



# Cautery Burns: Prevention Better than Cure!

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Received: 18 September 2018 / Accepted: 24 January 2019 / Published online: 5 February 2019  
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## Abstract

The electrocautery is an integral part of head and neck surgeries both for the primary lesion as well as for neck dissection. However, it is fraught with dangers of inadvertent burns to unintended areas, especially by the proximal end of the diathermy blade while working in deep narrow spaces. We devised a simple, cost effective, and easily reproducible method to eliminate this risk.

**Keywords** Electrocautery · Feeding tube

From its inception in 1928 by William T. Bovie [1], the electrocautery has proven its usefulness, making it an ubiquitous instrument in all operation theaters. It is now the instrument of choice for making incisions, and for hemostasis. However, in spite of all precautions, complications like electrocautery burns and misplaced electrocauterization are commonplace.

A common area of misplaced electrocauterization is the proximal end of the monopoly diathermy blade, which is often overlooked by the surgeon while working in narrow deep spaces, viz. in the areas of consternation during neck dissection. The damage may range from skin burn to unintended vascular, neural, or soft tissue injury, compromising patient safety.

Many methods have been described to prevent such injury like covering the diathermy blade with an insulating rubber catheter or with the proximal end of Foley's catheter [2]. However, these are frequently fraught with risk of melting with the heat generated by the electrocautery, thus contaminating the surgical field, or, becoming loose, leading to the risk of being dropped and lost inside patient with dire consequences. Many a times, they are ill fitting, requiring readjustments during surgery thereby interrupting surgical steps and proving to be an irritant to the surgeons' concentration.

We describe a simple yet effective method to avoid this situation using an infant feeding tube. The monopoly diathermy blade is insulated by inserting it in a snugly fitting infant

feeding tube, ensuring it effectively covers the entire proximal end of the diathermy blade, thus insulating it well. The size of the feeding tube can be chosen to ensure snug fit thus eliminating the risk of it falling, depending on the make of the diathermy blade. The distal end can then be cut to expose as much of the blade as is desirable during surgery, depending on the surgeon's ease of working. The feeding tube cover is cut flush with the insulating cover. If necessary, multiple diathermy blades with different exposures of tip can be kept ready for quick switching during surgery. The stiffer material of the feeding tube ensures that it resists melting by heat. Any

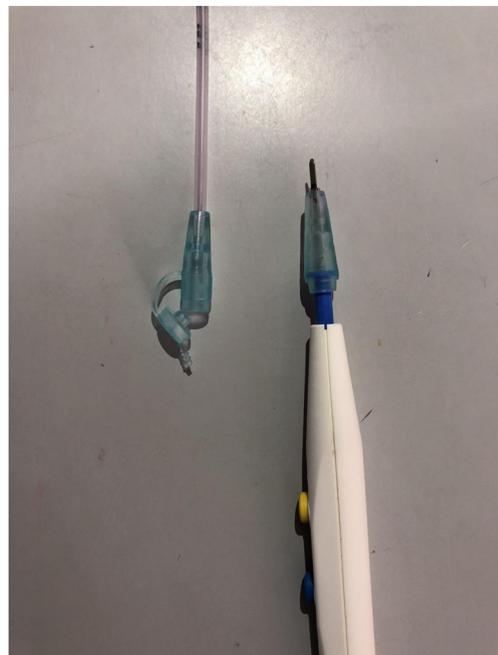


Fig. 1 Feeding tube used to cover the cautery tip

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damage in insulation area can be easily replaced by a new feeding tube, making it cost effective. This highly customizable method has been extensively used by the authors with satisfactory results (Fig. 1).

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