Vascular Devices – Pre-Existing

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• No financial conflicts of interest
Content

• Indications
• Device identification
• Procedure
• Awesome video (9 minutes and 54 seconds)
Indications

• Paramedics may access certain pre-existing vascular devices on standing order if the patient is in EXTREMIS and a lifesaving intervention will be performed

• Extremis includes, but is not limited to:
  – Cardiac arrest
  – Respiratory arrest
  – Status epilepticus
  – Decompenasated shock
  – Life threatening arrhythmias

• If the patient is not in extremis and access is needed, contact medical control for orders to access the device
Device Identification – Overview

- Pre-existing devices include:
  - Renal dialysis lines (but NOT fistulas)
  - Central venous catheters (CVC)
  - Peripherally inserted central catheter (PICC)

- *Not* accessible by prehospital providers:
  - Implanted ports
  - Fistulas

- Percutaneous catheters below the nipple are *not* for vascular access and must not be used
  - The entirety of the upper extremities (arms/forearms) is considered anatomically above the nipple
Device Identification – Renal Dialysis Catheter

- Renal Dialysis Catheter (NOT a Fistula)
• Renal Dialysis Catheter (NOT a Fistula)
Renal Dialysis Catheters (NOT fistulas)

- Generally have a red and blue port corresponding to “arterial” and “venous” dialysis flow respectively.
- Despite this terminology, both ports terminate in the vein (superior vena cava) and access the venous circulation.
- Patients can get hemodialysis through this line.
- Both ports can be accessed, flushed, and utilized in an emergency.
- If one port does not draw back or flush easily, do not use that port and try the other one.
- Although you only need one, it is recommended that you clean and prep both ports, if possible.
device identification – CVC

- Central Venous Catheters (CVC)
Device Identification – CVC

- Central Venous Catheters (CVC)

The securing device on the shoulder may not typically be present.
Device Identification – CVC

- CVC (Central Venous Catheters)
  - CVCs generally have two, three, or four ports
  - All ports access the venous circulation
  - If one port does not draw back or flush easily, do not use that port and try another one
  - Although you only need one, it is recommended that you clean and prep all ports, if possible
• Peripherally Inserted Central Catheter (PICC)
Device Identification - PICC

• Peripherally Inserted Central Catheter (PICC)
Device Identification – PICC

- Peripherally Inserted Central Catheter (PICC)
• PICC (Peripherally inserted central catheter)
  – Most likely encountered device in the prehospital environment
  – PICC lines generally have one or two ports
  – All ports access the venous circulation
  – If the line is a double lumen PICC and one port does not draw back or flush easily, do not use that port and try the other one
  – Although you only need one, it is recommended that you clean and prep both ports, if possible
Device Identification – Fistula

• This is a fistula
• Do *not* access a fistula
• Patients are not sent home with dialysis fistula lines accessed
• Working fistulas will typically have a palpable thrill
Device Identification – Non-Vascular

- Do not access lines below the nipple
- This is a peritoneal dialysis catheter and does not access the blood circulation
Device Identification – Port

- This is an implanted port
- Do *not* access implanted ports in the field
- If a port is already accessed, contact medical control if you feel that you need to use it
Procedure

- Discontinue any solution flowing into the line
  - Do not, however, discontinue a necessary continuous infusion such as epoprostenol (Flolan®/Veletri®) used to treat pulmonary hypertension
- Put on sterile gloves, if available
- Clean site with iodine or chlorhexidine wipe
- Do not remove antireflux valve, if present
  - If no antireflux valve, clamp line, remove cap, and utilize antireflux valve from an extension set
- With clamp open, withdraw 10 mL of fluid and discard
- Flush with 5 mL of normal saline
- If flushes easily, instill the remaining 5 mL from the 10 mL flush
Procedure

- Secure the administration set to the access site
- Maintain normal saline KVO through the device
- If the access device is damaged and begins to leak, clamp it one inch from the skin entry site *ideally* with a padded, non-serrated hemostat, if available