The median dwell time of the midline catheters was 8 days with substantial variation whereas the incidence for premature catheter removal was 71.8/1000 catheter days. The majority of midline catheters were removed prematurely” Bundgaard Madsen et al (2019).

Abstract:

BACKGROUND: The use of peripheral venous catheters is hampered by short dwell time and central venous catheters are often preferred for medium- to long-time intravenous treatment. Ultrasound techniques allow for easy catheter insertion into the major veins of the upper arm. A new generation of midline catheters, Powerglide Pro, utilises a one-hand Seldinger technique and can be inserted by one single operator without assistance. This study aimed to evaluate the clinical performance of the Powerglide Pro midline catheter.

METHODS: Consecutively inserted midline catheters were followed in a prospective, observational quality control study. Endpoints were dwell time, the incidence of premature catheter removal, causes of catheter removal and the dwell time and incidence rates of predefined subgroups representing potential effect modifiers.

RESULTS: 100 midline catheters, of which 98 were accessible to follow-up, were inserted in 70 patients. Median dwell time was eight days and 60 catheters were removed before the
indication for intravenous therapy had ceased. The overall incidence for premature catheter removal was 71.8/1000 days and no significant effects of subgroups (sex, body mass index, catheter reinsertions, significant comorbidity, anticoagulant therapy, irritant infusions) were identified for either dwell time or the incidence rate for premature midline catheter removal. The most frequent reasons for premature catheter removal were pain during infusion, clotted catheter or signs of infection.

CONCLUSION: The median dwell time of the midline catheters was 8 days with substantial variation whereas the incidence for premature catheter removal was 71.8/1000 catheter days. The majority of midline catheters were removed prematurely.

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