

Fibrin sealant to reduce drainage after axillary dissection.

Authors: Olsha O., Hadar T., Dalo R.A., Verocherinsky N., Ashkenazi I.

Publication Date: 2014

Abstract:

Objective: After axillary dissection, drains are left in place for 5 to 10 days until 24 hour drainage decreases to a predetermined amount, almost always less than 50 ml per day. The 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 has proven efficacy in the control of surgical hemorrhage in a variety of tissues. There is evidence suggesting that it may also reduce axillary drainage and it is less expensive by 30%-40% than instruments used for vessel sealing. Fibrin sealant was used as standard in axillary dissection and the number of days of axillary drainage were recorded for each patient as well as any adverse effects. **Methods:** The use of fibrin sealant in patients undergoing axillary dissection was prospectively documented. A patch 9.5 cm x 4.8 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 exit of the intercostobrachial nerve and 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:** Twenty-three consecutive patients undergoing axillary dissection who had fibrin sealant placed at the end of the procedure were included in this study. Seven had neoadjuvant chemotherapy. One of the patients had sentinel node biopsy before axillary dissection, and the rest had axillary dissection on the basis of known lymph node metastases. One additional patient had axillary dissection without breast surgery for axillary recurrence a year after mastectomy and negative sentinel node biopsy. Twelve patients had a simultaneous mastectomy.

All 12 patients with concurrent mastectomy had an additional drain under the skin flaps and 7 other patients had breast drains as part of their oncoplastic resections. The average number of lymph nodes removed was 25 (median, 23; range, 10 to 59). The average number of metastatic lymph nodes was 6 (median, 3; range, 0 to 59). Axillary drains were removed at a median of 4 days (mean, 5.0; range, 1 to 14). Fifteen (65%) of the axillary drains were removed on or before the fourth day (see 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) of which 1 was drained, and infection under breast flaps requiring open drainage (2). Conclusion: The use of fibrin sealant in axillary dissection limited the duration of axillary drainage compared with that quoted in the literature and may be an easy, useful and less expensive alternative to vessel-sealing instruments.