Reply: Does a Capsulectomy Really Improve Pulmonary Function in Women with Breast Implant Illness?

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Sir:

We thank Dr. E. Swanson for his comments regarding our recent publication.1 The purpose of studying respiratory function in this group of breast implant illness patients was due to the clinical observation that they could breathe better and more deeply with less effort after implant removal and capsulectomy. We developed a quantitative symptomatic data tool to study the outcomes of explantation with capsulectomy.1 These studies were our attempt to provide evidence-based information about this specific group of patients.2,3

The improvement in pulmonary function experienced by these patients may have many complex etiologies. One of these may be the weight on the chest. The effect of breast hypertrophy on pulmonary function has been studied in multiple studies.4–6 The relief of weight can have a beneficial effect on pulmonary function. Another etiology for improvement may be the relief of scarring on chest wall in improving chest wall mechanics in breathing.

It is important to note that for these patients, the decision to explant is challenging. Not only do they feel that they have to undergo an augmentation surgery that they once desired, but they also have to face potential deformity resulting from years of implantation. Their decision is purely based upon the possibility that their health could be improved.

The diagnosis of breast implant illness is also not an easy one. These 11 symptoms can mimic Lyme disease, hypothyroidism, menopause, autoimmune disease, or multiple sclerosis. The diagnosis of breast implant illness is based upon a diagnosis of exclusion and improvement of symptoms following implant removal and capsulectomy.

This study is not a randomized controlled study comparing implant removal with capsulectomy versus implant removal without capsulectomy. This type of study is ideal, but clinically challenging to execute practically. Total capsulectomy can be associated with increased complications. We did not report any complications from the 750-patient or 72-patient cohort related to pneumothorax complications. There is a clearly defined plane between the capsule and the external intercostal muscle. When you separate the capsule from the external intercostal muscle and you preserve this muscle, pneumothorax can be avoided. Bleeding complications have occurred, but in less than 1% of the group.

The selection criteria for the respiratory study2 are well-defined in our methods section. Only those patients who were able to return for a repeat spirometry after explantation were included. We have excluded patients with pre-existing airway and parenchymal disease such as asthma and COPD. That leaves 69 patients for statistical analysis. The exclusion rate is 4%.

We did not use a t-test for independent samples of means because the variables that we were testing, before and after capsulectomy, came from the same patient. Therefore, the paired t-test was more appropriately utilized. The online t-test or independent samples t-test is a less powerful and ideal t-test for this study because the same individuals are being measured before and after explant. The paired t-test was used to account for within patient variations. The P values in the paired t-test for FVC (P = 0.008), FEV1 (P = 0.009), and PEFR (P = 0.001) have all met the rigorous level of less than 0.01. In the multivariate and univariate analysis, both FEV1 P values of 0.009 for univariate analysis and 0.018 P value for multivariate analysis for the textured versus smooth implants are considered significant.

We look forward to future study of this under characterized patient population to better answer the thoughtful critiques and questions described by Dr. Swanson and many other accomplished surgeons caring for patients with symptomatic breast implants.

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DISCLOSURE

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

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