A Prospective Randomized Trial of the Efficacy of Fibrin Glue, Triamcinolone Acetonide, and Quilting Sutures in Seroma Prevention after Latissimus Dorsi Breast Reconstruction.

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Abstract:

BACKGROUND: Donor-site seroma is the most common complication following latissimus dorsi flap breast reconstruction. Various agents and techniques have attempted to minimize seroma formation. The purpose of this study was to compare the efficacy of different products and quilting sutures at seroma prevention.

METHODS: This is a single-center, double-blinded, randomized, controlled trial of a consecutive series of breast cancer patients (n = 96) undergoing latissimus dorsi flap reconstruction performed by a single surgeon. Patients were randomized to receive (1) fibrin glue (Tisseel) (n = 23), (2) triamcinolone acetonide (n = 26), or (3) normal saline (control) (n = 27) sprayed into the donor site. The fourth arm included donor-site quilting sutures (n = 20). Outcomes included seroma, drain output, and days to last drain removal. Drain removal was standardized at less than 30 cc/day.

RESULTS: All groups were matched evenly without differences in risk, procedures, or complications. The overall seroma rate was 31.3 percent (n = 30). The quilting group had significantly less drainage for weeks 1 (p = 0.006) and 2 (p = 0.050) postoperatively. Quilting statistically reduced the incidence of seromas to 5.0 percent (n = 1; p = 0.038) compared with other groups (control, 34.5 percent; fibrin, 27.6 percent; and triamcinolone, 37.6 percent). Drains were removed 10 days earlier with quilting (control, 35.5 days; fibrin, 39.5 days; triamcinolone, 37.4 days;

and quilting, 25.8 days; p = 0.001). The incidence of all other complications was similar between groups.

CONCLUSION: The use of quilting donor sites significantly decreases the incidence of donor-site seromas and leads to earlier drain removal following latissimus dorsi flap reconstruction and maintains a low complication profile.

CLINICAL QUESTION/LEVEL OF EVIDENCE: Therapeutic, II.