Use of fibrin glue in the prevention of seroma formation after axillary lymphadenectomy.

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Abstract:

Goals: The primary objective of this study was to determine the effectiveness of a fibrin sealant in the prevention of seroma formation after axillary lymphadenectomy, in a group of breast cancer patients. Secondary objectives included a comparison with another group of patients, in which an usual surgical drainage was used, regarding hospital stay, operating time, and main postoperative complications. (Table presented) Methods: We completed an analytical retrospective observational study of patients with breast cancer for whom a fibrin sealant was applied to the surgical site after an axillary lymphadenectomy (fibrin sealant group) and those for whom it was not applied (drain group), based on a review of breast cancer patient records from June 2006 to February 2014. Results:We studied a total of 317 patients of whom in 192 no sealant was applied to the surgical site after axillary lymphadenectomy, and were managed conventionally with the placement of an axillary drain (drain group). These were compared with 125 patients to whom a fibrin sealant was applied to the surgical site after axillary lymphadenectomy, without drain (fibrin sealant group), over the same time period. In 88.9% of cases of the sealant group the procedure was a complete success and no seroma formation was observed. Only 14 patients from a total of 125 in the fibrin sealant group required percutaneous drainage due to the delayed appearance of seroma. Overall, early discharge - 24 to 48 hours after surgery - was possible in 91.2% of patients. The volume of fluid obtained in the group with drains was significantly larger (361 ml) compared with the volume collected in the

fibrin sealant group (170 ml) ($p < 0.05$). Also significant differences in the number of punctures needed to evacuate the seroma between the two study groups were found (3.1 vs 2.3; $p < 0.05$). A logistic regression analysis was performed, using the hospital discharged (greater than or less than 48 hours) as dependent variable, and age, surgical technique (classic or Ivanovic), histological type (ductal, lobular, others), histological grade (1, 2-3) as independent ones. Only the use or not of fibrin sealant presents statistical significance ($p < 0.005$). . Conclusion: The use of fibrin sealants with low thrombin concentration is an effective means of preventing the formation of axillary seroma after lymphadenectomy, removing the need for a drain and reducing hospitalization time, with early autonomous discharge.