“A new, proprietary coiled tip guidewire-delivered PIV demonstrated clear superiority over the conventional catheter in our study. Clinical outcome results showed statistically significant improvements in first attempt success, complications, completion of therapy, dwell time, and overall patient satisfaction.” Idemoto et al (2014).

Reference:


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Abstract:

Background: Current peripheral intravenous catheter (PIV) first attempt success averages 47%, complications 47%, and dwell time 44 hours. Multiple intravenous (IV) access lines requiring replacement during each admission result in poor satisfaction and unnecessary costs. With 2011 Infusion Nursing Society standards allowing IV lines to dwell until complication, there is incentive to explore improvement opportunities.
Comparison of AccuCath IV catheter system with conventional catheters | 2

Purpose: A new, proprietary coiled tip guidewire PIV was compared with conventional IV catheters in adult patients. The experimental IV catheter was projected to have a higher rate of successful placement on first attempt, fewer complications, longer dwell times, higher completion of therapy, higher user satisfaction, and lower overall costs than conventional catheters.

Methods: Adult patients requiring nonemergent IV catheters provided consent and were enrolled and randomized. The study, conducted over 4 months, included 248 patients (experimental IV group n = 123, conventional IV group n = 125).

Results: Experimental IV first attempt success was 89% compared with 47% for the conventional catheter. Fifty percent of conventional IV placements required a second attempt. Experimental IV complications occurred 8% of the time and complications occurred with the conventional catheter 52% of the time. Completion of therapy was 89% with the experimental IV versus 34% with the conventional IV (P < .001). Dwell time improved with the experimental IV (mean 4.4 days [105 hours] vs conventional IV at 1.5 days [35 hours]) (P < .001). Overall patient satisfaction using a 5-point Likert scale scored an average of 4.5 with the experimental IV compared with the conventional IV, which scored 3.

Conclusions: A new, proprietary coiled tip guidewire-delivered PIV demonstrated clear superiority over the conventional catheter in our study. Clinical outcome results showed statistically significant improvements in first attempt success, complications, completion of therapy, dwell time, and overall patient satisfaction.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).