



Intravenous literature: Luyet, C., Hartwich, V., Urwyler, N., Schumacher, P.M., Eichenberger, U. and Vogt, A. (2011) Evaluation of a novel needle guide for ultrasound-guided phantom vessel cannulation. Anaesthesia. 21st June 2011 .

Summary:

We evaluated a novel, sled-mounted needle guide for ultrasound-guided vessel cannulation. Fifty medical students were randomly assigned to use ultrasound with the sled (sled group, $n = 23$) or ultrasound without the sled (control group, $n = 27$) for vessel cannulation in a phantom. For each of 15 attempts we recorded cannulation time and designated a successful cannulation as 1 and a failure as 0. Our primary outcome was the mean overall success rate. The median (IQR) number of successes in the sled group and control group were 15.0 (13.0–15.0 [11.0–15.0]) and 11.0 (9.0–13.0 [6.0–15.0]), respectively ($p < 0.001$). Cannulation time decreased from the first to the last attempt in the sled group from 7.0 s (6.0–10.0 [4.0–16]) s to 4.0 s (3.0–4.0 [1.0–6.0]) s and in the control group from 35.0 s (27.0–35.0 [11.0–35.0]) s to 7.0 s (5.0–10.0 [3.0–25.0]) s. The sled group demonstrated a shorter cannulation time at each attempt ($p < 0.001$). The novel sled improved the success rate and efficiency of ultrasound-guided phantom vessel cannulation.



