Preservation of the AV Fistula Using Buttonhole (BH) Cannulation

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The Fistula First Initiative requires a fistula prevalence rate of > 66%. To achieve this, our facility introduced the BH technique for cannulation to increase fistula longevity by reducing the risk of complications. We identified infiltrations, missed sticks, & poor bloodflow resulting from creation of smaller fistulas by Vascular Surgeons, as well as pain & bleeding as obstacles to achieving this goal.

We began our journey to BH utilization with educating surgeons, & our renal team. We contacted other centers about their experiences with BH, & utilized training materials from several sources.

Our procedure for BH stresses continuity & prevention of infection. A flow sheet is used to track progress & cannulation information. Staff Scheduling is done to accommodate patient’s (Pts.) schedules. Staff commitment including a willingness to flex workdays &/or times is key to success.

Two Pts. were initially chosen for BH based on access needs. Their fistulas were small and both had pain with cannulation. One Pt. was successful. She experienced no pain or infiltrates & minimal bleeding. The other Pt. was unable to maintain an optimal bloodflow. Stenosis was suspected, but she refused intervention.

We then proceeded with 11 more Pts. & 5 staff over a 3 month period of time. Staff were uncomfortable about cannulating the same area in fear of causing complications. More inservice was done to allay fears & answer questions. Pictures were used to show cannulation area and needle direction. Staff was given literature on troubleshooting when cannulation wasn’t successful.

It has been 1 yr. since introducing BH technique. Nine staff are involved in track formation. Pts. are educated & given the BH option if their access is small or they have had complications. Pts. that are interested in self-cannulation are offered the option.

Monitoring the program for success is vital to improve outcomes. Our facility continues to utilize BH with more staff comfortable with the procedure, & our fistula prevalence rate reaching 70%. Education is ongoing to improve skills & knowledge for staff & Pts. Our goal continues to be to preserve the Pts. dialysis lifeline.

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