Prospective, Randomized Study of Surgical Site Infections with the Use of Peri-operative Antibiotics for 24 Hours versus the Duration of a Drain after Spinal Surgery

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Summary: In a prospective randomized study, continuing antibiotics for the duration that a drain is in place after spinal surgery did not decrease the rate of acute surgical site infection.

Methods: 199 patients who underwent multilevel thoracolumbar spine surgery requiring a post-operative drain were enrolled and randomized into two groups: one group receiving 24 hours of perioperative antibiotics and one group receiving antibiotics for the duration that the drain was in place. Data collected included demographics, medical comorbidities, type of spine surgery and surgical site infection.

Results: 6/110 (5.4%) in the 24 hours of antibiotic group developed a surgical site infection while 13/89 (14.6%) in the antibiotic for the duration of the drain were found to have a surgical site infection. The differences between each group were significant (p=0.029). There were no significant differences between the groups with respect to demographics, surgical time, type of surgery, drain output or length of stay.

Conclusion: Continuing perioperative antibiotics for the entire duration a drain is in place after spine surgery does not decrease the rate of surgical site infections.