PHOTOBIMODULATION WITH BLUE LIGHT IN THE OUTPATIENT MANAGEMENT OF HARD TO HEAL WOUNDS: CLINICAL OBSERVATIONS

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Wound Care Surgery at Humanitas Gavazzeni Hospital is in charge of diagnosis and treatment of chronic and hard-to-heal wounds. Patients aren’t hospitalized; our therapeutic strategies are based exclusively on outpatient treatments. Recently we had the opportunity to test a Medical Device for Photobiomodulation therapy, using Blue Light to stimulate the physiological processes of wound healing in a natural and non-invasive way. It uses LED sources that emit light within the blue range wavelengths, corresponding to the absorption spectrum of certain chromophores contained in blood and tissues, such as Protoporphyrin IX. Blue Light acts on all phases of the wound repair process, stimulating blood coagulation, triggering a rapid onset of the inflammatory phase, promoting angiogenesis.

CLINICAL OBSERVATIONS
Duration: 3 months
9 patients enrolled
Wounds: not responding flat (no cavitary) chronic wounds, with granulation tissue
Treatment: one application of Blue Light on the lesion’s area for 60 seconds once a week
Method: data reported on clinical form at each visit and acquisition of photographic images

RESULTS

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TYPE OF WOUNDS

- venous/mixed: 1
- after skin graft: 3
- pressure sores: 5

CASE REPORT: TRAUMATIC ULCER TREATED WITH BLUE LIGHT

Patient: male, 81 years
Pathologies: CVI, arterial hypertension, atrial fibrillation (therapy with NOACs)
Wound type and site: traumatic ulcer, 9x4cm, lower third of leg
Age of the ulcer: 2 months
Therapy: 8 EmoLED treatments, once a week.
Healing rate: healed

CONCLUSIONS
From our preliminary results Blue Light treatment in addition to standard of care is an effective therapeutic strategy; recommended as part of outpatient treatment of flat chronic wounds, with granulation tissue and different size: in these type of wounds it accelerates the healing process, without pain.

References:
Mosti G et. Gasperini S., Observations made on three patients suffering from ulcers of the lower limbs treated with Blue Light, Chronic Wound Care Management and Research 2018:5 23–28;