“Several factors appear associated with PICC-DVT. While some of these characteristics may be non-modifiable, future studies that target potentially modifiable variables to prevent this adverse outcome would be welcomed” Chopra et al (2015)

Reference:


Risk factors and treatment associated with PICC-DVT http://ctt.ec/bcKk9+ @ivteam #ivteam

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Abstract:

BACKGROUND: Peripherally inserted central catheters (PICCs) are associated with upper extremity-deep vein thrombosis (DVT). However, patterns, risk factors and treatment associated with this event remain poorly defined.

OBJECTIVE: To determine patterns, risk factors and treatment related to PICC-DVT in hospitalized patients.

DESIGN, SETTING & PATIENTS: Between 2012-2013, consecutive cases of ultrasound-
confirmed, symptomatic PICC-DVT were identified. For each case, at least two contemporaneous controls were identified and matched by age and gender. Patient- and device-specific data were obtained through electronic-medical records. Using variables selected a priori, multivariable logistic regression models were fit to the outcome of PICC-DVT, comparing cases to controls.

RESULTS: 909 adult hospitalized patients (268 cases, 641 controls) were included in the study. Indications for PICC placement included long-term intravenous antibiotic therapy (n=447; 49.1%), in-hospital venous access for blood draws or infusion of medications (n=342; 44.2%), and total parenteral nutrition (n=120; 6.7%). Patients with PICC-DVT were more likely to have a history of venous thromboembolism (OR 1.70, 95% CI=1.02-2.82) or have undergone surgery while the PICC was in situ (OR 2.17, 95%CI=1.17-4.01 for surgeries longer than two hours). Treatment for PICC-DVT varied and included heparin bridging, low molecular weight heparin only and device removal only; the average duration of treatment also varied across these groups. Compared to 4-Fr PICCs, 5- and 6-Fr PICCs were associated with greater risk of DVT (OR 2.74, 95%CI=0.75-10.09 and OR 7.40 95%CI=1.94-28.16, respectively). Patients who received both aspirin and statins were less likely to develop PICC-DVT than those that received neither treatment (OR 0.31, 95%CI=0.16-0.61). Receipt of pharmacological DVT prophylaxis during hospitalization showed a non-significant trend towards reduction in risk of PICC-DVT (OR=0.72, 95%CI=0.48-1.08).

CONCLUSION: Several factors appear associated with PICC-DVT. While some of these characteristics may be non-modifiable, future studies that target potentially modifiable variables to prevent this adverse outcome would be welcomed.

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