Here, a needle is “preloaded” with a guidewire that is then advanced toward the tip of needle. The vein is then cannulated using long-axis ultrasound guidance. Becker et al (2015).

**Abstract:**

**BACKGROUND:** Dynamic ultrasound guidance reduces complications associated with central venous catheter placement. However, successful central venous cannulation often remains challenging, particularly in hypotensive patients. The new wire-in-needle (WIN) technique can further increase periprocedural safety. Here, a needle is “preloaded” with a guidewire that is then advanced toward the tip of needle. The vein is then cannulated using long-axis ultrasound guidance.

**OBJECTIVE:** To evaluate the feasibility and safety profile of the WIN technique.

**METHODS:** Medical students, and resident and attending physicians participated in this study. After a brief lecture and practice session on the WIN technique, they underwent a skills assessment evaluating different aspects of both techniques. Participants then completed a survey assessing their prior experience regarding procedural ultrasound, and their assessment of the WIN technique.

**RESULTS:** Sixty clinicians participated. The assessment of both techniques revealed no significant differences in the number of needle redirections, cannulation attempts, number of arterial punctures, or overall dexterity with the procedure. The WIN technique was faster (45.9 vs. 61.5 s, p = 0.0005) than the traditional technique. More participants confirmed the accurate position of the guidewire in the vein (75% vs. 95%, p = 0.002). More than 90% of study participants met the predefined safety aspects of the WIN technique. Almost all participants reported that they plan on using the WIN technique in their clinical practice.

**CONCLUSION:** This study demonstrates that the WIN technique can be learned quickly and easily by clinicians with various levels of training. In this study, using manikins, it was as successful and safe as the traditional short-axis approach.

**Reference:**


Thank you to our partners for supporting IVTEAM.