OBJECTIVE: To investigate the feasibility and safety of the peripherally inserted central catheters (PICCs) accessed via the superficial femoral vein in patients with superior vena cava syndrome (SVCS).

METHODS: From October 2010 to December 2014, 221 cancer patients with SVCS in our center received real-time ultrasound-guidance of the superficial femoral vein inserted central catheters (FICCs) at the mid-thigh. PICC insertion via upper extremity veins had also been investigated in 2604 cancer patients without SVCS as control. The average catheterization time, one-time puncture frequency, catheter duration and complications were compared between two groups.

RESULTS: In the FICC group, the mean catheterization time was 31.60 ± 0.15 minutes, one-
time puncture frequency was 1.05 ± 0.08, and catheter duration was 168.95 ± 20.47 days. There was no significant difference compared with the upper extremity veins PICC group: 31.11 ± 3.86 minutes, 1.03 ± 0.30, and 173.58 ± 39.81 days, respectively. The major complications included skin allergy to chlorhexidine gluconate (CHG) dressings, exudation, catheter-related infection, catheter occlusions, unplanned catheter withdrawal, venous thrombosis, mechanical phlebitis, and catheter malposition. It is interesting that a higher rate of catheter malposition was observed in the upper extremity veins PICC group than in the FICC group (2.15% vs. 0.00%). There were no significant differences in other complications between the two groups.

CONCLUSIONS: Real-time ultrasound-guided PICCs accessed via the superficial femoral vein at the mid-thigh is a new modified technique with low complications, which can be a feasible and safe alternative venous access for patients with SVCS.

Reference:


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