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Prepectoral breast reconstruction. Report after 4 years of follow-up: Experience of a Chilean tertiary general hospital

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Objective: Implant-based breast reconstruction (IBBR) has become the leading method for immediate breast reconstruction worldwide, for several years using the sub-pectoral plane. Post-mastectomy radiotherapy (PMRDT) and breast reconstruction are associated with complications including implant loss and animated breast deformity. The animated breast deformity can be avoided using the pre-pectoral plane IBBR. The objective of this report is to show 4 years of experience and results on pre-pectoral IBBR (PPIBBR) at a University Clinical Hospital. **Methodology:** The data were collected prospectively from a personal database. Selection criteria were based upon oncological considerations, multidisciplinary committee evaluation, and indication of mastectomy. The distance of tumors from the skin and proper subcutaneous fat thickness were evaluated. A review of general comorbidities, body mass index, smoking, breast weight, pathology report, and complications of any kind, including implant loss and its association with radiotherapy, was included. **Results:** The cohort study included 77 patients (81 PPIBBR procedures), from July 2019 to March 2023. The mean age was 47 (27–70) years. Eight (9.7%) patients were mutation carriers (4 BRCA1, 2 BRCA2, and 2 TP53). Out of 10 patients, 6 with bilateral breast reconstruction had a PPIBBR. Most of the procedures were done following the same technique and by the same senior surgeons' team. Mesh was used in 38% (31/81), mostly absorbable synthetic mesh. Most complications were considered mild (14.8%, n=12/81) or moderate (19.7%, n=16/81) and were managed as outpatient treatment. We have only 3 (3.7%) breast implant losses among 81 procedures and only one was related to PMRDT prior to actual reconstruction. **Conclusion:** PPIBBR is so far a safe and feasible breast reconstructive technique, with a very low complication rate in well-selected patients. It can be used for therapeutic or risk reduction purposes, and the aesthetic results are mostly good and excellent according to the Harris Scale evaluation and avoid the disadvantage of subpectoral implant placement.

Keywords: breast reconstruction; breast implant.