New study examines long-term aesthetic outcomes of implant-based breast reconstruction

28 August 2020

Breast reconstruction is an important option for women undergoing mastectomy, and a two-stage approach using implants is by far the most common reconstruction technique. Thousands of women undergo this procedure every year—despite the conventional wisdom among many surgeons that the results of implant-based breast reconstruction don't hold up over the long term.

Now a new study goes against that prevailing "surgical dogma," showing that the aesthetic and other outcomes of implant-based breast reconstruction remain stable at up to 12 years' follow-up. "Our study, the largest of its kind, demonstrates that prosthetic breast reconstruction outcomes do not deteriorate over time," write Akhil K. Seth, MD, and Peter G. Cordeiro, MD, of Memorial Sloan Kettering Cancer Center, New York.

"These results contradict the traditional dogma surrounding prosthetic breast reconstruction, and therefore should be given significant consideration when counseling patients on their options for breast reconstruction following mastectomy," the researchers add. Their study appears in the September issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

In 2019, ASPS member surgeons performed 107,000 breast reconstructions, 72,000 of which included a tissue expander followed by implants. Many studies have reported on the outcomes of this approach. However, there's a lack of long-term follow-up data, and little information on outcomes from the patient's point of view.

Despite the limitations of the evidence, some surgeons have come to believe that the results of implant-based reconstruction tend to deteriorate over time—including a decline in aesthetic outcomes, increased scarring around the implant (capsular contracture), and decreased patient satisfaction. Dr. Cordeiro has long questioned that idea, based on his own experience.

He and Dr. Seth performed an objective critical analysis of the long-term outcomes of two-stage implant-based breast reconstruction in 2,284 women. These procedures—including reconstruction of both breasts in 1,205 patients—were all performed by Dr. Cordeiro between 1994 and 2016. Follow-up outcomes were assessed at up to 12 years (average 5.5 years).

Throughout follow-up, scores remained stable for two key surgeon-reported outcomes: aesthetic results and capsular contracture. On a 5-point scale, average aesthetic scores decreased from 4.73 to 4.43—remaining in the "very good" range at all times. Scores for capsular contracture also decreased slightly over time; the change was
statistically but not clinically significant.

The findings were backed up by stable patient-reported outcomes, including physical, psychosocial, and sexual well-being (assessed on the validated BREAST-Q questionnaire). Physical well-being and overall patient satisfaction scores actually increased with long-term follow-up, suggesting that women feel better about their overall health after completing and recovering from their breast cancer treatment. "[S]table surgical outcomes contribute to stable or improved patient satisfaction," Drs. Seth and Cordeiro write.

Breasts treated with radiation had lower scores for aesthetic outcomes. Radiation treatment was also linked to higher rates of capsular contractures, although contractures improved over time for all patients.

The results add new evidence on the long-term outcomes of implant-based breast reconstruction. Other techniques use the patient's own tissue (autologous reconstruction—most commonly using a flap from the abdominal area). However, these approaches entail a longer recovery period and additional risks and are not an option for every patient.

The new study provides "objective, long-term data supporting the concept that prosthetic-based reconstruction is sustainable over time, with stable aesthetic outcomes and capsular contracture rates," Drs. Seth and Cordeiro conclude. They believe that women making decisions about breast cancer treatment should be reassured that implant-based breast reconstruction can provide long-lasting results in terms of appearance and quality of life.
