

A Retrospective Study Of Breast Augmentation In Transgender Women : Outcome, Complications, Patient Satisfaction.

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Abstract

Background Breast augmentation is a crucial component of gender-affirming surgery for many transgender women. However, limited data exist on postoperative recovery, complication rates, and satisfaction in this population. This retrospective study compares outcomes between sub glandular and sub pectoral implant placements in transgender women.

Objectives To compare postoperative pain, recovery time, and complication rates between sub-glandular and sub-pectoral breast augmentation in transgender women. To assess patient satisfaction across both surgical approaches. To identify factors influencing postoperative complications and satisfaction.

Methods: A total of 98 transgender women who underwent primary breast augmentation between 2023 and 2025 were retrospectively reviewed. Patients were divided into two groups based on implant location: sub glandular (Group A) and sub pectoral (Group B). Parameters evaluated included operative data, postoperative recovery, complications, and satisfaction.

Results: Group A (n=41) and Group B (n=57) showed similar demographic profiles. Group A had significantly less postoperative pain duration (mean 49.2 h vs. 68.5 h), and shorter drain use (1.8 vs. 3.0 days). Nipple-areola numbness was more common in Group A (9.7%). Capsular contracture and displacement were slightly more prevalent in Group B, though not statistically significant. Overall satisfaction was high in both groups (82.9% in Group A vs. 78.9% in Group B rated satisfaction ≥ 4 on a 5-point scale).

Conclusion: Sub glandular placement may offer faster recovery and less postoperative discomfort, while sub pectoral placement could reduce the risk of visible implant edges in thinner patients. Satisfaction was influenced primarily by complications like contracture and displacement, not implant plane.

Introduction

Breast augmentation serves as a key aspect of gender-affirming care for transgender women, significantly enhancing self-perception and body congruence [1, 2]. While the aesthetic and psychological benefits of breast augmentation are well-documented, there remains a scarcity of research specifically detailing postoperative outcomes based on implant placement techniques in transgender women [3]. Traditional studies in cisgender populations have compared sub-glandular and sub-pectoral placements, highlighting differences in pain, recovery, aesthetic results, and complications such as capsular contracture [4-6]. However, the transgender population presents unique anatomical and hormonal contexts that may influence these outcomes. This study evaluates two primary implant placement planes—sub-glandular and sub-pectoral—in transgender women, aiming to inform surgical planning and optimize patient outcomes through evidence-based assessment.

Materials and Methods

This is a retrospective observational study conducted from mid 2023 to early 2025. The study was conducted at a single tertiary-level surgical center at Chengalpattu, TN, specializing in gender-affirming procedures.

Sample Size Calculation

A total of 98 transgender women were included. All available cases within the defined timeframe that met inclusion criteria were analyzed, making this a convenience sample rather than one determined by power analysis.

Inclusion Criteria

Self-identified transgender women
Aged 18 years or older
Diagnosed with gender dysphoria
Completed at least one year of hormone therapy prior to surgery
Underwent primary breast augmentation at the study center

Exclusion Criteria

Revision surgeries
Incomplete medical records
Concurrent major surgical procedures during augmentation

Ethical Considerations

The study received approval from the institutional review board. As a retrospective analysis, informed consent for participation was waived, but confidentiality of patient data was strictly maintained in compliance with ethical standards and data protection regulations.

Data Collection

Patient demographics, BMI, surgical time, implant volume, duration of postoperative pain, hospital stay, and complications (capsular contracture, infection, implant displacement, nipple-areola numbness) were extracted from medical records. Satisfaction was assessed at three months post-surgery using a validated 5-point Likert scale.

Statistical Analysis

Data were analyzed using SPSS 26.0. Continuous variables were compared using t-tests, while categorical variables were analyzed with chi-square and Fisher's exact tests. Satisfaction scores were analyzed using ordinal logistic regression to identify factors impacting outcomes. A p-value < 0.05 was considered statistically significant.

Results

Group A included 41 patients and Group B included 57. Mean ages were 29.7 years (A) and 30.2 years (B). Mean implant sizes were 275 cc (A) and 285 cc (B). BMI did not significantly differ between groups. Pain Duration: Significantly shorter in Group A (49.2 ± 14.6 hours) vs. Group B (68.5 ± 16.3 hours), $p < 0.05$. Drain Use: 1.8 ± 0.6 days (A) vs. 3.0 ± 0.9 days (B), $p < 0.01$. Nipple-Areola Numbness: More frequent in Group A (4/41, 9.7%) vs. 0 in Group B. Capsular Contracture: 2 cases in Group A (4.8%), 4 in Group B (7.0%). Implant Displacement: 1 case (2.4%) in A vs. 3 (5.3%) in B. Satisfaction Scores: 82.9% in Group A and 78.9% in Group B rated satisfaction ≥ 4 .

Tables

Table 1. Patient Demographics and Surgical Characteristics

Variable	Sub glandular (n = 41)	Sub pectoral (n = 57)	p-value
Mean Age (years)	29.7 ± 4.8	30.2 ± 5.1	0.58
Mean BMI (kg/m ²)	22.4 ± 2.1	22.1 ± 2.0	0.43
Implant Volume (cc)	275 ± 20	285 ± 25	0.12
Hormone Therapy (years)	2.1 ± 0.6	2.2 ± 0.5	0.37

Table 2. Surgical Outcomes and Complications

Outcome/Complication	Sub glandular (n = 41)	Sub pectoral (n = 57)	p-value
Pain Duration (hrs)	49.2 ± 14.6	68.5 ± 16.3	<0.01
Drain Duration (days)	1.8 ± 0.6	3.0 ± 0.9	<0.01
Nipple Numbness (%)	9.7%	0%	0.03
Capsular Contracture (%)	4.8%	7.0%	0.61
Implant Displacement (%)	2.4%	5.3%	0.41
Satisfaction $\geq 4/5$ (%)	82.9%	78.9%	0.62

Figure 1. Postoperative Duration (Pain and Drain)

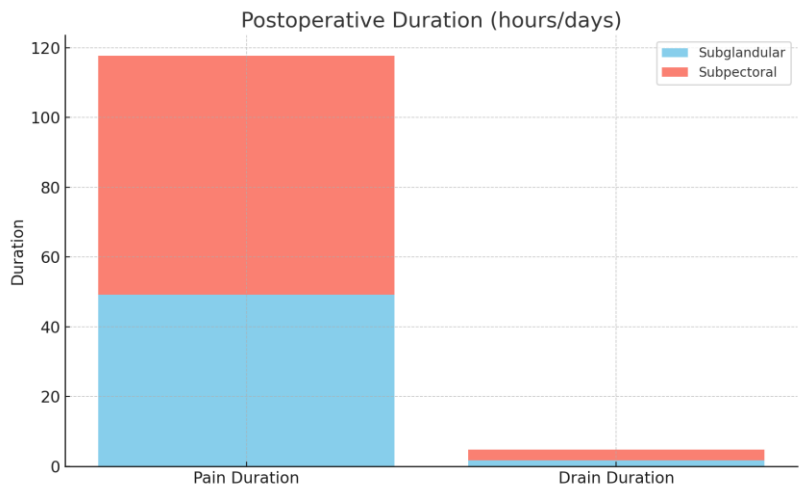


Figure 2. Nipple-Areola Numbness Distribution (Sub glandular)

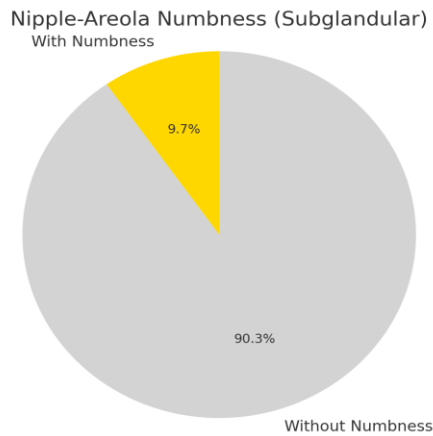


Figure 3. Complication Rates by Implant Placement

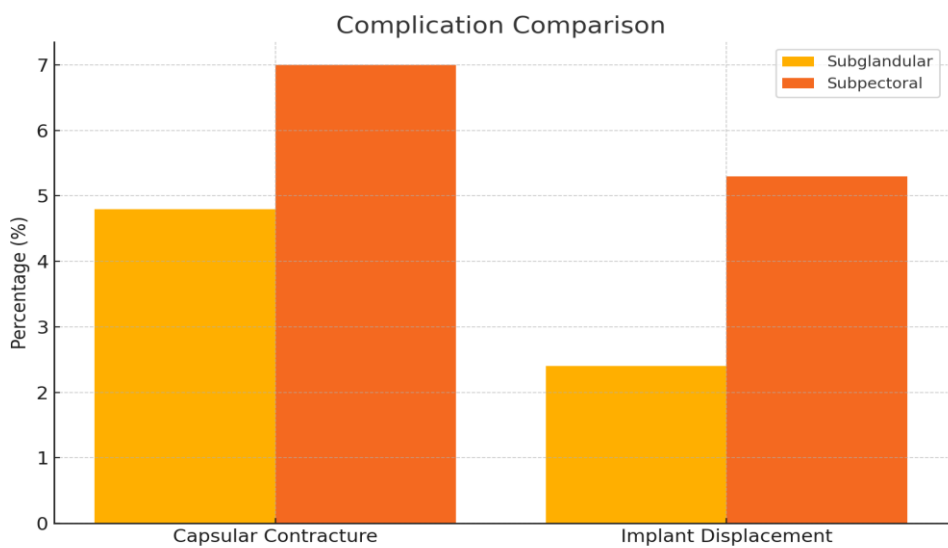
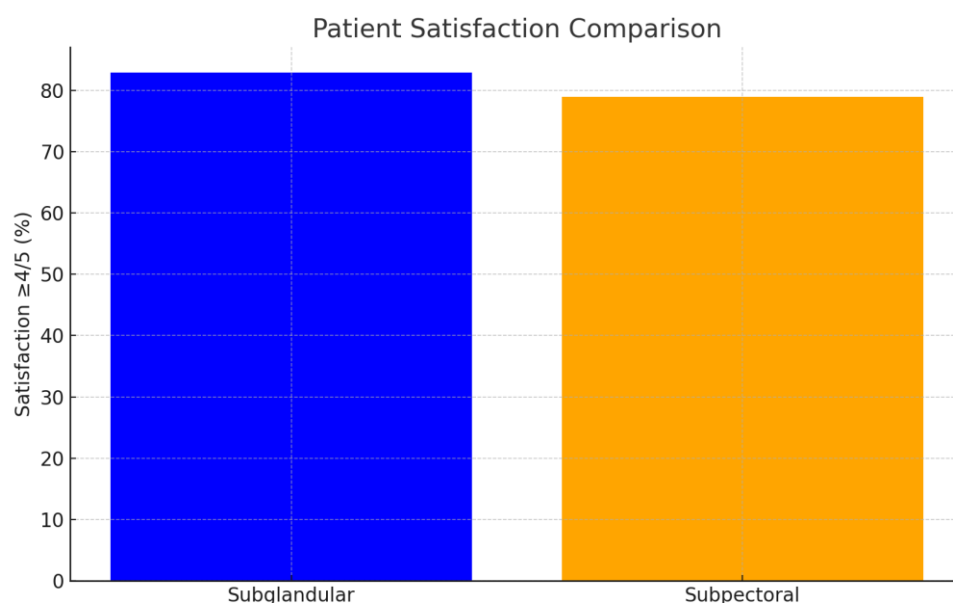


Figure 4. Patient Satisfaction Ratings

Discussion

This study presents a comparative analysis of sub-glandular and sub-pectoral breast augmentation in transgender women, offering insights specific to a population underrepresented in surgical literature. The findings suggest that sub-glandular placement may offer faster recovery and reduced pain, potentially due to the absence of muscle disruption ^[4, 5]. However, it also exhibited a higher incidence of nipple-areola complex numbness, possibly due to the proximity of dissection to superficial sensory nerves ^[6, 7].

In contrast, sub-pectoral implants, though associated with longer recovery times and increased pain, may offer superior aesthetic outcomes in thinner patients due to better soft tissue coverage and reduced visibility or palpability of implant edges ^[8, 9]. These benefits align with findings in cisgender populations where sub-pectoral placement is often preferred for minimizing visible implant contours ^[10].

Complications such as capsular contracture and implant displacement were more common in the sub-pectoral group, though differences were not statistically significant. This is consistent with prior studies indicating muscle movement and inflammation as potential risk factors for contracture ^[10, 11]. Importantly, overall patient satisfaction was high across both groups and was significantly influenced by the presence of complications rather than implant plane, echoing findings from long-term outcome studies in both cisgender and transgender cohorts ^[2, 3, 12].

These results support the need for personalized surgical planning in gender-affirming breast augmentation, considering anatomical features, patient lifestyle, and preferences. Moreover, the study contributes valuable outcome data to the limited body of research guiding implant placement decisions in transgender women.

Conclusion

Both sub glandular and sub pectoral implant placements are viable for breast augmentation in transgender women. The choice should consider patient anatomy, lifestyle, and expectations. Complication management and preoperative counseling remain crucial to optimizing outcomes and satisfaction.

Acknowledgments

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Conflicts of Interest

The authors declare no conflicts of interest.

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