The Ottawa Hospital | L'Hôpital d'Ottawa

# NEPHROLOGY PROGRAM
# DEPARTMENT POLICIES AND PROCEDURES

## Hemodialysis - Section 05 - AV Fistula Graft - Neph 5-06
## Accessing AV Fistulas/Grafts for Non-dialysis Procedures
**No.: 01211** (TOH Standardized Policy Number)

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**ISSUED BY:**
Hemodialysis Clinical Practice Committee

**DATE OF APPROVAL:**
N/A

**APPROVED BY:**
Program Clinical Director and Division Head

**LAST REVIEW/REVISION DATE:**
2015/12

**CATEGORY:**
AV Fistula/Graft

**IMPLEMENTATION DATE:**
2003/03

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## POLICY STATEMENT:

- Access of A-V fistulas/grafts for non-dialysis purposes will be performed only in Emergency Situations where conventional access attempts have proven unsuccessful
- Access of A-V fistulas/grafts for non-dialysis purposes will be performed by a Certified Hemodialysis Nurse
- Access for IV therapy requires consultation to the covering Nephrologist/Designate and/ or the Dialysis Access RN/ APN

## PURPOSE:

**To access A-V fistulas/grafts for non-dialysis procedures such as:**

**a.** Obtaining blood specimens
**b.** Initiating IV therapy

## BACKGROUND STATEMENTS:

- A-V fistula/graft care will be reviewed with both the staff caring for the patient and/or with the patient by the nurse who is accessing the AV fistula or AV graft
- The A-V fistula/graft must be assessed for the presence of bruit or thrill. Absence of bruit and thrill precludes cannulation
- The A-V fistula must be a minimum of 6 weeks old for cannulation

## SUPPLIES:

- 1 chlorhexidine swab
- Tourniquet (for A-V fistula only)
- Non sterile gloves
- Disposable towel
- 1" tape
- Mask with visor/eye protection

### a. Obtaining blood specimens

- Multi sample needle (vascutainer) adapter
- Vacutainer tubes
- #21 or 23 gauge safety winged blood collection set
- vacutainer holder
- 1 Pkg 2x2
- Bandaid

### b. Initiating IV therapy

- Smallest gauge metal needle or Teflon needle (Teflon needles should never be used on an AV Graft as these needles may damage the PTFE graft material).
- IV tubing flushed with ordered solution
- Volumetric pump
- Transparent dressing

## DEFINITION(S): N/A

## NURSING ALERTS:

1. There is high risk of exsanguination from AV fistulas and AV grafts. Accessing of these AV accesses requires close monitoring throughout the procedure and during IV infusion. The application of adequate pressure post accessing is essential to avoid exsanguination
2. All IV devices are to be removed immediately post infusion. Saline locks are never used for AV fistulas and AV grafts

## PROCEDURE:

### Section A: Obtaining blood specimens

1. Collect equipment
2. Perform hand hygiene according to Infection Control standards. Hand Hygiene Policy and Procedure #00014
3. Place tourniquet on upper arm but do not tighten (A-V fistula only). Place disposable towel under the limb

4. Select needle site. Never cannulate into a pseudoaneurysm or aneurysmal dilation where skin is white and shiny. Always select a site away from obvious sites of recent cannulation
5. Cleanse site with a chlorhexidine swab. Allow to dry
6. Assemble equipment and put on gloves
7. Tighten tourniquet (AV fistula only)
8. Stabilize vessel with non-dominant hand, hold needle by wings and insert needle into vessel at a 25 degree angle (for easily palpable vessels) with bevel up. Flashback will be evident. Anchor wings to the skin using micropore tape to help ensure that the needle remains in place while obtaining blood samples
9. Release tourniquet
10. Collect blood samples
11. Remove tourniquet from A-V fistula. Simultaneously remove needle at the same angle or one similar to the angle of insertion and apply pressure to site. Never apply pressure before the needle is completely out to avoid pressing the cutting edge of the needle into the intima
12. Continue to apply pressure for at least 5 minutes and/or until bleeding has stopped
13. Label and send specimens as per hospital and program standards

## Section B: Initiating IV therapy

1. Verify physician's order for solution type and rate
2. Explain the procedure to the patient
3. Assemble the equipment
4. ***NOTE**: The certified hemodialysis nurse must remain present
5. Perform hand hygiene according to Infection Control standards. Hand Hygiene Policy and Procedure #00014 Prepare IV solution and tubing. Add medications, if ordered
6. Apply tourniquet (for A-V fistula only)
7. Select the site and release tourniquet temporarily
8. Cleanse the site with chlorhexidine
9. Reapply the tourniquet and put on gloves
10. Needle should be inserted at approximately a 45 degree angle at least 2 cms from the surgical anastomosis. (Less steep angles can increase the risk of dragging the cutting edge of needle along the surface of the graft. Steeper angles can increase the risk of perforating the underside of the graft).Stabilize the vein by gently stretching the skin below the chosen site
11. Insert the needle, bevel side up, into the skin and into the vein in one smooth motion. The needle should be inserted nearly parallel to the vein
12. Check for back flow of blood into intravenous device
13. Release the tourniquet
14. If required, use 5 cm X 5 cm gauze to prop the needle to align with the fistula/graft. Apply tape over needle site and wings of the needle

15. Apply the 2nd and 3rd tapes to anchor the needle criss-crossing under the needle. Ensure that the tape is well adhered to the skin. Apply folded 10 x 10 cm gauze under the rigid part of the needle to support it and secure with tape
16. Attach the IV tubing to the hub of the catheter
17. Begin the infusion and assess for free flow
18. Ensure that the skin is clean and dry
19. Place tape along IV tubing junction to secure the connection
20. Loop IV tubing to form a U. Secure with tape

## DOCUMENTATION:

1. Document according to program standard
2. Nursing Care Plan will include site of IV insertion device, date for site/ tubing changes and contact numbers for problems

## RELATED POLICIES / LEGISLATION:

1. Infection Control Policies and Procedures - Basic Tenets of Infection Control - Policy # 00014 - Hand Hygiene Policy and Procedure

## REFERENCES:


1. The Ottawa Hospital Nursing Policy and Procedure Manual

2. NKF-KDOQI Guidelines, American Journal of Kidney Disease, Vol 48, No 1, Suppl 1


## COMMENTS / SIGNIFICANT REVISIONS: N/A