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Buttonhole Cannulation Revisited; Utilizing an Updated Skin Prep Procedure, It Is Possible to Minimize Access Related BSI's with the Buttonhole Cannulation Method

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Introduction: Buttonhole cannulation technique (same site cannulation with blunt needles of the arterio-venous fistula [AVF]) has been the recipient of both negative and positive reviews over the past 40+ years. It has been lauded as a method with the potential to preserve the life of the AVF, while at the same time, decreasing the pain and trauma of sharp needle cannulation. Unfortunately, this technique has also been associated with an increase in access related blood stream infections (BSI's).

Summary: Examining the underlying source of these BSI's reveals incomplete scab removal and/or skin tears at the cannulation site secondary to pulling off the scabs with tweezers or pickers (supplied by some needle manufacturers). Scabs are notoriously colonized with staph aureus; a break in skin integrity decreases its protective mechanisms. Both situations result in the introduction of bacteria at the cannulation site and set the stage for development of a BSI.

Discussion: Utilizing an updated approach to scab removal, we have successfully sustained a zero BSI infection rate in our home dialysis program for the past 7 years. This poster outlines the steps involved in "soaking" the scab site and "gently scrubbing" off any residual scab particles, thus eliminating bacteria laden particles being introduced into the blood stream, and any tearing or excoriation of skin at the cannulation site.

Conclusion: In light of the escalating goal of patients choosing a home modality or taking on a more active role in their in-center dialysis care, we are asking practitioners to re-visit and reconsider the buttonhole method using a modified method of pre-treatment scab removal as described, thus minimizing the risk of cannulation related infections in this patient population. This data has not been collected in a structured study, but rather is a result of an observational cohort report, however, we feel it is adequate for consideration, and can serve as a means to invoke future research.

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