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Immediate breast reconstruction using a latissimus dorsi flap: is lipofilling or implant-based reconstruction better?

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Objective: This study explores the outcomes of immediate breast reconstruction using the latissimus dorsi muscle flap (LDMF), comparing two approaches: LDMF combined with prosthesis (implant-based) and LDMF with fat grafting (lipofilling). The goal was to evaluate early and late postoperative complications and help determine which of these methods is more effective in terms of complications, surgical duration, hospital stay, and long-term outcomes. **Methods:** A 20-year retrospective cohort study was conducted involving 71 patients who underwent mastectomy with immediate reconstruction using LDMF. Of these, 35 underwent reconstruction with a prosthesis and 36 with fat grafting. Clinical and pathological characteristics, surgical duration, length of hospital stay, and early and late postoperative complications were evaluated. Minor complications (seroma, superficial infection, superficial dehiscence) and major complications (hematoma, deep dehiscence, deep infection, flap loss, life-threatening events) were documented. Data were analyzed using Fisher's exact test and the Kruskal-Wallis test, with significance set at $p<0.05$. **Results:** Both groups demonstrated comparable clinical characteristics with similar average ages (49.65 years in the implant group and 49.12 years in the lipofilling group; $p=0.497$). No statistically significant differences were found in body mass index, comorbidities, smoking habits, or clinical staging. The prosthesis group had a significantly shorter hospital stay (2.2 vs. 2.8 days; $p<0.001$) with no significant increase in operative time. Notably, the implant group exhibited a rate of capsular contracture (25.7%) and unplanned implant removal (17.1%). Overall, 37.1% of patients undergoing LDMF with prosthesis experienced implant-related complications. Minor complications, specifically seroma formation, were common but statistically similar across groups. Importantly, fat grafting required fewer additional surgeries to complete the breast reconstruction process than implant-based reconstructions. **Conclusion:** The LDMF with fat grafting presented a reliable, lower-complication alternative to implant-assisted reconstructions in immediate breast reconstruction following mastectomy. This technique demonstrated significant promise as a new standard in reconstructive breast surgery.

Keywords: breast reconstruction; myocutaneous flap; adipose tissue.