Buttonhole Technique
for AV Fistulae only

“Establish the Track”

- Same cannulator for approximately 8 cannulations for non-diabetics and 12 for diabetics.
- Same angle, depth, and insertion site every treatment.
- When the track is established, change to blunt needles - then other staff can cannulate.

Procedure

- Assess the access completely – inspect, palpate and auscultate.
- Soak scabs prior to removal.
- Remove the scabs from previous needle insertions.
- Prepare sites with betadine or per unit protocol.
- Using the 3-point technique, stabilize the access; pull the skin taut while compressing the dermis and epidermis. This allows for easier cannulation and temporary pain interruption.
- Insert the needles at the exact angle and depth for every cannulation.
- When flashback is observed, lower angle of insertion.
- Advance needle down the center of the vessel.
- Place tape (securely, but not tightly) over the wings and the insertion site.
- Confirm good flow using a syringe.
- Place chevrons, made from ½” plastic tape, under the needle, then cross over each wing in an “X” pattern to secure needles.
- Continue “On” procedure per unit protocol.

Scab Removal

- Moistening scabs allow for easier removal. Scabs can be moistened using a 2x2 with normal saline or alcohol-based gel; scrubbing arm with soap and water; or having patients tape an alcohol pad to their scabs before coming to dialysis.
- Once scabs are moistened, use your thumb and forefinger on top of the 2x2; pinch the scabs off; turn the 2x2 over to make sure you got the entire scab; prep the sites according to policy.

Troubleshooting

- If the sites you chose are not working, abandon the site and chose a new site.
- If, after the weekend, you have trouble with blunt needles, switch back to sharp needles for a couple of treatments being very careful to stay in the track.
- If you have to use a different site (other than the buttonhole), stay at least 3/4” away from in front of the buttonhole site to prevent damage to the buttonhole track.
- Bleeding around the needles during dialysis could be caused by stretching the track or by cutting the track with sharp needles during cannulation.

Barriers to Success

- Heavily scarred accesses from: multiple needle sticks, long-lived accesses or lidocaine use
- Large amounts of subcutaneous tissue – usually upper arm
- Stenosis present – buttonhole won’t improve clearances on a stenotic access, repair required
- Not having the same cannulator during track formation

Benefits

- Patient can, and should, learn to self-cannulate.
- Less painful for the patient.
- Fewer infections, missed sticks, and infiltrations. Decreasing these problems can extend the life of the AVF.
- Blunt needles meet OSHA Bloodborne Pathogen requirements – safer for the staff and the patient.

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