

**BLESS: BLUE LIGHT
EMPIRICAL SHINE STUDY,
PILOT. EMOLED
PHOTOBIO-MODULATION
THERAPY TO
KICKSTART CHRONIC
NON-HEALING WOUND.**

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INTRODUCTION

High incidence of chronic wounds that remain opened for more than 4 weeks were mostly caught in a recurrent inflammatory stage of healing. These chronic wounds are normally being healed through secondary intention, using wound bed preparation methods and covered with various standard dressings but many are still slow to progress to the proliferative and remodeling stage. They are also known as stalled wounds which have a high chance of exposure to reinfection, a downward spiral to becoming a more complex chronic wound.

A new treatment modality was introduced in Italy recently to address this issue. Emoled Photobiomodulation (PBM) utilizing LED blue light shining on wound tissue light absorbing molecules-chromophores. It will aid to resolve chronic inflammation during the inflammatory stage of wound heal & encourage wound to proceed to the next stage of proliferation. Exposure of Emoled Blue light once a week will alter wound at its cellular level, fibroblast & macrophage activity will be stimulated & will increase Reactive Oxygen Species in wound bed to enable resolution of inflammation, kick-starting wound healing process to progress to the next stage with tissue angiogenesis.

A number of studies has been successfully concluded that Emoled PBM on top of standard wound care speeds up wound healing process in various wounds¹⁻⁵. Our earlier study on 5 DFU subjects earlier has yielded positive results to speed healing process and close some stalled DFU in 10 weeks of standard therapy with addition of Emoled PBM⁶.

AIM

This study focuses on using Emoled PBM adjunctive therapy to kick-start healing of commonly seen stalled wound-inflammation and resolve the chronicity hurdles. It is also to validate the possibility of empirical use to kick-start wound healing of stalled wounds with various aetiologies. The use of Emoled PBM as adjunctive therapy is controlled at 1 weekly therapeutic exposure for 4 consecutive weeks to restore a stalled wound back to its normal healing path. After the 4 weeks therapy, patients can stop EMOLED PBM and continue treatment with the normal standard of care practice.

METHOD

Patient identified with chronic stalled wounds were included. The aetiology – could be of vascular or diabetic in nature. Wound measurement done (length & width). Patients with wound infection were excluded in this trial.

The trial protocol would be Wound Bed Preparation, cleansing, debridement and normal standard of care practice with addition of Emoled shine exposure of 1-2 minutes every week. Patient is followed up twice weekly but Emoled shine is only done on a weekly basis for 4 consecutive weeks. Standard of care practice was maintained throughout the study whereby diabetic foot ulcers were offloaded and venous ulcers were managed with compression bandaging.

RESULT

Stalled wounds showed progressive improvement of the wound bed and the reduction in the size. Epithelialization and granulation were noticed in the wound bed. Wound granulation increased and this showed that the stalled wound has moved

into the healing phase or trajectory. The increase in the epithelialization at the wound edge further supports these findings.

CONCLUSION

Emoled Photobiomodulation (PBM) LED blue light 400-430nm adjunct therapy once-a-week over conventional therapy helps as an adjunct therapy in addition to standard of care to help kickstart healing in hard to heal or stagnated wounds.

Reference

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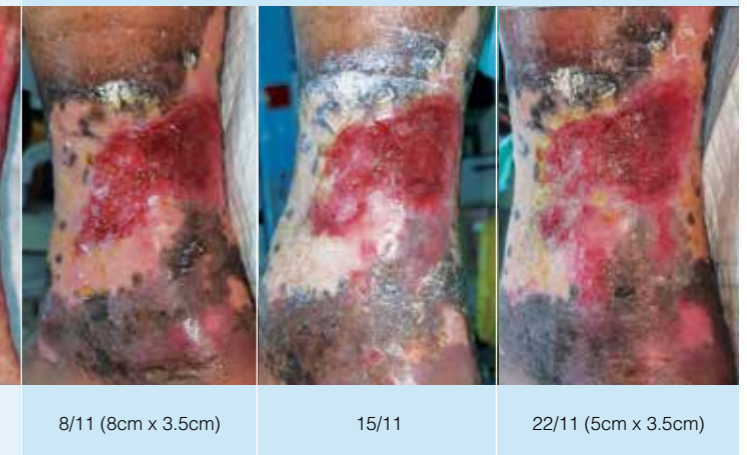
82 years old Female
Chronic Venous Ulcer over right leg
Wound duration 4 months



57 years old Female
Chronic venous ulcer over left foot, nkmi.
Wound duration 3 years 11 months



65 years old Female
Hypertension, chronic venous ulcer over right leg
Wound duration 1 years 5 months



53 years old Male
Hypertension & Diabetic non-healing ulcer over right leg
Wound duration 3 months



68 years old Female
Hypertension, Diabetic Unhealing ulcer over right dorsum
Wound duration 2 years 5 months

65 years old Male
Diabetic Foot Ulcer over left foot.
Wound duration: 3 months



73 years old Female
Chronic venous ulcer over right foot with nkmi
Wound duration 1 year 4 months

Presentation supported by:



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