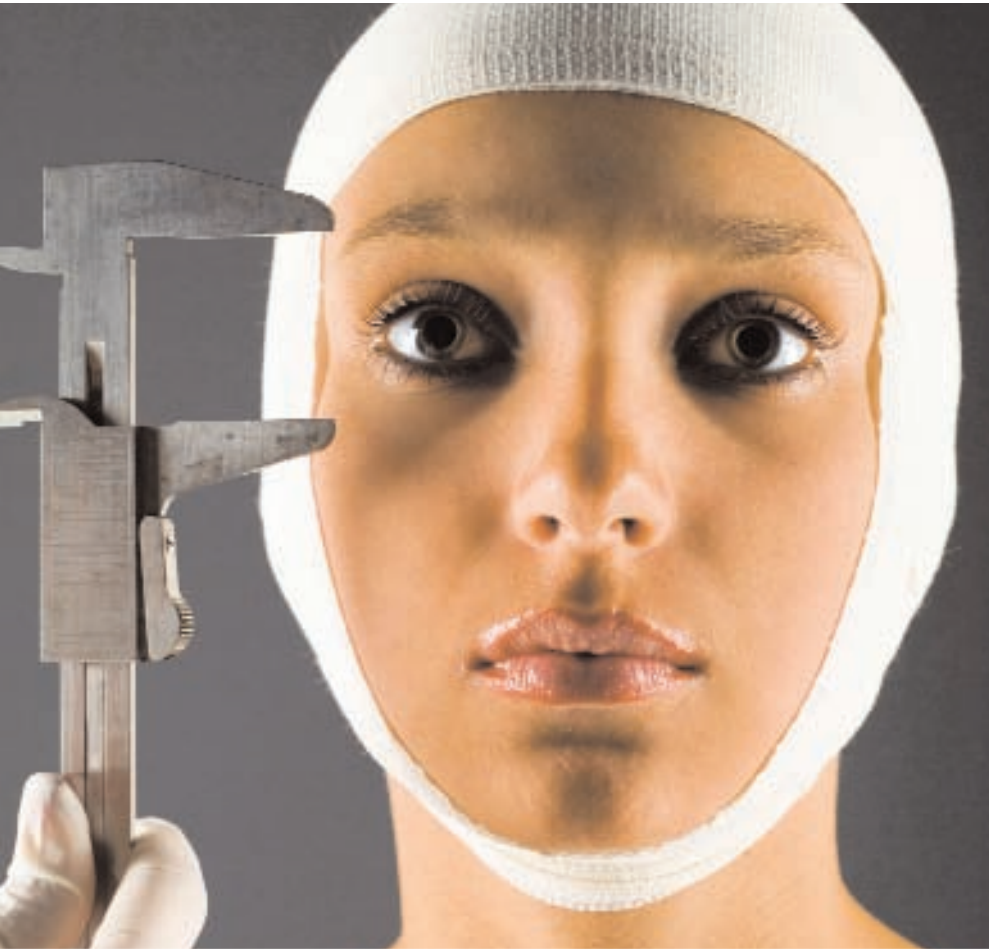


The Interface



Cosmetic Surgery and Psychological Issues

by Randy A. Sansone, MD, and Lori A. Sansone, MD

This ongoing column is dedicated to the challenging clinical interface between psychiatry and primary care—two fields that are inexorably linked. In this edition of *The Interface*, we review two psychiatric concerns related to cosmetic surgery patients.

INTRODUCTION

Cosmetic surgery continues to grow in popularity in the United States, perhaps stimulated by the impressive physical rejuvenations exhibited by

media figures and/or the spate of provocative television shows illustrating the “miracle” of drastic surgical self-transformation. Regardless of the reasons, cosmetic

procedures are on the rise—up 34 percent from 2005 to 2006.¹ According to the 2006 membership survey of the American Academy of Facial Plastic and Reconstructive Surgery,¹ these increases were largely attributed to non-surgical cosmetic procedures (e.g., Botox injections, microdermabrasion treatments, hyaluronic acid injections, chemical peels, dermal fillers, fat injections).

Additional findings of the 2006 membership survey¹ indicate that blepharoplasty was the most commonly performed cosmetic surgical procedure, followed by rhinoplasty and rhytidectomy. These procedures were followed, in turn, by hair transplantation, lip augmentation, laser resurfacing, forehead lifts, and breast enhancement. Nearly 80 percent of the recipients of these cosmetic undertakings were Caucasian. As for the prevalence of specific cosmetic procedures among other ethnic groups, rhinoplasty was most common among African-American and Hispanic subgroups, whereas blepharoplasty was most common among Asian Americans. Nearly 60 percent of the patients reported in this survey underwent multiple facial procedures in the same year.

Clearly, cosmetic procedures are on the increase in the US. As a result, these patients are not uncommon in primary care and psychiatric settings. But, how much do we really know about the psychological issues related to these individuals? In this article, we focus on two important psychiatric phenomena among cosmetic surgery patients: 1) the suicide risk among women who have undergone breast augmentation surgery and 2) body dysmorphic disorder (BDD).

BREAST AUGMENTATION AND SUICIDE

In the past seven years, a series of studies have consistently suggested

an increased risk of suicide among women who have undergone cosmetic breast augmentation surgery. In the only available US study, Brinton and colleagues² retrospectively examined the risk for completed suicide in a cohort of over 13,000 women who had received cosmetic breast augmentation

...these studies entailed different methodologies, varying patient characteristics, and various research groups, yet each came to the same conclusion: There is a slightly higher risk (just over twice that found in the general population) of suicide among women with breast implants.

surgery. During the study period, on average about 14 years after the procedure, the standardized mortality rate (SMR) (i.e., the ratio of the observed mortality rate to the predicted mortality rate in the general population) for suicide in this study sample was 1.54 (95% confidence interval, 1.0–2.4). In a subsequent examination of these participants approximately five years later,³ the SMR for suicide was 1.63 (95% confidence interval, 1.1–2.3). In a prospective study by Koot and colleagues⁴ of over 3500 Swedish women who had undergone cosmetic breast augmentation surgery, investigators again found an increased risk of suicide (SMR of 2.9; 95-percent confidence interval, 1.6–4.8). In studies among Finnish⁵ and Danish⁶ women, the SMRs for suicide following breast augmentation surgery were 4.26 (95% confidence interval, 1.56–9.26) and 3.1 (95% confidence interval, 1.7–5.2), respectively. Finally, in a retrospective study of Canadian women who had cosmetic breast

augmentation surgery, Villeneuve and colleagues⁷ found a SMR for suicide of 1.73 (95% confidence interval, 1.31–2.24). Rohrich and colleagues⁸ caution that these findings may be related to random chance, given the small absolute number of deaths among the various samples. However, these studies entailed different

methodologies, varying patient characteristics, and various research groups, yet each came to the same conclusion: There is a slightly higher risk (just over twice that found in the general population) of suicide among women with breast implants.

The explanation for these findings remains unknown. However, previous studies indicate that there may be meaningful differences between women with breast implants and women in the general population.

BDD occurs in up to one percent of the general population,¹² but appears to be much more prevalent in patients seeking cosmetic surgery.

For example, in contrast to women in the general population, women with breast implants have been found to have significantly lower body mass indices and greater likelihoods of cigarette smoking;⁹ more induced abortions and fewer live births;¹⁰ and lower educational levels, earlier ages

at first delivery, and more screenings for breast disease.¹¹ However, other potential differences warrant further study, including the prevalence of Axis I and II disorders. Interestingly, in the PsycINFO database, we were unable to locate any articles relating to breast augmentation patients and Axis II disorders.

BODY DYSMORPHIC DISORDER AND COSMETIC SURGERY

According to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, BDD is designated as an Axis I disorder that is characterized by an individual's intense preoccupation with an imagined defect in appearance. If a physical anomaly is actually present, the individual's preoccupation with it is markedly excessive. As with many other Axis I disorders, the individual must experience significant distress and/or functional impairment.

BDD occurs in up to one percent of the general population,¹² but appears to be much more prevalent in patients seeking cosmetic surgery. For example, in a review of the cosmetic-surgery literature, Glaser and Kaminer found prevalence rates of BDD between 7 and 15 percent. As for specific studies among cosmetic surgery patients, Sarwer and colleagues¹³ found a seven-

percent prevalence rate of BDD. In an Italian sample, Altamura and colleagues¹⁴ found that the prevalence of formal BDD was 6.3 percent; however, the prevalence of subclinical or subthreshold BDD among these patients was 18.4%. Finally, in a Dutch sample consisting

of patients from both dermatology and plastic surgery clinics, 8.5 percent screened positively for BDD.¹⁵

Comorbidity in psychiatric patients with BDD. Among general psychiatric patients with BDD, past investigators have examined the prevalence of comorbid psychological characteristics as well as formal Axis I and II psychiatric disorders. Compared with non-BDD samples, psychiatric patients with BDD appear to have higher levels of anger and hostility,¹⁶ lower self esteem and higher levels of perfectionism;¹⁷ higher frequencies of childhood abuse and neglect;¹⁸ and more frequent suicidal ideation and attempts.¹⁹ Comorbid Axis I disorders include major depression (74%),²⁰ substance use disorders (49%),²¹ social phobia (39%),²² eating disorders (33%),²³ and obsessive-compulsive disorder (30%).²⁴ There are also psychotic and nonpsychotic variants of BDD,²⁵ further broadening Axis I possibilities. Axis II disorders are also apparently common, particularly Cluster C disorders.²⁶

Comorbidity in cosmetic-surgery-seeking patients with BDD. Psychiatric disorders have also been investigated in BDD patients who are seeking cosmetic surgery. These patients appear to have high prevalence rates of several comorbid Axis I disorders including major depression, social phobia, and obsessive-compulsive disorder.²² Compared to patients without BDD seeking cosmetic surgery, those with BDD also have significantly higher rates of Axis II disorders including borderline, avoidant, paranoid, schizotypal, and obsessive-compulsive personality disorders.²⁶

CONCLUSIONS

Both psychiatrists and primary care physicians are likely to encounter increasing numbers of

patients in their practices who are either seeking or have undergone cosmetic surgery. Two psychiatric phenomena are of potential concern: 1) the heightened risk of suicide among women following breast augmentation surgery and 2) the high prevalence of BDD and its associated psychiatric comorbidities.

Compared with non-BDD samples, psychiatric patients with BDD appear to have higher levels of anger and hostility;¹⁶ lower self esteem and higher levels of perfectionism;¹⁷ higher frequencies of childhood abuse and neglect;¹⁸ and more frequent suicidal ideation and attempts.

Being alert to these specific psychiatric maladies in cosmetic surgery patients will hopefully enhance prompt diagnosis and effective treatment in both practice settings.

REFERENCES

1. American Society of Facial Plastic and Reconstructive Surgeons (AAFPRS). *2006 Membership Survey: Trends in Facial Plastic Surgery*. Alexandria, VA: American Society of Facial Plastic and Reconstructive Surgeons, 2006.
2. Brinton LA, Lubin JH, Burich MC, et al. Mortality among augmentation mammoplasty patients. *Epidemiol* 2001;12:321–6.
3. Brinton LA, Lubin JH, Murray MC, et al. Mortality rates among augmentation mammoplasty patients: An update. *Epidemiology* 2006;17:162–9.
4. Koot VCM, Peeters PHM, Granath F, et al. Total and cause specific mortality among Swedish women with cosmetic breast implants: Prospective study. *BMJ* 2003;326:527–8.
5. Pukkala E, Kulmala I, Hovi SL, et al. Causes of death among Finnish women with cosmetic breast implants, 1971–2001. *Ann Plast Surg* 2003;51:339–42.
6. Jacobsen PH, Holmich LR, McLaughlin JK, et al. Mortality and suicide among Danish women with cosmetic breast implants. *Arch Int Med* 2004;164:2450–5.
7. Villeneuve PJ, Holowaty EJ, Brisson J, et al. Mortality among Canadian women with cosmetic breast implants. *Am J Epidemiol* 2006;164:334–41.
8. Rohrich RJ, Adams WP, Potter JK. A review of psychological outcomes and suicide in aesthetic breast augmentation. *Plast Reconstr Surg* 2007;119:401–8.
9. Kjoller K, Holmich LR, Fryzek JP, et al. 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.
10. 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;45:349–56.
11. Brinton LA, Brown SL, Colton T, et al. Characteristics of a population of women with breast implants compared with women seeking other types of plastic surgery. *Plast Reconstr Surg* 2000;105:919–27.
 12. Glaser DA, Kaminer MS. Body dysmorphic disorder and the liposuction patient. *Dermatol Surg* 2005;31:559–60.
 13. Sarwer DB, Wadden TA, Pertschuk MJ, Whitaker LA. Body image dissatisfaction and body dysmorphic disorder in 100 cosmetic surgery patients. *Plast Reconstr Surg* 1998;101:1644–49.
 14. Altamura C, Paluello MM, Mundo E, et al. Clinical and subclinical body dysmorphic disorder. *Eur Arch Psychiatry Clin Neurosci* 2001;251:105–8.
 15. Vulink NC, Sigurdsson V, Kon M, et al. Body dysmorphic disorder in 3 to 8% of patients in outpatient dermatology and plastic surgery clinics. *Ned Tijdschr Geneesk* 2006;150:97–100.
 16. Phillips KA, Siniscalchi JM, McElroy SL. Depression, anxiety, anger, and somatic symptoms in patients with body dysmorphic disorder. *Psychiatr Q* 2004;75:309–20.
 17. Bartsch D. Prevalence of body dysmorphic disorder symptoms and associated clinical features among Australian university students. *Clin Psychol* 2007;11:16–23.
 18. Didie ER, Tortolani CC, Pope CG, et al. Childhood abuse and neglect in body dysmorphic disorder. *Child Abuse Negl* 2006;30:1105–15.
 19. Phillips KA, Menard W. Suicidality in body dysmorphic disorder: A prospective study. *Am J Psychiatry* 2006;163:1280–2.
 20. Phillips KA, Didie ER, Menard W. Clinical features and correlates of major depressive disorder in individuals with body dysmorphic disorder. *J Affect Disord* 2007;97:129–35.
 21. Grant JE, Menard W, Pagano ME, et al. Substance use disorders in individuals with body dysmorphic disorder. *J Clin Psychiatry* 2005;66:309–16.
 22. Coles ME, Phillips KA, Menard W, et al. Body dysmorphic disorder and social phobia: Cross-sectional and prospective data. *Depress Anxiety* 2006;23:26–33.
 23. Ruffolo JS, Phillips KA, Menard W, et al. Comorbidity of body dysmorphic disorder and eating disorders: Severity of psychopathology and body image disturbance. *Int J Eat Disord* 2006;39:11–19.
 24. Pavan C, Vindigni V, Semenzin M, et al. Personality, temperament and clinical scales in an Italian plastic surgery setting: What about body dysmorphic disorder? *Int J Psychiatry Clin Pract* 2006;10:91–6.
 25. Phillips KA. Psychosis in body dysmorphic disorder. *J Psychiatr Res* 2004;38:63–72.
 26. Bellino S, Zizza M, Paradiso E, et al. Dysmorphic concern symptoms and personality disorders: A clinical investigation in patients seeking cosmetic surgery. *Psychiatry Res* 2006;144:73–8. ●

AUTHOR AFFILIATION: Dr. R. Sansone is a professor in the Departments of Psychiatry and Internal Medicine at Wright State University School of Medicine in Dayton, Ohio, and Director of Psychiatry Education at Kettering Medical Center in Kettering, Ohio; Dr. L. Sansone is a family medicine physician in practice (government service) at Wright-Patterson Air Force Base. The views and opinions expressed in this column are those of the authors and do not reflect the official policy or the position of the United States Air Force, Department of Defense, or US government.

ADDRESS CORRESPONDENCE TO:

Randy A. Sansone, MD, Sycamore Primary Care Center, 2115 Leiter Road, Miamisburg, OH 45342; Phone: (937) 384-6850; Fax: (937) 384-6938; E-mail: Randy.sansone@kmcnetwork.org