Table 2. Summary of Treatment Outcome, Follow-Up, and Side Effects

Study	Outcome	Follow-up (mo)	Side Effects
Schlesinger et al., 2002[1]	Case 1: Left, class III to class I in 3 mo Case 2: Bilateral, class III to class I in 3 mo Case 3: Left, class IV to class I in 1 mo Case 4: Left, class IV to class I in 1 mo Case 5: Left, class IV to class II in 3 mo; right, class IV to cloass III in 3 mo	One month in case 1; 5 mo in case 2; others not mentioned	Not reported
Reid et al., 2005[2]	In 6 mo Complete response: 22 breasts Partial response: 9 breasts No response: 10 breasts Long-term follow-up (mean, 16.5 mo) Complete response: 30 breasts Partial response: 4 breasts No response: 7 breasts	Mean, 16.5 (range, 6–29)	No untoward effects of the drug
Scuderi et al., 2006[3]	Reduction in mammary compliance of 10.59% after 1 mo, 17.10% after 3 mo, and 23.49% after 6 mo	Not mentioned	No major complications; only 1 patient experienced hypertension
Scuderi et al., 2007[4]	Group A (zafirlukast): reduction in mammary compliance of 7.69% after 1 mo, 16.78% after 3 mo, and 24.01% after 6 mo Group B (vitamin E): reduction in mammary compliance of 0.32% after 1 mo, 0.95% after 3 mo, and 2.09% after 6 mo	Not mentioned	No major complications; only 1 case presented hypertension No untoward effects of the drug
Huang and Handel, 2010[5]	Completely improved: 7 patients (within days to 2 mo) Improved: 5 patients (within days to 1 mo) No change: 3 patients Worsened: 2 patients Prevented: 2 patients	Mean, 19 (range, 5–36)	Only one patient reported fatigue

REFERENCES

1. Schlesinger SL, Ellenbogen R, Desvigne MN, Svehlak S, Heck R. Zafirlukast (Accolate): A new treatment for capsular contracture. *Aesthet Surg J.* 2002;22:329–336.
2. Reid RR, Greve SD, Casas LA. The effect of zafirlukast (Accolate) on early capsular contracture in the primary augmentation patient: A pilot study. *Aesthet Surg J.* 2005;25:26–30.
3. Scuderi N, Mazzocchi M, Fioramonti P, Bistoni G. The effects of zafirlukast on capsular contracture: Preliminary report. *Aesthetic Plast Surg.* 2006;30:513–520.
4. Scuderi N, Mazzocchi M, Rubino C. Effects of zafirlukast on capsular contracture: Controlled study measuring the mammary compliance. *Int J Immunopathol Pharmacol.* 2007;20:577–584.
5. Huang CK, Handel N. Effects of Singulair (montelukast) treatment for capsular contracture. *Aesthet Surg J.* 2010;30:404–408.

Measurement of Breast Volume after Breast Reconstruction Using Computed Tomographic Scanning

Sir:

The goal of breast reconstruction is to have the breast that had the lesion resemble the preoperative breast. For this, symmetry of both breasts needs to be satisfied. To satisfy the symmetry of both breasts following breast reconstruction, an accurate size of the flap inserted to the breast that has the lesion has to be considered for breast reconstruction. However, changes in breast volume occur with time following breast reconstruction with flaps.[1] Amir et al. determined the volume of the actual flap, which was calculated from the actual volume of the flap plus an additional 10 percent of its volume.[2] However, quantitative measurement of breast volume during follow-up has not yet been reported after breast reconstruction by flap. Therefore, in the current study, postoperative breast volume changes were measured by computed tomography after breast reconstruction using the transverse rectus abdominis myocutaneous (TRAM) flap.

From September of 2007 to July of 2010, among the patients who underwent breast reconstruction by TRAM flaps after mastectomy, a total of five patients followed for more than 3 years and who underwent computed tomographic scanning more than two times during follow-up were enrolled. Consecutive computed tomographic scanning was performed with 1-mm interval and 1-mm thickness at 120 kV and 170 mA with a LightSpeed 64-channel multidetector-row computed tomography (GE Medical Systems, Milwaukee, Wis.) device and with patients lying supine, holding their breath, and raising both hands over their heads. The breast volumes were examined by the INFINITT program (INFINITT Health Care, Korea). When we measured the breast volume, we set the range of the breast from the posterior margin, anterior of the pectoralis major to the anterior margin, skin, and nipple-areola complex. On the axial

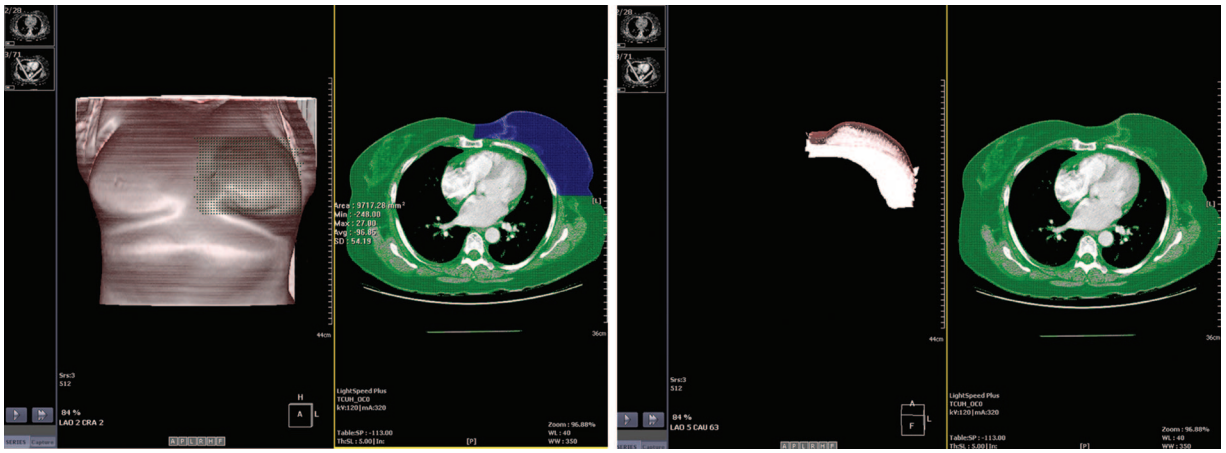

Fig. 1. The authors' methods for measuring breast volume. (*Left*) The borderline of the breast is selected in each axial computed tomographic section. (*Right*) Several selected sections of the axial view were reconstructed as a three-dimensional image. The image shows the basal view of the three-dimensionally reconstructed breast.

view, we set the range of the breast from the starting part of the breast crest to the ending part of the breast crest. The medial side of the breast was the lateral border of the sternum, and the lateral side of the breast was the midaxillary line (Fig. 1). After we checked each section of the axial computed tomographic scan, the sections were transformed into three-dimensional images. We then measured the volume of the three-dimensional image. We compared the changes in breast volume as time passed, and we used a paired sample t test for statistical verification.

The breast volume of a total of five patients showed a decrease by an average of 12 percent, which was statistically significant ($p < 0.05$). The mean follow-up period was 42 months. Accordingly, the result was determined to be attributable to common operators, and patients were more satisfied with the results obtained by applying an overcorrection of flap size, when the design of the flap was made.

This study has a limitation of generalization, because only a few cases were examined and the follow-up periods after reconstruction were short. Also, our method was difficult to measure by computed tomographic scanning subjectively. However, this method is cost-effective and does not cause patient discomfort. Therefore, this method is an objective and effective method for measuring the volume of the breast and can be very helpful in designing the size of TRAM flaps.

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DISCLOSURE

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

REFERENCES

1. Mandrekas AD, Zambacos GJ, Zervoudis S. TRAM flap breast reconstruction and weight fluctuations: It is alive! *Plast Reconstr Surg.* 2003;112:696–697.
2. Amir A, Silfen R, Hauben DJ. Use of Archimedes' law for measuring the volume of the TRAM flap in immediate breast reconstruction. *Plast Reconstr Surg.* 1999;103:1329.

Microsurgical Reconstruction of a Huge Mediastinal Defect Using Thoracoacromial Vessels as Recipient Pedicle

Sir:

A 26-year-old patient was admitted to our department with a longstanding ulceration of the chest wall. She had been diagnosed 1 year before with a primary mediastinal diffuse large B-cell lymphoma, and received radiation therapy and chemotherapy. However, the neoplasm eventually recurred and the patient developed a malignant skin ulcer that gradually grew until reaching the proportions depicted in Figure 1.

The computed tomographic scan revealed a large defect (13 × 13 × 13 cm) in the anterior compartment of the mediastinum, with the surrounding lymphoma displacing structures such as the thoracic aorta, the superior vena cava, the segmental bronchi, and the