

# **Fibrin sealant to reduce lymphatic drainage after axillary dissection.**

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## **Abstract:**

Background: After axillary dissection drains are left in place 5 to 10 days until 24 hour drainage decreases to less than 50 ml/day in most centers. Use of harmonic scalpel (Harmonic Focus, Ethicon Endo-Surgery, Cincinnati, OH) and electrothermal bipolar vessel sealing (Ligasure, Covidien, Dublin, Ireland) have shown promise in reducing axillary drainage when compared with unipolar diathermy, but are expensive. TachoSil (Nycomed, Linz, Austria) is a fibrin sealant that is used to control surgical hemorrhage in a variety of tissues. There is evidence that it reduces axillary drainage after axillary dissection, and it is less expensive by 30-40% than instruments for vessel sealing. Fibrin sealant as standard treatment in axillary dissection and we documented the duration of drainage and incidence of adverse effects. Methods: The use of fibrin sealant in patients having axillary dissection was prospectively documented. A fibrin sealant patch 9.5 cmx4.8 cm in size was placed over the axillary vein to cover the vein and the space between pectoralis minor and the chest wall medially, and the area over the entrance of the axillary vein laterally. Axillary drains were removed when drainage was less than 50 ml/24 hours or if there was leakage around the drain sufficient to stain the patient's clothing. Results: 23 consecutive patients undergoing axillary dissection who had fibrin sealant were included in this study. 7 had neoadjuvant chemotherapy. One patient had sentinel node biopsy before axillary dissection and the rest had known lymph node metastases. One patient had axillary dissection without breast surgery for axillary recurrence a year after mastectomy and negative sentinel node biopsy. 12 patients had a simultaneous mastectomy. One patient had axillary dissection for axillary recurrence a year after mastectomy and negative sentinel node biopsy. All 12 patients with concurrent mastectomy and 7 other patients with

oncoplastic resections had an additional breast drain. The mean number of lymph nodes removed was 25 (median 23, range 10-59). The mean number of metastatic lymph nodes was 6 (median 3, range 0-59). Axillary drains were removed at a median of 4 days (mean 5.0, range 1-14). 15 (65%) of the axillary drains were removed on or before the 4th postoperative day (Table). Complications were axillary seroma that did not require drainage (1), axillary cellulitis that resolved with oral antibiotics (2), fever without an identifiable source (1), breast flap seroma (2), infection under breast flaps requiring open drainage (2). Conclusion: The use of fibrin sealant limited the number of days of axillary drainage compared with that quoted in the literature and may be an easy, useful and less expensive alternative to vessel sealing instruments. (Table Presented).