



## Room Temperature Saline-soaked Gauze Assists in Hemostasis Between Mohs Layers

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**B**leeding between Mohs layers is distressing to the patient and potentially time-consuming for the physician. Electrosurgery is utilized for hemostasis in most Mohs cases. Obtaining complete hemostasis between Mohs layers can be difficult as anti-coagulant use by patients is often encountered. We present a simple and cost-effective method to assist in obtaining hemostasis between Mohs layers. Advantages of this method include quick hemostasis that doesn't require significant electrodesiccation; therefore, saves time for the physician between Mohs layers, less destruction of tissue that may be critical for the reconstruction, and perhaps decreases exposure to smoke from electrosurgery.

We have found the use of gauze soaked with room temperature sterile saline and then applied to the wound bed under a pressure bandage can assist in hemostasis. We use room temperature saline which is most commonly around 20-25°C. We presume the success of this method is due to the saline being cooler than body temperature; therefore, precipitating local vasoconstriction. The saline-weighted gauze might also provide additional pressure. This technique is particularly useful for eyelid lesions where minimizing electrosurgery to improve outcome is critical. Other locations that seem to benefit from this technique are scalp and nose defects. Although we have found success with this method repeatedly, the literature is divergent regarding the temperature of saline to assist in hemostasis.

Perhaps contrary to intuition, warm saline opposed to cool or room temperature saline has been associated with reduced bleeding [1]. A recent study in oral surgery compared dressings soaked in room temperature saline compared to saline dressings warmed to 42°C. Significantly reduced bleeding was reported in this split-mouth study with the warmed saline dressings. These findings are aligned with results previously reported in endoscopic sinus surgery and treatment of epistaxis. The use of irrigation with warmed water for epistaxis and minor vessel hemostasis in endoscopic sinus surgery has been reported [2-4]. There is no literature looking at warm soaks on cutaneous versus mucosal surfaces.

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It has been hypothesized that hypothermia inhibits enzymatic reactions of the coagulation cascade and might impair platelet reactivity [5]. Hypothermia from general anesthesia has been associated with coagulopathy [6]. By increasing the body temperature, this coagulopathy might be nullified and actually reversed. In addition, other mechanisms of action proposed include interstitial edema precipitating compression on blood vessels [7]. Vasodilation of the vessels is also thought to decrease intraluminal pressure that would slow blood flow. Under this theory, the role of vasoconstriction due to hypothermia contributing to hemostasis has yet to be determined and would play a secondary role.

The use of cold saline has been supported in various literature. A randomized, control trial during total knee arthroplasty that compared irrigating with cold (4°C) saline with 0.5% epinephrine versus normal saline (no epinephrine) at normal temperature (21-24°C) [8]. The patients irrigated with cold saline experienced significantly less drainage post-operatively and a significant less decrease in hemoglobin [8]. A study involving patients undergoing external rhinoplasty were randomized. One group of patients had cold (2-8°C) saline-soaked gauze applied to the nasal dorsum during the operation and had significantly less operative bleeding than the group with dry gauze compression [9].

It has been our experience that using sterile saline soaked gauze is an economic and efficient method to assist in achieving hemostasis during Mohs layers. Despite the evidence for using warmed water or saline, our personal experience has found benefit using room temperature saline. Further investigation might assist in explaining the inconsistency between our experience and the experience of others in the literature.

### Article Information

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