



Veinplicity applies mild electrical stimulation to forearm veins to aid vessel dilation. To assess this new technique, we compared its effect on the veins to that of standard heat treatment” Barton (2019).

Abstract:

BACKGROUND: Peripheral intravenous cannulation is one of the most common invasive procedures for hospitalised patients. Patients with difficult venous access require special measures to facilitate cannulation. Veinplicity applies mild electrical stimulation to forearm veins to aid vessel dilation. To assess this new technique, we compared its effect on the veins to that of standard heat treatment.

METHODS: In all, 20 volunteers were randomised to receive either application of heat packs to the forearm and later stimulation with Veinplicity or the same two treatments in reverse order. Ultrasound measurements of the basilic, cephalic and brachial veins were taken at intervals during and after treatment and compared with baseline values.

RESULTS: The mean maximum vein diameter increase from baseline was significantly higher with Veinplicity than with heat packs ($49.94\% \pm 23.55\%$ vs $36.26\% \pm 23.09\%$, $p = 0.021$). In addition, the mean duration of the dilatory effect was significantly longer with Veinplicity than with heat packs ($9.7 \pm 3.9^{\circ}\text{min}$ vs $4.9 \pm 2.2^{\circ}\text{min}$, $p < 0.001$). **CONCLUSION:** Veinplicity dilates forearm veins more effectively and for a longer time than commonly used heat packs. This new treatment option appears to be a valuable addition to the vascular access toolkit,

with the potential to improve first-attempt cannulation rates and spare patients from discomfort, pain and iatrogenic vessel trauma.

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Reference:

Barton, A. (2019) Veinplicity versus heat treatment for vein dilation: A randomised cross-over study. The Journal of Vascular Access. January 4th. .

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