Fat for Breast: Where Are We?

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Controversy is no stranger to plastic surgery, and the subject of infiltrating the breast with fat is one of the latest examples. This topic has many features that complicate how people see it, so it seems the right moment to step back and try to assess where we are.

Autologous fat injection in general has achieved wide acceptance over the past decade or two. It is widely used by surgeons for face, buttock, hand, and postliposuction deformities. Its use in the breast has proceeded more slowly, perhaps for good reason. The breast can be augmented or reconstructed in most cases relatively easily with implants or flaps. It is important to remember that for reasons of disease detection, the breast is subjected to frequent radiologic and physical examinations, and greater than 10 percent of women eventually develop breast cancer. Thus, mimicking breast cancer, obscuring breast cancer, or causing breast cancer are issues that surround any breast procedure or device, particularly fat infiltration.

As we assess the value proposition of breast fat infiltration, we need to distinguish five different scenarios and assess them individually. Those five scenarios are:

1. Supplementing breast reconstruction by improving contour irregularities.
2. Correcting defects after lumpectomy or other partial injuries.
3. Cosmetic breast enhancement and enlargement.
4. Camouflaging implants after breast augmentation.
5. Reconstruction after mastectomy using solely fat infiltration.

As scientific investigations go, we are relatively early in looking into this subject. As we attempt to arrive at our conclusions, I suggest that we measure and examine five factors for each of these potential applications: efficacy, safety, cost, value/work, and liability.

Table 1. Preferred Technique for Addressing an Upper Breast Contour Defect after Breast Reconstructions

<table>
<thead>
<tr>
<th>Option</th>
<th>No. of Responses (%)</th>
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</thead>
<tbody>
<tr>
<td>Dermal fat graft</td>
<td>13 (11)</td>
</tr>
<tr>
<td>Fat injection or lipoinfiltration</td>
<td>92 (76)</td>
</tr>
<tr>
<td>Latissimus flap</td>
<td>7 (6)</td>
</tr>
<tr>
<td>AlloDerm grafts</td>
<td>7 (6)</td>
</tr>
<tr>
<td>TRAM flap</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Do nothing</td>
<td>1 (0.8)</td>
</tr>
</tbody>
</table>

TRAM, transverse rectus abdominis myocutaneous.

Table 2. Fat Injection or Lipoinfiltration as a Tool in Breast Reconstruction Is an Acceptable Technique

<table>
<thead>
<tr>
<th>Option</th>
<th>No. of Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>123 (87)</td>
</tr>
<tr>
<td>Disagree</td>
<td>18 (13)</td>
</tr>
</tbody>
</table>

While surgeons learn more about this and investigators share more scientific information, organized medical societies have the challenging responsibility of preaching caution without stifling progress. With the accelerating speed of scientific advancement and dissemination of knowledge, this responsibility gets harder and harder. Thus, for highly volatile topics such as this, it may be necessary to review position papers or policy statements more frequently.

Putting the legal definition aside, what is or is not within the standard of care? Or to put it another way: what is or is not done by the mainstream of plastic surgeons can change in a matter of months.

In the interest of learning what plastic surgeons think regarding fat infiltration of the breast, three questions were posed to the audience during panels at two major meeting in 2007 (American Association of Plastic Surgeons and Northeastern Society of Plastic Surgeons). The votes were marked on paper ballots and tabulated. The questions and the tallied numerical votes are presented in Tables 1 through 3.

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One can see from the tables that the surveyed plastic surgeons overwhelmingly endorse fat infiltration to complement breast reconstruction but as a group remain undecided on its use for cosmetic purposes. It is important to emphasize that undecided means just that, the jury is out.

Over the coming months or even years, we will have a great deal more information and evidence by which to make more informed decisions. In the meantime, it is important to remain open minded, curious, and a little bit skeptical. Most of all, it is important to keep our biases locked up and let the evidence take us where it may.

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