

Female Patients Undergoing Latarjet Surgery Demonstrate Similar Two-Year Secondary Surgery Rates but Greater Risk of Emergency Department Visits Compared to a Matched Cohort of Male Patients

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INTRODUCTION: Latarjet coracoid transfer for recurrent shoulder instability has been shown to be a safe procedure with favorable outcomes. Currently, most conclusions drawn on outcomes after the Latarjet procedure are based on studies focused on male patients, lacking comparison of sex-based differences. The purpose of the present study was to evaluate sex-based differences in 30-day postoperative emergency department (ED) visits, 90-day complications, and two-year secondary surgery rates following the Latarjet procedure for the treatment of recurrent shoulder instability.

METHODS: The PearlDiver Mariner151 database was used to identify patients with International Classification of Diseases (ICD)-10 diagnosis codes for shoulder subluxation or dislocation on the day of first-time stabilization with the Latarjet technique between 2015 and 2021. Male patients were matched 4:1 to female patients based on age, Elixhauser Comorbidity Index (ECI) score, and body mass index (BMI) class. Rates of 30-day ED visits and 90-day complications were compared between cohorts, and risk factors for ED visits were identified by multivariate logistic regression. Incidence of secondary surgery within two years was compared between cohorts by Kaplan-Meier analysis with log-rank test.

RESULTS: Prior to matching, 1059 males and 360 females met inclusion/exclusion criteria. Subsequent 4:1 (male-to-female) matching controlling for age, ECI, and BMI yielded 694 males and 185 females who underwent the Latarjet procedure. The overall incidence of 30-day ED visits was 9.3%, including 8.2% for males and 13.5% for females. Based on multivariate logistic regression, these 30-day ED visits were associated with female sex (OR, 1.79; P=0.029) and incrementally higher ECI scores (relative to ECI 0, ECI scores of 1-2, 3-4, and ≥5 were associated with ORs of 5.31, 8.12, and 12.84, respectively; P<0.05 for each). Ninety-day complications occurred in 1.5% of the total cohort, and incidence was not statistically different between sexes. Overall two-year secondary surgery rate was similar between male and female patients (5.1% vs. 6.7%, respectively; P=0.4).

DISCUSSION: Female patients undergoing the Latarjet procedure for recurrent shoulder instability demonstrated similar 90-day complication and two-year secondary surgery rates compared to a matched cohort of male patients. Female sex, however, was associated with a greater rate of 30-day ED visits.

SIGNIFICANCE/CLINICAL RELEVANCE: Preventative strategies for managing postoperative pain that may contribute to ED visits should be considered in Latarjet patients, especially females. However, similarly effective two-year outcomes can be expected irrespective of sex.

Table 1: ED visits in 30 days after primary Latarjet reconstruction.

Variable	OR	95% CI		P-value
Age, mean (SD), years				
<20	0.30	0.10	0.71	0.014
20-29	-	-	-	-
30-39	0.67	0.38	1.15	0.16
40-49	0.52	0.20	1.14	0.13
50-59	1.00	NA	NA	0.98
Sex				
Male	-	-	-	-
Female	1.79	1.05	2.98	0.029
BMI, kg/m ²				
Normal (20-24.9)	-	-	-	-
Overweight (25-29.9)	1.30	0.46	3.12	0.59
Class I obesity (30-34.9)	0.28	0.02	1.40	0.22
Class II/III obesity (≥35)	0.36	0.06	1.25	0.17
ECI score, mean (SD)				
0	-	-	-	-
1-2	5.31	1.85	22.42	0.006
3-4	8.12	2.75	34.82	<0.001
≥5	12.84	4.18	56.13	<0.001

Odds ratios (ORs), 95% confidence intervals (CIs), and p-values for significant association with ED visits. **Boldface** indicates statistical significance (P<0.05). Dashes indicate referent categories for multivariate logistic regression analysis. OR: odds ratio; CI: confidence interval.

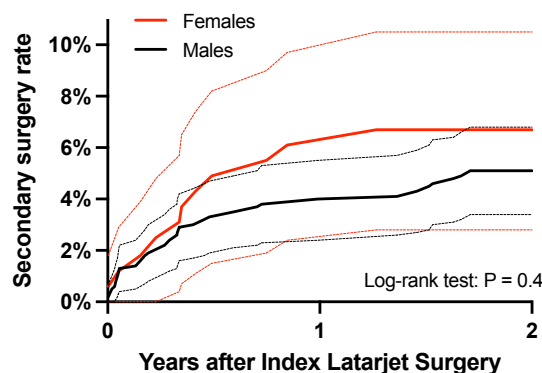


Figure 1: Two-year incidence of revision surgery following primary Latarjet reconstruction, with 95% confidence intervals (shown as dotted lines). Survival curves were analyzed by log-rank test, with cumulative revision rate of 5.1% for male patients and 6.7% for female patients (P=0.4).