



A NATURAL ANTIOXIDANT DRESSING: THE IMPORTANCE OF GREEN WOUND CARE IN THE 3RD MILLENNIUM

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Introduction:

The **Third millennium** is characterized by several challenges:

- the lengthening of life expectancy
- resulting increase in patients with chronic skin lesions suffering from numerous co-morbidities;
- the often inappropriate use of antibiotics, resulting in infections from multi-resistant germs;
- the use of non-renewable natural resources dressings (like that from metals and coal).



The **Earth** is progressively depleted of raw materials and is becoming polluted by plastic and microplastic waste, resulting in global climate change.



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Introduction:

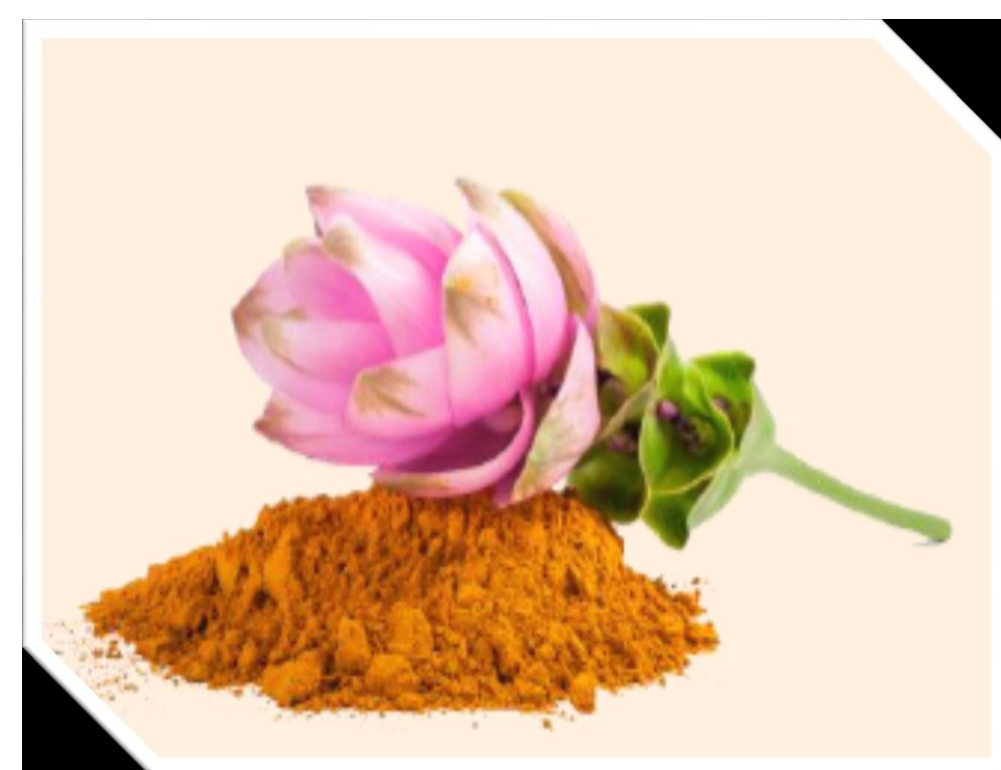
Green Wound Care is a way of life in threatening wounds:

- **naturally-based** dressings,
- renewable and **eco-sustainable** sources
- Disposable for every different T.I.M.E.R.S. or Wound Hygiene phases.



Focus on a **plant-based antioxidant dressing** for the treatment of chronic skin lesions of no infected, **Hard to Heal**, wounds of the lower limb no responsive to “traditional” dressings.

curcumin



carob



Ascorbic acid (Vit. C)



Lycopene (antioxidant)



α -Tocopherol (Vit. E)



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Materials and Methods:

Ten patients (average age 73,8 years, 7 females and 3 males).

Area from 4 to 10 cm².

Aethiology: DU (Diabetic ulcer) (5 patients); VU (Venous ulcer) (8 patients); LEAD (Lower Extremity Artery Disease) (3 patients); CKD (Chronic Kidney Disease) (3 patients).

All lesions were characterized by chronic inflammation signes, no healing process (Tab. 1).

A natural antioxidant dressing based on carob, turmeric, N-acetyl cysteine, vitamins C and E, and lycopene was used.

The patients, under pharmacological treatment, and compressive therapy, were threated every 72-96 hrs.

The study lasted 12 weeks, with weekly check-ups (Tab.2).

Tab. 1:

10 Wounds Hard to Heal	
Sex	7 females 3 males
Age	Average 73,8 years
Co-pathologies	DU (5) VU (8) LEAD (3) CKD (3)
Treatments associated	Blood sugar control Elastic compression bandage Angioplasty Dialysis

Tab. 2:

Study protocol	
Dressing used	Natural antioxidant dressing based on carob, turmeric, N-acetyl cysteine, vitamins C and E, and lycopene
Change frequency	Every 72-96 hrs
Duration of treatment	12 weeks
Check-up visits	weekly

Results:

All patients showed improvement in healing area: 8 patients have completed healing; 2 patients realased 80% of wound area closure.

The average healing time for the 8 healed cases was 5.5 weeks.

Perilesional area had excellent improvements in all cases: no maceration, edema, redness and itching.

The edge were showing signs of pro-inflammation healing and re-epithelialization rates.

The wound bed showed no fibrin, no biofilm in all the patients.

Conclusions:

Delayed or no-healing ulcers are often linked to chronic inflammation, or oxidative stress and cellular senescence.

Green wound care seems to be a efficacy alternative method in complete wound healing results joining natural focus dressing approach and enviromental protection way of life.

Excellent results showed in all the patients may suggest an alternative or a first line dressing approach.

Hard to Heal Venous Ulcer (present for 8 months)



13.05.2024 1st application



17.06.2024 After 9 applications



15.07.2024 stable healing

References:

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