

For the clearance of occluded PICC lines at our LTACH, there was no statistical difference in the efficacy of a maximum of 2 doses of intraluminal volume dose alteplase versus the standard dose” Sapienza and Ciaschini (2015).

Abstract:

**PURPOSE:** To evaluate the efficacy and economic impact of a maximum of 2 doses of intraluminal volume 1 mg/1 mL dose alteplase for the clearance of occluded peripherally inserted central catheter (PICC) lines at a long-term acute care hospital (LTACH).

**METHODS:** Open-label, nonrandomized quasi-experimental trial taking place over a 3-month period from December 2013 to March 2014. Patients had a standing order of either standard (2 mg/2 mL) or intraluminal volume (1 mg/1 mL) dose alteplase entered for any potential occlusions. The primary efficacy outcome was restored line patency after a maximum of 2 doses of alteplase. Secondary efficacy outcomes included restored patency after 1 dose of alteplase, reocclusion rate, mean time to reocclusion, and mean number of occlusions per patient.

**RESULTS:** A total of 168 patients were enrolled into the study (intraluminal volume, n = 54; standard, n = 114) and a total of 270 occlusions were recorded; 90 received intraluminal volume dose alteplase and 180 received the standard dose. The primary efficacy endpoint was 93.3% for the intraluminal volume dose group and 94.4% for the standard dose group. Secondary outcomes were similar between groups. The average cost per dose was \$123.77 and \$60.62 for the standard and intraluminal volume dose alteplase groups, respectively.

**CONCLUSION:** For the clearance of occluded PICC lines at our LTACH, there was no statistical difference in the efficacy of a maximum of 2 doses of intraluminal volume dose alteplase versus the standard dose. Use of intraluminal volume dose alteplase was found to be significantly more cost-effective.

Reference:

Sapienza, S.P. and Ciaschini, D.R. (2015) Intraluminal Volume Dose Alteplase for the Clearance of Occluded Peripherally Inserted Central Catheter Lines at a Long-Term Acute Care Hospital: Efficacy and Economic Impact. Hospital Pharmacy. 50(3), p.202-7.

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