CARE OF PATIENT POLICY & PROCEDURES

Policy Number: 4:77

Subject: Chest Drain Autotransfusion

Purpose: Reinfusion of autologous blood collected through a closed system from the chest cavity by way of thoracic drainage apparatus to return to patient’s circulatory system to optimize circulation, perfusion and hemostasis.

Policy: Blood loss from pleural cavity or mediastinal area secondary to trauma or postoperative conditions maybe reinfused by a registered nurse to the patient by way of a chest tube collection device within 6 hrs of loss.

Additional Information:
1. Reinfusion requires a physician order.
2. Contraindications to reinfusion of shed blood would include:
   - D.I.C.
   - Pericardial, mediastinal or systemic infections.
   - Pulmonary or respiratory infection or infestation.
   - Malignant neoplasm presence.
   - Enteric contamination of thoracic cavity.
   - Intraoperative thoracic or mediastinal cavity use of thrombin, microfibrillar hemostatic agents, povidine – iodine anticeptic solution or gels.
3. Collected blood should not remain outside the body longer than 6 hrs before reinfusion is completed or discontinued.
4. Autotransfusion tubing is single patient use only. A new microemboli filter will be used for each Autotransfusion (ATS) bag.
5. Observe all steps of procedure carefully for air in bag or tubing to prevent introduction of air emboli.
6. Observe all hospital protocols for blood handling, pressure infusion of blood products and disposal of blood contaminated equipment, e.g. Universal Precautions.
7. If a pressure infuser bag is desired, a larger size device is recommended. Be sure ATS bag air vent is closed if pressure is used.
8. If blood flow is poor during reinfusion, check bag for clots, gently agitate bag; check for opening of filtered air vent on top of ATS bag, check to make sure all clamps are open.
9. Water seal column in chest drainage system will change temporarily during maneuver of blood tranfuser from collection chamber to ATS bag. Observe for changes that are not temporary.

Equipment: Patient IV
Sterile saline
Patient autotransfusion form MR-104
Self-filling blood bag (ATS) from kit.
Microemboli filter and blood administration tubing
Dry suction chest drain with ATS chamber.
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Procedure:

1. Using universal precaution following chest tube insertion, identify the PVC access port at bottom of drainage collection unit. Clamp and cap this part.
2. Remove ATS bag from package. Clamp access line to top of bag.
3. Using aseptic technique. Spike the collection unit access line with the ATS access line using a firm twisting motion.
4. Open both clamps. Hold ATS bag 2-4” below the base of the drain to facilitate transfer of blood to bag, bending bag upward where indicated to activate spring.
5. After blood transfer, squeeze bag gently as needed to displace any air in bag.
6. Reclamp both access lines. Cap off line from chest drain chamber. Reinsert spike from ATS bag access line into holder along filtered air vent port.
7. Attach microemboli filter to port at location of ATS bag. Prime tubing with sterile saline, following microemboli filter package directions.
8. Open filtered air vent at top of ATS bag to prime blood. Do not squeeze ATS bag during priming and hold blood bag upright but several inches below saline bag.
9. With blood tubing now attached to patent IV site, obtain vitals and document on autotransfusion sheet. Administration procedure is the same as Blood Administration (4:70).
10. If gravity flow is used, open air vent on top of ATS bag. Next open blood filter clamp and regulate rate of flow.
11. Administration by pump is not advised.
12. Complete transfusion information on autotransfusion sheet and CPSI.

References:

Atrium Medical Coporation
5 Wentworth Drive
Hudson, New Hampshire 03051
1-800-528-7486

Microaggregate Blood transfusion set
Pall Biomedical Inc.
Fajardo, PR 00738
1-800-645-6578