Results suggest that use of a PIV based blood collection was a reliable and valid approach and was superior to routine phlebotomy in self-reported responses from patients" Mulloy et al (2018).

Abstract

AIM: To evaluate the effect of daily PIV-based phlebotomy using the PIVO device on PIVC dwell times and replacement rates, as well as the reliability of blood sample collection, and patient response to this method of blood collection.

BACKGROUND: Blood draws which are also known as phlebotomy for laboratory analyses are one of the most common experiences for hospitalized patients. When performed by venipuncture, they are often associated with pain and anxiety for patients. Most hospitals avoid phlebotomy from peripheral IV catheters due to sample hemolysis, sample dilution by fluids in PIVC line or infused medications, PIVC dislodgement or infiltration, and increased rates of phlebitis.

METHODS: A prospective, randomized- controlled study of 160 GI surgery patients was enrolled. Patients were randomized to either control evaluation of PIVC dwell or to receive daily PIVO blood collections in addition to evaluation of PIVC dwell.

RESULTS: Daily PIVO blood collections did not negatively affect PIVC dwell or replacement rates. Overall 81% of blood collection attempts were successful and the likelihood of success was strongly associated with PIVC condition. Patients reported 0.7/10 pain for PIVO blood collection on a 0-10 pain scale and a 9.1/10 preference for PIVO on a 0 (strongly prefer needle) to 10 (strongly prefer PIVO) preference scale. Results suggest that use of a PIV based blood collection was a reliable and valid approach and was superior to routine phlebotomy in self-reported responses from patients.

Full Text

Reference:

Mulloy, D.F., Lee, S.M., Gregas, M., Hoffman, K.E. and Ashley, S.W. (2018) Effect of peripheral IV based blood collection on catheter dwell time, blood collection, and patient response. Applied Nursing Research. 40, p.76-79.

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