Vascular access audit is a feasible quality initiative, which leads to a decrease in the number of patient reported errors in vascular access” Dhruve et al (2019).

Abstract:

INTRODUCTION: Vascular access complications are associated with increased morbidity and mortality in home hemodialysis (HHD). Nurse-administered vascular access checklist is a feasible quality improvement strategy aimed to lower HHD access errors.

METHODS: We conducted a prospective quality improvement initiative for consecutive HHD patients between April 2013 and December 2016 at the Toronto General Hospital. Vascular access audits were administered every 6 months during clinic visits and during retraining sessions after an infection. We aimed to (1) determine whether prospective serial administration of vascular audit will decrease in the number of errors performed by the patient and (2) to determine whether there is an association between the number of errors and vascular access related infection.

FINDINGS: A total of 370 audits were performed on 122 patients with a mean HHD vintage of 6.7 (0.8-19.5) years. The mean number of errors per patient decreased from 1.24 ± 1.75 (baseline) to 0.33 ± 0.49 (last follow-up), P < 0.001. Among patients who had serial vascular access audits performed, there was a significant decrease in median number of errors (baseline median 1, [0-2] end of study median 0, [0-1] P = 0.01). Patients performing buttonhole cannulation made most proportion of errors as compared to CVC, 54% vs. 40% (P = 0.01) respectively; and as compared to rope ladder cannulation 54% vs. 37% (P = 0.008). We were unable to demonstrate an association between the change in patient reported errors and vascular access related infection. DISCUSSION: Vascular access audit is a feasible quality initiative, which leads to a decrease in the number of patient reported errors in vascular access. The longitudinal clinical sequelae of this strategy warrants further examination.

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