We retrospectively compared the Micropuncture kit with the standard 18-gauge Angiocath IV catheter for tunneled cuffed catheter insertion in the right jugular vein” Lee et al (2018).

Abstract:

Introduction: Tunneled cuffed catheters provide stable, instantaneous, long-term intravenous access for hemodialysis. Because catheterization is often performed in emergency situations, speed and accuracy are emphasized.

Methods: We retrospectively compared the Micropuncture kit with the standard 18-gauge Angiocath IV catheter for tunneled cuffed catheter insertion in the right jugular vein. From June 2016 to May 2017, 31 tunneled cuffed catheters were successfully inserted via the Micropuncture kit and another 31 via the Angiocath IV catheter. All patients underwent the same ultrasound-guided procedure performed by a single experienced interventionalist. Procedure time was the time from draping of the patient to the completion of povidone dressing after the catheterization. In our center, the Angio Lab nurse maintains records, including procedure time and method for every procedure. All patient records were retrospectively tracked through electronic medical record review. The primary outcome was procedure time and the secondary outcomes were complications and cost-effectiveness.

Results: There were no significant differences in the patients’ demographic data between the two groups. However, procedure time was significantly shorter in the Angiocath group than in
the Micropuncture group (12.4 ± 3.5 vs 17.6 ± 6.9 min, p = 0.001); there were no serious complications, such as hemorrhage, pneumothorax, or hematoma, in both groups. Moreover, cost-effectiveness was better in the Angiocath group than in the Micropuncture group (0.34 vs 52 US$, p < 0.01). Conclusions: Using the Angiocath IV catheter can reduce procedure time and cost with no severe complications. Moreover, experienced practitioners can reduce the risk of complications when using Angiocath. There are several limitations to this study. First, it was retrospective; second, it was not randomized; and finally, it was conducted by only one experienced interventionalist.

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