

Analysis of the use of low molecular weight heparin for thromboembolic complication chemoprophylaxis in microsurgical breast reconstruction.

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Introduction:

While microsurgical breast reconstruction is an effective technique for breast restoration after mastectomy, its lengthy nature and its use in patients with malignancy render it at high risk for venous thromboembolic (VTE) complications. The practice of peri-operative chemoprophylaxis in this population is strongly recommended by the American College of Chest Physicians, and is supported largely by studies describing preoperative treatment with continuation of treatment for several days postoperatively. Whilst surgeons recognize the importance of prophylaxis, there is hesitation in initiating preoperative chemoprophylaxis for fear of increased bleeding complications. We report the results of a single-surgeon experience comparing the use of preoperative low molecular weight heparin (LMWH) versus no preoperative LMWH in microsurgical breast reconstruction.

Methods:

Charts were retrospectively reviewed for all patients who underwent free flap breast reconstruction with the senior author from September 2006 to April 2010. Patient data including demographics, treatments, co-morbidities, and complications were recorded and analyzed.

Results:

During the study time period 138 patients (192 flaps) underwent microsurgical breast reconstruction. 83/138 (60%) of patients received preoperative LMWH while 55/138 (40%) received only postoperative LMWH or no LMWH at all. One patient who received preoperative LMWH was diagnosed with pulmonary embolism, both clinically and on CT angiogram. No other episodes of VTE were identified. Three patients developed intra-operative flap pedicle arterial thromboses. All were successfully revised in the same operative session. One patient developed flap venous thrombosis as an outpatient on postoperative day 6 and had flap loss. 5 (3.6%) patients developed postoperative bleeding complications. Of these, 3 required operative exploration, whilst 2 were mild and managed expectantly. Preoperative LMWH use was not associated with increased bleeding complications.

Conclusion:

Microsurgical breast reconstruction has inherently high risk of VTE. This study suggests that preoperative LMWH does not lead to increased risk of bleeding complications. Surgeons can use this information in deciding the merits of preoperative chemoprophylaxis initiation. This study was not powered to analyze VTE prophylaxis efficacy.