

Pre-Operative, Operative, and Post-Operative Procedures for Graft Loss Prevention

OBJECTIVE: To ensure that all staff are appropriately trained, prepared and equipped to provide the essential tasks necessary for the preparation of OR burn procedures and to have a clear understanding of expectations during the OR procedure for any burn patients that are having a surgical procedure. To provide direction for the appropriate steps, post surgically, related to skin graft preservation, adherence and overall successful graft take.

GUIDELINE:

Preoperative

1. A thorough preoperative history taking is critical; patient's medications (particularly those with anticoagulant properties), allergies, bleeding diathesis, frequent or recurrent infections, general wound healing, patient's nutritional status.
2. Other pre-operative considerations include the potential for postoperative trauma (particularly those involving shearing forces) the patient's ability to care for the wounds and the surgeon's assessment of the patient's expectations and understanding of the procedure.
3. Preoperative orders need to be placed for blood products to be placed on hold for the operative procedure and well as postoperative.
4. Preoperative orders also need to be placed for prewarming of patients prior to the operative procedure if below required temperature.

Planning:

1. When a patient is scheduled for surgery the medical provider will complete a case request in the EMR. Based on the procedure code a DPC will be generated. This will be used along with the OR prep sheet to communicate needs to the surgical team.
2. At this time the operative prep sheet is completed by the Burn team and emailed to Periopburn@upstate.edu. The operative prep sheet includes the location of the procedure (adult or pediatric) and additional supplies required for the operative procedure.
3. Operative prep sheet is printed by the periop burn leader and given to the OR surgical team.
4. Operative Burn team needs to order burn dressing cart from distribution. The cart should be outside of the Burn OR prior to the case. Check that the cart is stocked properly prior the beginning of the case. Any missing items should be ordered from distribution
5. The surgical team will obtain the burn surgical cart (located in 5E 1A/Peds cart equipment storage room 3N). The surgical team will ensure all necessary supplies are on the cart as dictated on the OR prep sheet and EMR, and then place in the OR suite. After completion of the OR case the cart is to be immediately restocked to ensure readiness for next case.
6. Prior to sending for the patient, the surgical team will call HVAC to obtain the room temperature. If the temperature is within the limits of the specified degrees requested in the OR prep sheet the surgical team will send for the patient. If the temperature is not within range of the specified target the surgical team will notify the attending to determine what steps to take.
7. Prior to the patient being transferred to the OR table, the surgical team will prepare the surgical bed based on the OR prep sheet.

8. Pre-operatively Occupational Therapy will be notified that they are needed to come to the OR to make splints for the patient.

Procedure:

1. Patients core temperature prior to procedure needs to be 36.8, to assist with the prevention of hypothermia. MD may place order to pre-warm patient prior to surgery. If the patient is a direct to the OR the room will already be pre-warmed. If the patient is going to patient holding, the room will need to be pre-warmed.
2. Upon arrival patient is moved safely to OR table, anesthesia safely monitors the patient and administers anesthesia. The patient is then positioned, prepped and draped
3. Per policy timeout is conducted to ensure
 - a. Correct patient
 - b. Correct procedure
 - c. Correct position
 - d. Correct equipment/requirements
 - e. Allergies, medications, antibiotics and ASA score
 - f. Everyone agrees all safety measures met
4. If grafting will be taking place refer to policies:
<https://upstate.ellucid.com/documents/view/4556>
PROC OPER B-03A - Procedure for Intra-operative Autologous Skin Harvesting and Implantation
5. Anesthesia will monitor the patient temperature throughout the case and communicate with the surgical team. Patients core temperature prior to procedure needs to be 36.8, to assist with the prevention of hypothermia.
If the patients core temperature reaches **35.5** the case will be stopped.
- 6 After removal of the old dressing remove soiled gloves and apply new ones.

Xenografting:

1. Xenograft is removed from the package according to the IFU. RN will open outer package, then using aseptic techniques remove foil pack for surgical field.

Homografting:

1. Homograft comes frozen. It is typically meshed but also comes in sheet form. The surgical team needs to thaw with warm saline. The warmer temperature is set to 104 degrees.
2. Homograft is then rinsed three times in three separate sterile bowls with room temperature normal saline.

Autografting:

1. Autograft skin needs to be rinsed three times in three separate sterile bowls with room temperature saline. NO EPINEPHRINE.

2. Prepared skin is then meshed and placed in sterile bowl with room temperature saline in a safe location on the back table until used.

Harvesting:

1. Tissue harvest- refer to the following policy:
<https://upstate.ellucid.com/documents/view/4556>
PROC OPER B-03A - Procedure for Intra-operative Autologous Skin Harvesting and Implantation.

Post Procedure:

1. Blue ties from the lap pads are preserved or staples are used for post-operative dressings. Dressing scissors need to remain available to the OR team until the entire dressing is complete and the patient is transferred to the bed.
2. Bulky dressings or wound vac will be applied for graft securement. Dressings will be applied by the surgeon, residents or RNFA. (OR team members are not responsible for applying dressings) The patient should be transferred to the bed with the use of a hovermat to prevent shearing of grafts.
3. When the patient has returned to the unit, the patient will have a hovermat underneath them. Orders will be placed identifying the need for the use of the hovermat.
4. The hover mat will be used for transfers and positioning of patients with grafts to the posterior portion of the body, or per MD order to prevent shearing of grafts.
5. The hovermat will remain under the patient at all times unless soiled.

Orders placed Post Procedure:

1. Renew patient diet
2. Occupational and physical therapy orders placed on hold if deemed necessary by the attending physician.
3. Activity order must be updated
4. Splints or other devices that are applied during surgery or need to be applied post-surgery require an order to ensure proper treatment is provided to maintain healthy grafts.
5. Specific positioning orders

Dressing Changes:

1. Dressing changes will occur as ordered by the MD.
2. The initial dressing are done 3 and 5 days post-surgery.
3. Any sign of infection, increased odor, unusual bleeding should be brought to the attention of the Surgical Team.

Dressing Change Procedure

1. Room temperature needs to be increased to maintain the patient's body temperature during the procedure, and close the door. Door should be kept closed with traffic kept to a minimum.
2. High touch surface cleaning with approved disinfectants will be conducted pre and post dressing
3. Ensure patients temperature is above 36.8 prior to the start of dressing change and monitor throughout.
4. Pre-medicate prior to procedure

5. Set up dressing table with the dressing supplies using aseptic technique in patient room or shower room.
6. Only supplies that are needed will be opened. Additional items will be open as needed.
7. Isolation gowns and bouffant caps are to be worn by anyone in the room during the dressing change.
8. Dressings will be removed gently to maintain skin/graft integrity. If there is failing graft, noticeable foul smell or signs of infection notify the MD immediately.
9. Cleaning wounds/grafts:
 - a. cleanse the areas with chlorhexidine and warm water using 4x4 gauze in a sterile bowl
 - b. Rinse with warm water from a second sterile bowl
 - c. Pat all areas dry.
10. Remove soiled gloves and apply new ones
11. Apply creams or ointments as ordered, then apply burn dressings that are bulky to protect new grafts, but allow for ROM. Apply topical cream, ointment or occlusive dressings as ordered. Dressings should be applied with enough bulk to absorb drainage, protect the grafts and provide comfort and movement according to orders.
12. Ensure all grafted or residual burned areas are properly covered and dressings are secure. (there should be no burn or graft visible, unless otherwise specified)
13. Remaining supplies that are opened will be discarded.
14. Scissors need to be placed in the sterilization bin in the dirty utility room after each dressing change.

Documentation:

1. Burns need to be added as a Burn LDA, not a Wound LDA on admission.
2. If a patient goes to the OR the graft and donor site are still recorded as a Burn wound, not a surgical wound.
3. Document assessment of the wound bed characteristics ie. Meshed graft, sheet graft, has the graft taken or is their loss?
4. Is there drainage of the wound?
5. Odor
6. Color of the wound
7. Treatment modalities ie. Cleaning, medications, and dressings applied