

## Abstract

**Background:** Donor site seroma occurring after latissimus dorsi (LD) reconstruction of the breast is a common complication. The aim of the present study was to identify predictors of donor site seroma requiring aspiration in breast cancer patients undergoing mastectomy with breast reconstruction using either ELD flap, or LD flap with prosthesis, and to compare the frequency of donor site seroma between the two operations.

**Method:** Medical records of breast cancer patients treated between January 2013 and September 2015 were reviewed. Univariable and backward stepwise multivariable logistic regression analyses were used to identify predictors of donor site seroma.

**Results:** Fifty-nine breasts in 58 cancer patients underwent breast reconstruction using the LD flap. Forty-five patients (76%) had donor site seroma. There was no significant difference in the frequency of donor site seroma between two operations. Multivariable analysis showed that total donor site drainage volume >340 mL on postoperative days 1 to 3 (OR = 19.2, 95% CI: 1.8 to 204.5), and duration of donor site drain retention of at most 17 days (OR = 12.5, 95% CI: 1.4 to 100) were significant predictor of seroma. Of the 45 patients who had seroma, those with concurrent chemotherapy, whose operative time was > 250 minutes, and undergoing nipple sparing mastectomy had significantly longer duration of donor site seroma, on univariable analysis.

**Conclusion:** Significant predictors of donor site seroma included total donor site drainage > 340 mL on postoperative days 1 to 3, and duration of donor site drain retention  $\leq$  17 days. There was no significant difference in the frequency of donor site seroma between ELD and LD with prosthesis procedures. To avoid donor site seroma, donor site drain retention > 17 days, especially in patients who have total donor site drainage volume > 340 mL on days 1 to 3, is recommended.

**Keywords:** Extended latissimus dorsi flap, Latissimus dorsi flap with prosthesis, Flap complication, Breast reconstruction, Donor site seroma