Tisseel utilized as hemostatic in spine surgery impacts time to drain removal and length of stay.

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Abstract:

Background: Although fibrin sealants (FSs) and fibrin glues (FGs) are predominantly utilized to strengthen repairs of cerebrospinal fluid (CSF) fistulas (deliberate/traumatic) during spinal surgery, they are also increasingly utilized to achieve hemostasis. Here, we investigated whether adding Tisseel (Baxter International Inc., Westlake Village, CA, USA), utilized to address increased bleeding during multilevel lumbar laminectomies with non-instrumented fusions, would reduce or equalize the time to drain removal and length of stay (LOS) without contributing to infections or prolonging time to fusion. Methods: Prospectively, 39 patients underwent multilevel laminectomies and 1-2 level non-instrumented (in situ) fusions to address stenosis/olisthesis; 22 who demonstrated increased intraoperative bleeding received Tisseel, while 17 without such bleeding did not. Results: The 22 receiving versus 17 not receiving Tisseel, with similar clinical parameters, underwent comparable average multilevel laminectomies (4.36 and 4.25) and 1-2 level fusions (1.4 vs. 1.29 levels). As anticipated, for those receiving Tisseel, the average intraoperative estimated blood loss (EBL), total postoperative blood loss, and total perioperative transfusion requirements [red blood cells (RBC), fresh frozen plasma (FFP), platelets] were higher. However, Tisseel had the added benefit of equalizing the time to postoperative drain removal [e.g. 3.41 days (with) vs. 3.38 days (without)] and LOS [e.g. 5.86 days (with) vs. 5.82 days (without)] without increasing the infection rates (e.g. one superficial infection per group) or average times to fusion (e.g. 5.9 vs. 5.5 months). Conclusions: Adding Tisseel for increased bleeding during multilevel laminectomies/in situ fusions contributed to hemostasis by equalizing the average times to drain removal/LOS compared to

patients without increased bleeding and not requiring Tisseel. Copyright: