

**Abstract:**

**Objective:** This study aimed to compare the impact of saline lock to running a slow continuous infusion to-keep-vein-open (TKVO) on the total time a peripheral intravenous (PIV) catheter remained patent.

**Method:** A retrospective chart review of all children admitted to the paediatric ward of a regional hospital in Saskatchewan December 1, 2013 through February 28, 2014. Characteristics of patients with PIV catheters were abstracted from the health records, including patient size, catheter size and site, and total time each PIV catheter spent (i) infusing therapeutic fluids or medications, (ii) running a TKVO infusion, or (iii) saline locked. The duration of catheter patency was compared with the proportion of time that TKVO infusions were run, as well as patient gender and age.

**Results:** During 375 admissions, there were 189 PIVs which met inclusion criteria. The proportion of nontherapeutic time a PIV catheter spent TKVO compared to saline locked did not affect the total time the PIV catheter was patent ( $P=0.33$ ). Gender had no influence, but older age, a nonmodifiable factor, was associated with increased time a PIV catheter remained patent ( $P=0.028$ ).

**Discussion:** Peripheral intravenous (PIV) catheter insertion can be a painful and traumatic procedure. On the paediatric ward of a regional hospital, TKVO infusions were not superior to saline lock for prolonging PIV catheter patency.

**Reference:**

Thorpe M, Berry W, Soper J. Duration of peripheral intravenous catheter patency in children. *Paediatr Child Health*. 2020 Apr 9;26(1):32-34. doi: 10.1093/pch/pxaa038. PMID: 33552320; PMCID: PMC7850282.