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52285: Factors Associated with Implant Flipping in Immediate Breast Reconstruction

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PURPOSE: Implant-based reconstruction remains the most common form of post-mastectomy breast reconstruction. With ever-evolving device characteristics, including the advent of high-profile, cohesive, fifth-generation implants, the incidence of anterior-posterior flipping of implants is presenting a new challenge. Patient and device characteristics associated with this phenomenon have yet to be fully elucidated.

METHODS: Patients who underwent nipple- or skin-sparing mastectomy with subsequent two-stage or direct-to-implant reconstruction with smooth implants between 2015 and 2021 were retrospectively identified and stratified by incidence of implant flipping. Patient, procedural, and device characteristics were compared.

RESULTS: A total of 165 patients (255 breasts) were evaluated. 14 cases of implant flipping were identified (flip rate 5.5%). All flips occurred in patients with cohesive implants (OR 87.0, $p=0.002$). On univariate analysis, extra full implant profile (OR 11.2, $p<0.001$) and use of a smooth tissue expander during two-stage reconstruction (OR 4.1, $p=0.03$) were associated with flipping. Implants that flipped were larger than those that did not (652.5 ± 117.8 versus 540.1 ± 171.0 cc, $p=0.0004$). Prepectoral implant placement (OR 2.7, $p=0.08$) and direct-to-implant method (OR 3.17, $p=0.07$) trended toward association, but this effect was not significant. Patient BMI, weight fluctuation during the reconstructive course, mastectomy weight, ADM use, and seroma or periprosthetic infection were not associated with flipping.

CONCLUSION: Patients who receive a highly cohesive, high profile, larger implant appear to be at higher risk for implant flipping. These device characteristics are an important consideration in device selection to minimize discomfort, aesthetic deformity, and the need for reoperation.