

The aim of this study is to determine the use of a high-flow flush technique (HFFT) in successful correction of malpositioned catheters into the lower superior vena cava or cavoatrial junction and provide a cost comparison to interventional/fluoroscopic-based repositioning” Spencer (2017).

Abstract:

BACKGROUND: Malpositioned central venous access device (CVAD) tip locations can cause significant mechanical and chemical vessel-related injuries and complications if left in inappropriate positions. The aim of this study is to determine the use of a high-flow flush technique (HFFT) in successful correction of malpositioned catheters into the lower superior vena cava or cavoatrial junction and provide a cost comparison to interventional/fluoroscopic-based repositioning.

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METHODS: This is a Retrospective chart and radiographic review of all inserted CVADs found malpositioned between 1996-2014 in a multi-specialty 1000-bed tertiary trauma center in Sydney, Australia. 7450 CVADs placed by a nurse-led vascular access service were reviewed. Catheters repositioned pre-2010 were excluded owing to radiology repositioning interventions.

RESULTS: There were 3996 peripherally inserted central catheters (PICCs) and 3454 centrally inserted central catheters (CICCs) placed. Seventy-four were malpositioned post-2010. Of these, 53 devices were repositioned using the studied technique; 86% (46/53) of catheters were successfully repositioned on the first HFFT attempt. There was supportive evidence that device insertion side is important in potential catheter malposition.

CONCLUSIONS: Clinical outcomes suggest that CICCs and PICCs may be successfully repositioned utilizing this technique, with no adverse events associated and a prospective



cost saving benefit when compared to interventional-based repositioning procedures.

Reference:

Spencer, T.R. (2017) Repositioning of central venous access devices using a high-flow flush technique - a clinical practice and cost review. *The Journal of Vascular Access*. August 2nd. .

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