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CONTRIBUTION OF BLUE LIGHT IN THE PROCESS OF HEALING: CASE STUDIES ON CHRONIC LESIONS.

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Type of ulcers

Ulcers of various etiology with average age of 5.57 (SD 3,12 months)

End point

Measure of healing times

Method

Treatment of the wound area for 60s once a week or once a fortnight up to a maximum of 12 weeks.

Registration of the patient relevant data at the beginning of the observation.

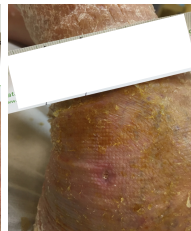
Filling of a dedicated form at each visit and photo registration.

CASE STUDY A: PERI-MALLEOLAR DECUBITS

- Level of healing: **100%**
- N of applications: **5**
- Age: 87 years old
- Pathology: CVI
- Type and ulcer location: peri-malleolar decubitus ulcer
- Age of the ulcer: 4 months



Beginning of observation



Week 6

CASE STUDY B: TRAUMATIC ULCER

- Level of healing: 100%
- N of applications: 5
- Age: 87 years old
- Pathology: CVI
- Type and ulcer location: traumatic lower leg injury, tibia face
- Age of the ulcer: 4 months
- Clinical history: MA treatment in another health institution



Beginning of observation



Week 6

CASE STUDY A: PERI-MALLEOLAR DECUBITS

- Level of healing: **100%**
- N of applications: **3**
- Age: 49 years old
- Pathology: CVI
- Type and ulcer location: lower leg traumatic ulcer
- Clinical history: ulcerectomy and homologous skin graft on 1/10. By 10/10 implant was no longer in place
- Age of the ulcer: 11 months



Beginning of observation



Week 7

CASE STUDY B: TRAUMATIC ULCER

- Level of healing: **100%**
- N of applications: **3**
- Age: 88 years old
- Pathology: heart disease, collapsed vertebra and osteoporosis
- Type and ulcer locations: lower leg traumatic ulcer
- Age of the ulcer: 3 weeks



Beginning of observation



Week 3

CASE STUDY E : MARTORELL ULCER

- Level of healing: **95%**
- N of applications: **2**
- Age: 72 years old
- Type and ulcer location: lower leg Martorell ulcer
- Age of the ulcer: 4 months
- **Significant reduction of pain**



Beginning of observation



Week 5

CASE STUDY F: TRAUMATIC ULCER

- Level of healing: **95%**
- N of applications: **4**
- Age: 82 years old
- Pathology: CVI
- Type and ulcer location: traumatic lower leg injury, tibia face
- Age of the ulcer: 7 months



Beginning of observation



Week 3

- Most patients (about 80%) reached healing,* and one patient achieved a consistent reduction of the wound area (60%) within the observation time.
- Lesions which achieved complete re-epithelization: 33% obtained it after 3 treatments and a further 44% after 5 treatments.
- All the lesions reacted to the treatment.
- 78% of the lesions have healed within 12 weeks
- Average healing time was 6,6 weeks (minimum 3 weeks, maximum 10 weeks).
- No adverse events or side effect were observed.

Conclusions

The authors claim, albeit primarily, that Blue Light treatment is an effective and innovative therapy for the treatment of chronic lesions. The interesting preliminary results, based on what has been observed, have led the authors to plan a structured and multicentric study - which is currently on going and which will involve 90 patients in six centres in Italy.

*An ulcer that has achieved >90% of re-epithelialization is considered healed.