

Intraoperative Comparison of Round vs. Anatomical Implants in Primary Breast Augmentation

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Disclosure/Financial Support: Neither author has a financial interest in any of the devices mentioned below. All study costs were directly funded by the authors.

INTRODUCTION: The aesthetic superiority of anatomical implants has not yet been proven by objective study. This Level I randomized control trial tested whether plastic surgeons and lay individuals could perceive an aesthetic difference between anatomical and round implants placed in the *same* patient.

MATERIALS AND METHODS: Seventy-five patients undergoing breast augmentation had a round implant of placed in one breast and either an anatomical silicone sizer or actual implant of similar volume temporarily placed in the other. There were twenty-five cases each representing Allergan, Mentor, and Sientra. Standardized multiple view photographs were then taken with the patient sitting completely upright. The anatomical device was then replaced by a second round implant to complete the procedure. An online survey instrument was designed for evaluation of all 75 patients by 10 plastic surgeons and 10 lay reviewers. All reviewers were asked 'which breast was more aesthetically pleasing' and 'by how much' on 5-point Likert scale. Plastic surgeon reviewers were also queried on which implant style they thought was placed on the side judged better and what breast characteristics were responsible for perceived aesthetic superiority.

RESULTS: No observable difference in breast aesthetics between anatomical and round implants was reported in 36.4% of cases. In the remaining 63.6% of cases where a difference was perceived neither reviewer group preferred the anatomical side significantly more often than the round side. Aesthetic preferences did not correlate with manufacturer. Plastic surgeons reported not knowing which implant shape was producing the aesthetic superiority they perceived in 35.0% of cases. In the remaining cases where they believed they knew the implant type, they were able to identify it correctly in only 26.5%. Regarding breast characteristics accounting for perceived aesthetic superiority there was no statistically significant difference between the two implant types.

CONCLUSIONS: This Level I study shows no aesthetic superiority of anatomical over round implants. Given disadvantages including greater firmness, malrotation potential, possible higher risk for late seroma and ALCL due to surface texturization, limited incision options, and greater cost, a lack of proven aesthetic superiority argues against the continued routine use of anatomical implants in breast augmentation.