

**Buttonhole Practice:
Should We Abandon
This For HHD
Patients?**

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Vascular Access and Home Hemodialysis

- "Unsuccessful cannulation can result in needle infiltration (swelling that happens when the needle goes through the fistula wall) which in turn causes localized bruising and increases the risk of thrombosis and loss of AVF patency"
- You may also lose your home patient....

Objectives

- What is button hole cannulation?
- Who does it benefit?
- Advantages for HHD patients
- Disadvantages for HHD patients
- Recommendations

Who Am I?

- An OLD Nurse!
- Began my dialysis career in 1986, doing acute dialysis
- Home Training nurse 1988-1997
- Home Dialysis Manager 1997-2009
 - First HHD patient in 2004 with a retired Fresenius H machine
 - Began AKSYS in 2005- 2007 10 patients!
 - Began NxStage 2006 Currently 146 patients
- Moved to West Virginia and began my career with FKC in 2009- NOW!

Buttonhole Candidates

- Require a native fistula
- **Any potential self cannulator or home hemodialysis patient**
- Limited area for cannulation sites, short fistula
- Preservation of the last viable access option
- Patients who are "needle phobic"

What is button hole cannulation?

- Let's first review ladder technique, used in most or all of our in-center facilities!
- The idea of "ladder technique" is to use the entire length of your fistula and each cannulation would go up higher and then repeat...
- In reality, there is very little "ladder" in the technique due to dips and unusable areas, or staff who want a "safe stick"

Ladder Technique



Button hole cannulation

- Repeatedly cannulating in the same exact location, at the same angle, and depth. Establish a "track" that can then be cannulated with blunt needles.
- Once established, sharps should not be reintroduced as it can "shred the tunnel created."

2 Sets of Established Buttonholes



Advantages

- Once buttonhole is established, there is reduced pain, bleeding and trauma with cannulation
- Removes the concern of finding a new sight everyday
- Lower risk of development aneurysm and decreases the risk of infiltration
- Reduced risk of accidental needle stick injury.

Disadvantages

- Can only be utilized with fistulas
- May have a higher risk of infection
- Must adhere to a strict protocol to prevent infection, technique is very important
- Need a dedicated cannulator, especially when buttonhole is being established.

Yes to Buttonholes!

- Combats the biggest fear for our patients! **THE NEEDLES!**
- Patients experience "success" early on in the training process, giving them confidence to continue!
- Disadvantages can be minimized by a structured training and re-education program.
- Teaching self-cannulation decreases partner burnout or need for a partner at all!

References

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