Buttonhole Cannulation Workshop

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Alignment Issues and What to do About Them (inability to transition)
Why You Meet Resistance

- Manipulating the needle
- “After the Weekend” effect
- Tourniquet vs. no tourniquet
- Patient with vomiting and diarrhea

**dashed line – correct tunnel position
solid line – displaced buttonhole tunnel**
Eliminating Resistance: Best Demonstrated Practice

“Tip Up / Tip Down” Technique

TIPPING UP

TIPPING DOWN

Dashed line – extra tunnel without entranceway into AVF
Solid line – original tunnel with entranceway into AVF
When You Meet Resistance at Just One Site

Problem with the arterial buttonhole site

check here for stenosis

anastomosis

Problem with the venous buttonhole site

check outflow or central vein for stenosis

surface of the skin

AV fistula
Best Demonstrated Practice

**Touch Cannulation Technique**

- Hold the tubing with thumb and forefinger just behind the wings.
- Prevents cannulator from pushing (directing) the needle.
- Allows the needle to direct itself down the tunnel.

Photo used with permission
Scab Removal
Removing the scab

• The Buttonhole Technique requires complete removal of the scab before cannulating

• Moistening the scabs makes them easier to remove

• Scab removal should occur just before needle placement – never have the patient remove scabs before they get to dialysis
Proper Use of Scab-Lifting Devices

Lift a corner

Scoop - like ice cream

Never dig like you’re using a shovel - you can cause an exit site infection!
Hubbing
Hubbing - What's This?

- Creates a cave-like entranceway of buttonhole exit site
- Inability to remove scab completely can cause infection
- Prevents you from "seeing" correct angle of insertion

Photos: Stuart Mott
Preventing “Hubbing”

• Leave space between the hub and the skin to prevent the bowl effect called “hubbing”

• Have approximately 1/8 inch of the needle showing

Using Alternative Devices to Create Buttonhole Sites
Inserting BioHole into Skin
BioHole in the Patient's Arm

Source: Nipro
Cannulation After 14 Days
ClampCath™ Catheter
ClampCath Catheter
VWING® Device
VWING Device

• It is a titanium funnel with a palpable ridge.
• The AVF needs to be 5mm in diameter.
• It is used for deep upper arm accesses deemed uncannulatable.
• It is initially sewn onto the top of the AVF, but grows into vessel wall.
• It takes three weeks to heal, but still reduces catheter exposure time.

Source: Vital Access
Unguided vs. Guided Buttonhole Creation

Source: Vital Access
Questions

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Resources:
www.fistulafirst.org (change concept #8 - Cannulation Training
www.northwestrenalnetwork.org