

Appendix J: Blood Drawing From a Hemodialysis and Hemepheresis Catheter

EQUIPMENT

- Sterile gloves
- Fluid resistant mask with eyewear protection
- Cone mask (non-fluid resistant) for patient
- Chlorhexidine gluconate 2% with isopropyl alcohol (CHG) swabs
- Vacutainer waste tube (recommend at least a 7ml red top tube) or 10cc syringe
- Appropriate vacutainer tubes to obtain labs
- Vacutainer needleless adapter
- Prefilled 10 cc normal saline syringe
- Heparin Flush, if ordered
- Alcohol pad
- Sterile cap

PROCEDURE

1. Wash your hands.
2. Mask yourself and the patient.
3. Use the inside sterile packaging from the sterile glove package as the clean field.
4. Drop the following onto the clean field:
 - assembled vacutainer holder with vacutainer needleless adapter or 10cc syringe
 - vacutainer tubes; and
 - opened chlorhexidine swab.
5. Don sterile gloves.
6. Disinfect the catheter hub/ cap connection by cleaning and saturating the cap with chlorhexidine.
7. After ensuring the catheter lumen is securely clamped, remove the cap and scrub the catheter hub with an alcohol pad. Attach assembled vacutainer holder with vacutainer needleless adapter or empty 10cc syringe. Whenever the hub is reaccessed, wipe it with an alcohol pad.
8. Open the clamp.
9. Engage the red top tube to the vacutainer holder (for waste), fill and discard or attach the 10cc syringe and withdraw and discard at least 6cc of blood as waste.
10. Collect vacutainer tubes in the proper order based on the additive type and whether the tubes are glass or plastic. Follow the order of draw:
 1. Blood culture container
 2. Coagulation tube (e.g. blue top)
 3. Serum tube with or without clot activator, with or without gel (red top)
 4. Heparin tube with or without gel plasma separator (green top)
 5. EDTA (lavender top)
 6. Glycolytic inhibitor (gray top)
 7. Note: Any tubes containing anticoagulants (lavender top, blue top, clot activator tubes, and others) shall be gently inverted several times immediately after Venous Blood Collection to prevent specimen clot formation. These tubes shall be filled to capacity to obtain the proper anticoagulant to blood ratio. <http://pathology.jhu.edu/department/GeneralPolicy/VenipunctureProcedure.pdf>
11. Clamp catheter.

Appendix J: Blood Drawing From a Hemodialysis and Hemopheresis Catheter

12. Remove vacutainer apparatus.
13. Attach prefilled 10 cc normal saline syringe, unclamp and flush line.
 - PATIENTS ROUTINELY RECEIVE NORMAL SALINE FLUSH ONLY. A specific order must be written for heparin flush.
14. Reclamp and begin pheresis procedure or complete flushing procedure.
15. If heparin lock ordered, attach syringe with appropriate amount of heparin. (See VAD flush procedure)
16. Unclamp catheter and instill heparin.
17. Reclamp.
18. Open the sterile cap package and leave cap inside sterile package.
19. Wipe catheter hub with alcohol and carefully attach sterile cap to the catheter.

SEE ALSO

JHH Department of Nursing Staff Education

- Phlebotomy self learning packet http://www.insidehopkinsmedicine.org/nursing/se/staff_education.htm

REFERENCES/CONSULTATION

1. Charmelle Hughes Manager Hemodialysis Unit, The Johns Hopkins Hospital (2006).
2. B. Reynolds, Nurse Manager, Vascular Access Team, The Johns Hopkins Hospital (2007).
3. Estelle Harvey, RN, BSN, CNRN, Hemapheresis and Transfusion Support (HATS)
4. MiKaela Olsen RN, MS, OCN, Oncology & BMT Clinical Nurse Specialist