Clinical Information Hotline News

Volume 2 Issue 4
December, 1997

Buzzing the Hemostat, What You Should Know

Valleylab is not only concerned with the safety of the patient but also with the safety of the staff using our equipment. Oftentimes we are asked why a doctor or assistant is shocked or burned when "buzzing the hemostat." This technique in effect makes the hemostat the active electrode and coagulates the tissue between the instrument tines.[1] When performed incorrectly, the insulating properties of the surgical staffs' gloves can break down, resulting in a small hole which allows for a shock and burn to the provider's hand. This practice of "buzzing the hemostat" is not recommended and the hazards of such a practice probably cannot be eliminated. To minimize the risk:

- Do not lean on the patient, the table, or the retractors while buzzing the hemostat. Doing this places your body within the electrical circuit, making your hand a possible path for the current to travel in completing the circuit.
- Activate cut rather than coag. Cut has lower voltage than coag.
- Use the lowest power setting possible for the minimum time necessary to achieve hemostasis.
- Activate the generator **after** the electrode makes contact with the hemostat. Activating the generator before the electrode makes contact creates an "open circuit" which allows the voltage to build up on the electrode. In this condition, if the electrode comes in contact with the hemostat or other metal object, an arc will occur producing a demodulated frequency and possible neuromuscular stimulation.
- Firmly grasp as much of the hemostat as possible before activating the electrosurgical generator. This disperses the current over a larger area and minimizes the current concentration at the fingertips.
- "Buzz the hemostat" below hand level (as close as possible to the patient) to reduce the opportunity for current to follow alternate paths through the surgeon's or assistant's hands.
- When using a stainless steel blade electrode, place the **flat** surface against the hemostat or other metal instrument.
- When using a coated or nonstick blade electrode, place the **edge** of the electrode against the hemostat or other metal instrument.

Alternatives to "buzzing the hemostat" are coagulating forceps. These forceps are available in handswitching or footswitching configurations as well as monopolar or bipolar. Use of a monopolar forceps does require a patient return electrode whereas a bipolar forceps does not. Either of these alternatives would require a change in electrosurgical technique.

Additional questions can be answered by a Clinical Information Associate at 800-255-VLAB(8522), Ext. 2005.

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[1] Tucker RD, Ferguson S. Do surgical gloves protect staff during electrosurgical procedures? SURGERY 1991; Vol. 110, No. 5, PP. 892-895.

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