TITLE: ELECTROSURGICAL GENERATOR USE/VALLEYLAB and BOVIE

PURPOSE: To define nursing role in the set-up and use of the Valleylab Force FX-C and Bovie IDS-300 electrosurgical generators.

SKILL LEVEL: R.N., or Surgical Technologist/ Patient Care Technician-OR under direction of RN

SUPPORTIVE DATA:

The Valleylab Force FX-C Electrosurgical Generator is an isolated output electrosurgical generator that provides power for cutting, desiccating, and fulgurating tissue during bipolar and monopolar surgery. Each unit includes Instant Response Technology which automatically senses resistance and adjusts the output voltage to maintain a consistent effect across different tissue density. This adjustment is based on the selected mode (bipolar or cut modes only), the power setting, and the level of tissue resistance. The maximum output voltage is controlled to reduce capacitive coupling and video interference and to minimize sparking.

The Bovie IDS-300 measures tissue impedance in real time (5000 times a second). As the impedance varies, the power is adjusted to deliver a consistent clinical effect.

EQUIPMENT:

- Valleylab electrosurgical generator or Bovie IDS-300 (located in each O.R.).
- Patient return electrode pad (located on shelf of generator stands and in Operating Room equipment room)
- Hand-held active electrode (mono and bipolar) - (CSS, omnicell)

CONTENT:

1. Plug the generator power cord into the rear panel receptacle.
2. Plug the generator power cord into a grounded wall receptacle.
3. Turn on the generator and verify that the self-test is successfully completed.
4. Prepare for bipolar or monopolar electrosurgery
5. For monopolar surgery, apply the patient return electrode to the patient and connect cord to patient return electrode receptacle on the front panel.
6. For footswitch use, connect cord to footswitch receptacle on rear panel.

7. Connect hand held electrode to appropriate instrument receptacle on front panel.

8. For simultaneous monopolar surgery, connect a monopolar accessory to the Monopolar 1 receptacle. Connect a second monopolar accessory to the Monopolar 2 receptacle. (Valleylab Generator)

9. Confirm verbally with surgeon the desired mode and power settings and adjust accordingly.

10. To adjust power, press up or down arrows (blue for coag, yellow for cut).

**To select cut and coag modes:**

- Verify mode and settings with surgeon. Touch up and down arrows to requested setting.

**Warnings and Cautions:**

- Connect the generator only to a properly grounded receptacle.

- Use the generator only if the self test has been completed successfully.

- Do not stack equipment directly on the generator itself so as to allow adequate cooling. Avoid liquid use and pouring near the generator.

- Provide as much distance as possible between the generator and other electronic equipment so as not to cause interference.

- Do not turn down the activation tone to an inaudible level. This tone alerts the team as to when an accessory is active.

- **Always use a holster** to store the handpiece on the sterile field when it is not in use to minimize fire risk.

- Inspect accessories and cords for breaks, cracks, nicks. If damaged, do not use.

- **Do not wrap the accessory cords or the patient return electrode cords around metal objects and do not use metal to secure cords to drapes.** Injury or electrical shock to the patient or the surgical team may result.

- Secure cords with plastic purple “Barney” clamps, loops in drapes or Velcro in drapes.
Accessories must be connected to the proper receptacle type. Improper connection may result in inadvertent generator activation or alarm.

If using only bipolar, do not apply patient return electrode to patient.

**Patient Contraindications:**

- Electrosurgery must be used with caution in the presence of internal or external pacemakers. Interference produced by the electrosurgical devices can cause a pacemaker to enter an asynchronous mode or can block the pacemaker effect entirely. The physician should contact Cardiology or the pacemaker manufacturer before use.

- Electrosurgery may cause multiple activations of internal cardiac defibrillators (ICD). The physician should contact the ICD manufacturer before using electrosurgery.

- Electrosurgical instruments are capable of inducing radio frequency currents that could flow through the cochlear implant electrode array. Monopolar electrosurgical instruments must not be used on the head or neck of a cochlear implant recipient as induced currents could cause damage to cochlear tissues or permanent damage to the implant. Bipolar electrosurgical instruments may be used on the head and neck of recipients. However, the cautery electrodes must not contact the implant and should be kept more than ~ 1/2 in. (1 cm) from the extracochlear electrodes.

**DOCUMENTATION:**

Record serial number and settings used on electrosurgical screen of perioperative record.

**REFERENCE:**

- Bovie IDS-300 User Manual
- Cochlear Implants: www.cochlear.com/......mri-and-medical-consequences

**APPROVAL:** 11/00 (new)

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