



## Introduction

The principle of wound bed preparation<sup>1,2</sup> is widely practiced by clinicians with the structural TIME process to optimize condition for endogenous healing. When the wound is healing, the “Edge of wound” should be assessed of advancement and there should be migrating keratinocytes and responsive wound cells in the wound & edge to enable epithelial cells ability to slide over one another. Clinicians recognizes that poor management of the periwound area will result in poor wound healing<sup>3,4</sup> and attention should be paid to address challenges associated with vulnerable periwound skin.

Modified collagen & glycerin (MCG) gel used with modern dressing was demonstrated to improve the length of rete ridges as wound heal when compared to only modern dressings<sup>5</sup>. Post heal tissue treated with MCG ensure greater tensile strength and protects against reopening of a close wound<sup>5</sup>. Positive skin changes were seen in peri wound clinical case studies done in 2 wound care centers resulting in skin with better moisture, improved callous & pigmentation when the modified collagen & glycerin lotion were used<sup>6</sup>.

The objective of this clinical study is to further establish the use of Modified collagen & glycerin Lotion to be applied on vulnerable skin that is essential in good and timely wound healing.

## Methodology

Peri wound and wound sites were cleansed with standard cleansing agents. Modified Collagen & Glycerine Lotion (MCG) was applied once daily directly on affected periwound areas at 1 to 4 drops depending on the size of the affected area. Patients were given supply of MCG to continue application daily at home and the periwound condition is subjected to weekly inspection.

MCG was used because of the following properties; Collagen induced cell signaling regulates cellular functions such as cell adhesion & migration, hemostasis & immune functions<sup>12</sup>, MCG improves the length of rete ridges, normalizes the dermal cycle in tissue regeneration, improves tensile strength of post heal tissue with effective interlocking by healthy rete ridges, increase in abundance of collagen in the wound (increase in Type 1:3 ratio), accelerates macrophages recruitment to the wound site, enhances proliferation of wound site endothelial cells and increases the blood flow in the wound<sup>5</sup>. It reestablish more healthy skin featuring well-nourished epidermis.

Glycerine is a humectant and hold moist on site of application, in high concentration, it is bacteriostatic and fungistatic<sup>11</sup>.

A simple classification was used to classify these peri wound skin conditions .

Peri Wound Skin Classification		
Grade	Type	Description
0		Normal skin
1		At Risk Skin
2	A	Dessication
(Exudate Centred)	B	Maceration
	C	Allergy
3		Inflamed
4		Infection
5		Atypical

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## Conclusion

The peri wound skin is an important part of wound management. Recognising the at risk conditions are crucial to manage this area. The keratinocytes need to migrate into the wound milieu from the surrounding peri wound area for the wound to heal. Many conditions inhibit this and need to be addressed. This is a pilot study looking at this condition and a simple classification has been made to describe the conditions contributing to poor wound healing due to poor peri wound skin management. The initial findings from this trial proved modified collagen with glycerin is effective in the management of peri wound skin possibly resulting in faster wound healing. This will be further confirmed at the conclusion of the 100 patient follow up trial to get a better and significant yield.

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