SPECIAL PROCEDURE POLICY AND PROCEDURE

SUBJECT: ELECTROSURGICAL UNIT USAGE IN THE SPECIAL PROCEDURE LAB

Policy No.: SPL11
Supersedes: ALL
Revised Date: 12/2015

Purpose of Procedure: To establish guidelines for the safe use of the electrosurgical units (ESU) and electrosurgical bipolar coagulator in the Special Procedure.

Policy Statement: Each (ESU) will be inspected and calibrated by Bio-medical services personnel on an established schedule. Bio-medical services will maintain copies of routine safety and preventive maintenance inspections. Each ESU will have current inspection sticker in place. The ESU is not to be used in the presence of flammable agents such as alcohol or tincture base agents. A new disposable dispersive pad with cord and a new polypectomy snare is used with each patient. When using an ESU on patients with pacemakers, the EKG is monitored closely. All patients are assessed pre-procedure for presence of pacemaker.
KEY POINT: The ESU is used with caution in patients with pacemakers because of the danger of introducing an electrosurgical current that can cause pacemaker to revert to an asynchronous mode or inhibit the pacemaker entirely.

Physician's Order Required: No

Performed By: RN
Equipment List:
Electrosurgical Unit (ESU)
Use hospital approved disinfectant
Disposable dispersive pad with cord
Polypectomy snare
Polyptrap (attach to endoscope suction outlet)
Pathology specimen container and label

Procedural Steps:

A. **ESU**

1. Clean the flat surfaces of the generator daily with a hospital approved disinfectant.
2. Inspect the generator, cords and wires for integrity.
   KEY POINT: Any damaged unit must be tagged removed from service immediately.
3. Plug the generator into the appropriate wall outlet.
4. Open the sealed package, following manufacturer's instructions. Peel the grounding pad from the backing.

KEY POINT: DO NOT CUT PAD

5. Apply dispersive pad as close to operative site as possible.
KEY POINTS:
   a. Electrosurgical current flows toward the ground and will take the path of least resistance. Any other grounded equipment can act as an "alternate path" to the current flow.
   b. While prepping the patient, do not allow the dispersive pad to become wet. Solutions are excellent conductors. If they are allowed to pool under the patient, they could create an alternate path and a potential burn site.

6. Place the dispersive pad on the patient by selecting an appropriate site for application of the dispersive pad. Suggested placement area: forearm, anterior thigh, abdomen and buttock.

   a. Site should be dry and clean.
   KEY POINT: Moisture may prevent adequate adhesion and increase conductivity.
   b. Place pad in area of high vascularity such as the thigh.
   KEY POINT: Blood carries away heat and helps keep the area under the pad cool.
   c. Avoid scarred tissue.
   KEY POINT: Vascularity is poor over scarred area.
   d. Avoid hairy area. Shave area if necessary to use this site.
   KEY POINT: Hairy surfaces have poor adhesion and tend to insulate.
   e. Avoid bony prominence.
   KEY POINT: Bony prominence reduces contact surface and vascularity is poor.
   f. Avoid internal hardware.
   KEY POINT: Pad should not be placed on top of prosthetic devices.
   g. Do not place pad circumferentially around limb. This may restrict blood flow.

7. Adhere the pad securely to the skin surface by applying gentle pressure over the entire pad and border.
KEY POINT: Be sure the entire pad contacts the skin. Do not re-apply or re-use the same dispersive pad.

8. Connect the dispersive pad to the patient return electrode outlet on the generator. Turn on the ESU, and then plug the patient return electrode into the ESU.
KEY POINT: Cord should be of adequate length to reach patient without stress on the connection.

9. Position the foot pedal, if used, for the doctor's convenience.

10. The nurse will turn the main switch "ON" and set coagulating and cutting power control to the setting that the doctor requests.
KEY POINT: Begin with the lowest setting that will accomplish coagulation/cutting function.

11. When the procedure is completed, turn machine off.

12. If the ESU does not function properly, the nurse will turn the main switch "OFF" and check the unit as follows:

a. Check connection at wall outlet.
b. Check connection between patient dispersive pad and adapter in front of ESU.
c. Check location and integrity of dispersive pad. Be sure that pad has maintained uniform body contact. Look for lifting, tenting, or any other reason for poor contact. Replace if necessary.
d. If foot pedal is used, check connections from foot pedal to unit.
e. If the ESU still does not function properly, remove the defective machine from service, red tag, and call Bio-Med for repairs. Keep the dispersive pads and cautery pencil that were used during the procedure and give to repair staff with the malfunctioning ESU. In the event of a patient injury, an Event Notification form must be completed and the surgeon notified. All items (pad, cautery pencil and ESU) involved will be immediately removed from service and saved until the event has been investigated. Nurse will notify Charge Nurse/Nurse Manager of incident.

B. **Electrosurgical Bipolar Coagulator:**

1. Place generator on stand with foot pedal on floor at foot of surgeon.

2. Attach power cord to wall electrical outlet.

3. Connect the two banana plug outlets into the OUTPUT adapter on front of generator.

4. Switch POWER switch to ON. Red lamp will glow.
KEY POINT: Red light means generator is functioning properly.

5. Adjust COAGULATION switch. Always start at #10 power setting and work up to higher setting as requested by the surgeon.
KEY POINT: #25 is usually the maximum requested.

6. When foot pedal is depressed, amber light will glow.
KEY POINT: If light does not glow, generator is not functioning properly.

7. Machine is now ready.

Documentation:

1. On the Web Periop Documentation:
a. The lot number and location of the dispersive pad and the identification number of generator
b. The condition of the skin under the dispersive pad before and after the procedure.

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References: Rancho Los Amigos National Rehabilitation Center Injury & Illness Prevention Program Safety Manual (Ch. 4 pg.6).
Guidelines for Perioperative Practice – AORN 2014
Valley Lab Inc Surgical Products Instruction Manual (2012)

07/99 – Reviewed
12/02 – Revised
08/05 - Revised
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