

This study compares first pass success rates and patient and physician satisfaction scores of using a guide wire-associated peripheral venous catheter (GAPIV) vs a traditional peripheral venous catheter in difficult to obtain venous access patients” Chiricolo et al (2015).

Abstract:

STUDY OBJECTIVE: This study compares first pass success rates and patient and physician satisfaction scores of using a guide wire-associated peripheral venous catheter (GAPIV) vs a traditional peripheral venous catheter in difficult to obtain venous access patients.

METHODS: A total of 200 patients were enrolled prospectively from a convenience sample in a large urban academic emergency department. Patients were included when they were deemed difficult access per study criteria. Patients were alternated to receiving either a traditional peripheral venous catheter or a GAPIV. The number of attempts, the number of catheters used, and patient and physician satisfaction scores were recorded.

RESULTS: A total of 100 patients were enrolled into each group. First attempt success was 85% with GAPIV vs 22% with the traditional peripheral venous catheter ($P < .0001$). Sixty-two percent of patients required a second stick with the conventional catheter compared to 15% with the GAPIV. The average number of attempts overall for the GAPIV product was 1.2 with an SD of 0.4 attempts vs 1.9 and an SD of 0.6 attempts with the traditional peripheral venous catheter; $P < .0001$. Using a 5-point Likert scale, the GAPIV had a median patient satisfaction score of 5 at insertion compared with the traditional peripheral venous catheter score of 2; $P < .0001$. Median physician satisfaction with the GAPIV study device was 5 at time of insertion, compared to 3 for the traditional peripheral venous catheter.

CONCLUSION: The GAPIV product demonstrated significantly higher first attempt success and patient satisfaction compared to a traditional peripheral venous catheter in difficult to obtain venous access patients. Physician satisfaction was also favorable due to ease of access, time, and efficiencies gained.

Reference:

Chiricolo, G., Balk, A., Raio, C., Wen, W., Mihailos, A. and Ayala, S. (2015) Higher success rates and satisfaction in difficult venous access patients with a guide wire-associated peripheral venous catheter. The American Journal of Emergency Medicine. August 7th. .

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