

WHITE PAPER

The effects of the Drain Glider™ vs. manual clearing on wound drain elongation

Introduction

Current facility protocols instruct healthcare professionals to “milk” wound drain tubing in order to move clots. With their thumb and forefinger, technicians pinch and slide down the tube repeatedly in order to loosen drainage debris. This method can result in elongation in the tubing material, causing it to weaken and/or alter the flow area.

We tested both the manual method and the Drain Glider™ to determine which process produces less elongation in wound drain tubing.

Methods

A test was conducted by Typenex® Medical, LLC to determine the wound drain elongation effects of both manual clearing and the Drain Glider. Two marks were placed on the wound drain 50 cm apart, and the drain was cleared 50 times per method. For each method, 30 drains were tested, and none contained fluid. The new distance between each mark after clearing was recorded in millimeters for each test.

Results

A two-sample t-test was used to analyze the elongation percentage of the wound drains in reference to their starting length. The estimate for the difference in means is 3.7% less with the Drain Glider than the manual process with a 95% upper bound of 3.2% less. For a start length of 500 mm, this equals a difference in means of 18.5 mm less with the Drain Glider than the manual process with a 95% upper bound of 16.0 mm less. Thus, the mean elongation percentage of the wound drain when cleared with the Drain Glider is less than the mean elongation of the wound drain when cleared manually using fingers.

Results (cont.)

Figure 1: Histogram of the total elongation length of the wound drain when cleared with the Typenex® Medical Drain Glider™

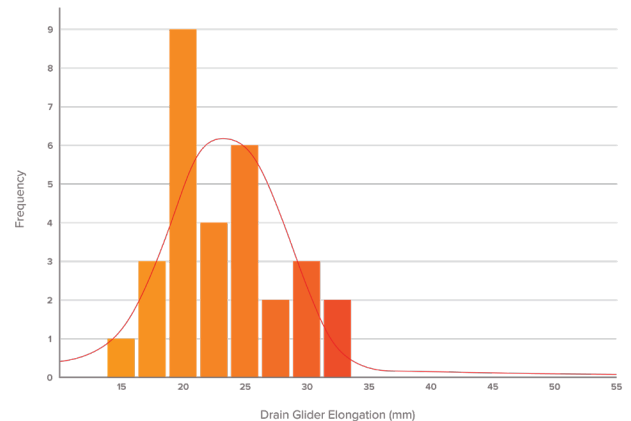
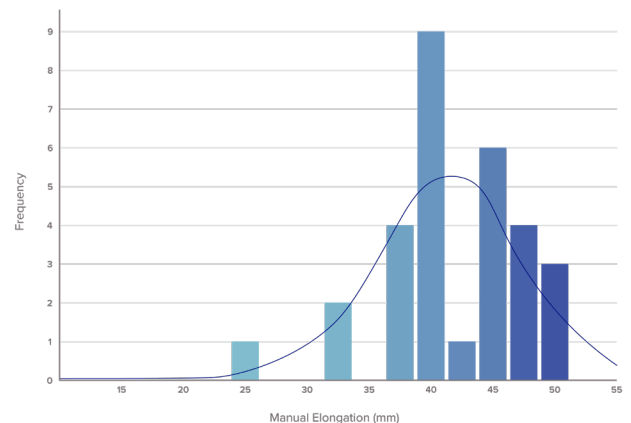


Figure 2: Histogram of the total elongation length of the wound drain when cleared manually using fingers



Conclusion

Elongated drains will result in sections that have thinner walls and/or reduced flow area. Due to less elongation, wound drains cleared with the Typenex Medical Drain Glider will provide better flow characteristics and be less susceptible to breakage than those drains cleared manually.