossa D, Bartlett SP, et al. Body image concerns of breast augmentation patients. *Plast Reconstr Surg* 2003;112:83-90.
8. Rankin M, Borah GL, Perry AW, Wey PD. Qualify-of-life outcomes after cosmetic surgery. *Plast Reconstr Surg* 1998;102:2139-2145.
9. Jacobs DG (Ed). *The Harvard Medical School Guide to Suicide Assessment and Intervention*. San Francisco; Jossey-Bass: 1999.

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