University of São Paulo School of Medicine
Rua Mato Grosso
306 cj.1705-1706
São Paulo 01239-040, Brazil
munhozalex@uol.com.br

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this communication.

REFERENCES

1. Alperovich M, Tanna N, Samra F, et al. Nipple-sparing mastectomy in patients with a history of reduction mammaplasty or mastopexy: How safe is it? *Plast Reconstr Surg.* 2013;131:962–967.
2. Munhoz AM, Aldrighi CM, Montag E, et al. Clinical outcomes following nipple-areola-sparing mastectomy with immediate implant-based breast reconstruction: A 12-year experience with an analysis of patient and breast-related factors for complications. *Breast Cancer Res Treat.* 2013;140:545–555.

Reply: Nipple-Sparing Mastectomy in Patients with a History of Reduction Mammaplasty or Mastopexy: How Safe Is It?

Sir:

Our study evaluated the safety of nipple-sparing mastectomy following prior breast reduction or mastopexy.[1] It described our experience performing this higher risk procedure in a small subset of patients who were at a theoretically higher risk for complications.

We thank the letter authors for their comments and support their call for more rigorous studies in the plastic surgery literature. As outlined by Chung et al. in this *Journal* in 2009, our specialty would benefit from higher levels of evidence to definitively determine whether a technique is safe, an intervention effective, or a statistical finding accurate.[2]

The letter authors recommended a larger sample size with a multivariate regression model to control for factors such as skin flap necrosis, body mass index, smoking, cardiovascular disease, weight of the breast specimen, surgeon technique, and experience. The sample size necessary for a multivariate regression model using seven predictors with an anticipated size effect (f^2) of 0.15, a statistical power level of 0.8, and a probability level of 0.05 would require over 100 nipple-sparing mastectomy breasts that underwent prior major breast surgery.

Combining the published experience from our institution with the patients reported at other major institutions would not reach the minimum number of breasts required for this multivariate regression analysis.[3,4] Furthermore, it would introduce other confounding variables by comparing results across multiple institutions.

Our specialty should continue to strive for higher levels of evidence and statistically powered studies. We agree that studies of smaller sample size should be interpreted cautiously. However, it is also important to recognize that statistical analyses are limited by the sample sizes. In instances where the rarity of a study topic limits total available sample size, we must continue to publish with the best statistical tools available and exercise caution in the interpretation.

DOI: 10.1097/PRS.0000000000000126

Michael Alperovich, M.D.
Mihye Choi, M.D.
Nolan S. Karp, M.D.
New York University Langone Medical Center
New York, N.Y.

Correspondence to Dr. Alperovich
560 First Avenue
New York, N.Y. 10016
michael.alperovich@nyumc.org

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this communication.

REFERENCES

1. Alperovich M, Tanna N, Samra F, et al. Nipple-sparing mastectomy in patients with a history of reduction mammaplasty or mastopexy: How safe is it? *Plast Reconstr Surg.* 2013;131:962–967.
2. Chung KC, Swanson JA, Schmitz D, Sullivan D, Rohrich RJ. Introducing evidence-based medicine to plastic and reconstructive surgery. *Plast Reconstr Surg.* 2009;123:1385–1389.
3. Spear SL, Rottman SJ, Seiboth LA, Hannan CM. Breast reconstruction using a staged nipple-sparing mastectomy following mastopexy or reduction. *Plast Reconstr Surg.* 2012;129:572–581.
4. Vaughn CJ, Peled AW, Esserman LJ, et al. Feasibility of performing total skin-sparing mastectomy in patients with prior circumareolar mastopexy or reduction mammoplasty incisions. *Ann Plast Surg.* (in press).

Magnetic Resonance Imaging and Ultrasound Evaluation after Breast Autologous Fat Grafting Combined with Platelet-Rich Plasma

Sir:

With great interest, we read the article entitled "Magnetic Resonance Imaging and Ultrasound Evaluation after Breast Autologous Fat Grafting Combined with Platelet-Rich Plasma" by Fiaschetti et al.[1] We would like to congratulate Dr. Fiaschetti et al. for their publication and their results.

Lipofilling is gaining popularity and is becoming a more common method for breast reconstruction after breast-conservation surgery, after mastectomy and radiotherapy treatment. Radiologists today are better able to differentiate neoplastic processes (recurrences or new cancers) from fat necrosis, as Fiaschetti et al. emphasized in their article. Nevertheless, we have some

concerns about the selection criteria for patients who may have breast reconstruction with lipofilling, especially if the fat graft is enriched with platelet-rich plasma. According to many reports, no increased occurrence of breast cancer or recurrence or metastatic spread was observed in patients who have had breast reconstruction with lipograft, except in cases of intraepithelial tumors, high-grade neoplasia with Ki-67 greater than or equal to 14, or in patients who had undergone quadrantectomy, as published by Petit et al.[2]

Experimental studies raise important questions about the potential detrimental effect of adipocytes on the stimulation of cancer growth and reappearance. Adipocytes and white adipose tissue-resident progenitors are able to produce different growth factors, which could act on cancer cells through a paracrine activity. It is therefore mandatory to raise the question of recurrence risk for patients undergoing lipofilling in the area of the previous breast cancer treatment, particularly after conservative treatment.[3]

In this study, Fiaschetti et al. evaluated the radiologic aspects of 24 breasts of 15 women who underwent lipofilling to correct the results of surgery or solely for aesthetic reasons. All patients underwent breast lipofilling with adipose tissue enriched with platelet-rich plasma. Anamnesis, clinical examination, ultrasound, mammography, and magnetic resonance imaging were performed before lipoinjection. Ten of the 15 patients have had breast reconstruction using lipofilling with platelet-rich plasma within 3 months after removal of the tumor and 6 months after the end of radiotherapy/chemotherapy (seven patients after breast-conserving surgery and three patients after a radical mastectomy).

In 10 breast cancer patients of this study, it is not indicated whether the histologic type of cancer or its characteristics (e.g., Ki-67 index) have been considered as important for including or excluding patients from the adipose enriched with platelet-rich plasma procedure. For lack of scientific evidence that proves the safety of lipofilling of the breast in patients with a history of cancer, the American Society of Plastic Surgeons and the French Society of Plastic, Reconstructive and Aesthetic Surgery recommend caution in the use of lipofilling, particularly if enriched.[4] As suggested by the major world societies of plastic surgery, we think that the use of adipose tissue enriched with platelet-rich plasma, to increase fat-graft survival, must require strict selection criteria for patients.[5] In this study, though well conducted, there is no mention of selection criteria. This could be a wrong message, especially for young surgeons.

We think that in breast-conservation surgery, the lipofilling should be performed at least 3 (or 5) years (not months) after the removal of the breast tumor, and the enhanced fat-grafting should be discouraged until clinical studies provide evidence regarding safety.[5]

Fat grafting after mastectomy is a good surgical option with limited risk. It can be combined with other reconstruction techniques, including prostheses implants; however, in patients who have undergone a mastectomy, there is an increased risk for developing breast cancer also on the contralateral side. For this reason, we suggest that lipografting on the contralateral breast should be avoided.

In aesthetic surgery, breast augmentation with lipografting is a surgical option in women without a personal or family history of cancer. Some authors even suggest performing genetic testing for *BRCA1* and *BRCA2* mutations; radiologic controls at least 1, 5, and 10 years after grafting; and then entering normal breast cancer screening programs afterward.

These recommendations are based on the oncologically unclear situation of fat grafting after tumor surgery and arise from the need to reduce hazardous treatment by careful patient selection. Today, no informed consent can be given to our patients stating that lipofilling (with or without platelet-rich plasma) does not stimulate fueling of dormant cancer cells or eventually induce new cancer cells. We should always keep in mind that today's patients know their disease and treatment options. They also have a greater number of tools with which to understand breast reconstruction techniques (through specific Web sites and outreach programs on the disease such as Breast Reconstruction Awareness Day). Even for medicolegal reasons, surgeons should act prudently in selecting the patients and informing them (with a specific informed consent) that there is limited scientific evidence available to verify the safety of fat transfer procedures in patients with a history of breast cancer surgery.

DOI: 10.1097/PRS.0000000000000141

Sara Di Lorenzo, M.D.

Bartolo Corradino, M.D.

Adriana Cordova, M.D.

Dipartimento di Discipline Chirurgiche,
Oncologiche e Stomatologiche
Sez. Chirurgia Plastica
Università di Palermo
Palermo, Italy

Correspondence to Dr. Di Lorenzo
Via Libertà 56
Palermo 90143, Italy
dilsister@libero.it

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this communication.

REFERENCES

1. Fiaschetti V, Pistolese CA, Fornari M, et al. Magnetic resonance imaging and ultrasound evaluation after breast autologous fat grafting combined with platelet-rich plasma. *Plast Reconstr Surg.* 2013;132:498e–509e.
2. Petit JY, Rietjens M, Botteri E, et al. Evaluation of fat grafting safety in patients with intraepithelial neoplasia: A matched-cohort study. *Ann Oncol.* 2013;24:1479–1484.
3. Petit JY, Botteri E, Lohsiriwat V, et al. Locoregional recurrence risk after lipofilling in breast cancer patients. *Ann Oncol.* 2012;23:582–588.

4. Gutowski KA; ASPS Fat Graft Task Force. Current applications and safety of autologous fat grafts: A report of the ASPS fat graft task force. *Plast Reconstr Surg.* 2009;124:272–280.
5. Krumboeck A, Giovanoli P, Plock JA. Fat grafting and stem cell enhanced fat grafting to the breast under oncological aspects: Recommendations for patient selection. *Breast* 2013;22:579–584.

Re: Reply: The Poly Implant Prothèse Debacle

Sir:

We welcome Maijers and Neissen drawing attention to the nonsurgical issues surrounding Poly Implant Prothèse implants.[1] Although initially unsettled in the United Kingdom, fortunately, last week's report from the Medicines and Healthcare Products Regulatory Agency[2] has again failed to evidence any harmful issues with constituent products. Although it is surprising that any breast-augmented women continue to decline follow-up given the global health scare, it is reassuring to have comparable figures using different tools of measurement from both Britain and Holland.

Although not wishing to prolong debate unnecessarily, there is a major error in the above-mentioned reply,[1] which mandates correction because of a complete inversion of our data.[3] Perhaps linguistic misapprehension is at fault, but Figure 2 clearly displays device durability according to year of implantation and *not* duration of implantation (that is Figure 3). To clarify, we documented median time to rupture for implants implanted in the year 2000 to be 10.5 years. The same measure from 2005 was 5.8 years, with the intervening years declining in a broadly linear fashion. It is obvious that implant integrity decreases with time; however, we have documented something entirely different with Poly Implant Prothèse devices, and this runs counter to any previously published data. As a smaller point, with our original article being received for publication on December 30, 2011, and that by Maijers and Neissen being received on January 8, 2012, the claim of primacy is factually incorrect.

DOI: 10.1097/PRS.0000000000000140

MG Berry, M.S., F.R.C.S.(Plast.)

Jan Stanek
Surgical Aesthetics
London, United Kingdom

Correspondence to Mr. Berry
Surgical Aesthetics
London, United Kingdom

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this communication.

REFERENCES

1. Maijers MC, Neissen FB. Reply: The Poly Implant Prothèse debacle. *Plast Reconstr Surg* 2013;131:112e–114e.
2. Medicines and Healthcare Products Regulatory Agency. Final testing results for PIP breast implants are published. Available at: http://www.mhra.gov.uk/NewsCentre/CON228800.
3. Berry MG, Stanek JJ. The Poly Implant Prothèse debacle. *Plast Reconstr Surg.* 2013;131:110e–112e.

Facial Changes Caused by Smoking: A Comparison between Smoking and Nonsmoking Identical Twins

Sir:

I wish to acknowledge the article entitled, "Facial Changes Caused by Smoking: A Comparison between Smoking and Nonsmoking Identical Twins," by Okada et al.[1] The authors' creative use of photographic facial contrasts between smoking and nonsmoking twins identified specific features of facial aging consequent to tobacco use.

However, a serious methodologic flaw is the investigators' failure to document the procedures by which the zygosity of the twin pairs was determined; the only mention of the twins' zygosity (identical) occurs in the title. Accurate assessment of twins as monozygotic (identical) or dizygotic (fraternal) is crucial to the design of any twin study and to the interpretation of the data. The identification of smoking-discordant monozygotic twins constitutes a naturally occurring co-twin control study, which I believe the investigators had in mind.[2] Specifically, the nonsmoking twin provides the perfect genetic control against which to assess the effects of smoking on the part of the co-twin. In the event that dizygotic twins were included in the sample, the basic logic of the co-twin control study would have been violated. More importantly, the conclusions from the study would have been misleading. That is because the differential aging of smoking-discordant dizygotic co-twins could be associated with both genetic and experiential factors, thereby confounding these sources of explanation.

Accurate diagnosis of zygosity requires DNA testing for approximately 15 short tandem repeat markers that can be easily obtained from buccal smears (cheek swabs).[3] Standard physical resemblance questionnaires developed to show excellent agreement with results from DNA testing or blood group analysis can be substituted when necessary. Possibly, a description of the zygosity testing for the twins in this study will be forthcoming. This information will greatly increase readers' confidence in such important findings.

DOI: 10.1097/PRS.0000000000000134

Nancy L. Segal, Ph.D.
California State University
Department of Psychology
Fullerton, Calif. 92834
nsegal@fullerton.edu

DISCLOSURE

The author has no financial interest to declare in relation to the content of this communication.