The Use of Cyanoacrylate Skin Protectant* to Treat Periwound Maceration in Combination with Negative Pressure Wound Therapy in the Treatment of Neuropathic Foot Ulcers

**Case Studies**

Negative Pressure Wound Therapy (NPWT) has been proven to be an effective and valuable tool for treating complex wounds. However, it can be difficult to maintain an airtight seal on the foot where wounds are close to the web spaces, are highly exudative or irregularly shaped. As a result, periwound maceration developed in the wound field. The use of cyanoacrylate skin protectant* in conjunction with NPWT significantly improved the periwound maceration. NPWT was discontinued after 3 weeks when the wound was near closure.

**Introduction**

Cyanoacrylate skin protectant* is a liquid skin protectant that is designed to protect intact or damaged skin from breakdown caused by friction or moisture. We propose that the use of cyanoacrylate skin protectant* will decrease or eliminate periwound maceration commonly encountered in NPWT.

**Method**

Cyanoacrylate skin protectant* is used in six consecutive patients who demonstrated periwound maceration as a complication of their NPWT with the KCI Wound Vac. Photographs and measurements were obtained before, during and after cyanoacrylate skin protectant* use. Cyanoacrylate skin protectant* was applied to the periwound area under the wound vac. This practice eliminated the periwound maceration. NPWT was used for an additional 4 weeks before it was discontinued.

**Results**

In each case the Wound VAC dressing was changed three times per week. Photographs and measurements were obtained before, during and after the use of cyanoacrylate skin protectant*. Three weeks later the Wound Vac was discontinued. Maceration significantly decreased with the use of cyanoacrylate skin protectant*. Maceration was eliminated. The patient was transferred to a LTAC facility where hyperbaric rehabilitation care was initiated.

**Discussion**

In all patients treated, periwound maceration that developed under the Wound Vac was resolved by the addition of topical cyanoacrylate skin protectant.*

**Conclusion**

Cyanoacrylate skin protectant* binds to the skin surface and tangential to the skin to provide a tough enough and high resistance to break-off than other barrier films. Cyanoacrylate skin protectant* is a moisture-repellent skin protectant that enables the epidermis to provide a higher strength and higher resistance to wash off than other barrier films. Cyanoacrylate skin protectant* is resistant to external moisture, yet allows the skin to breathe. Based on this small series of patients we suggest that cyanoacrylate skin protectant* applied under the Wound Vac will prevent periwound maceration.

**References**


*Marathon liquid skin protectant

**Notes**