



CASE SERIES: EPIGRANEX CAPSULES AND DFU WOUND HEALING

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INTRODUCTION:

Wound healing is a complex and dynamic process. Phases of wound healing include hemostasis, inflammatory, proliferative and remodeling. For a wound to heal successfully, all four phases must occur in the proper sequence and time frame. Many factors can interfere with one or more phases of this process, thus causing improper or impaired wound healing. Nutrition is one of the cornerstones of wound healing. Poor nutrition before and/or during wound healing may slow the rate of wound healing and result in non-healing ulcer.

MATERIALS & METHODS:

Ten subjects who have Diabetes Foot Ulcer (DFU) have been recruited and consented to participate in this study. They consumed Epigranex 2 capsules twice a day for 2 weeks. Every week the wound was assessed by using the TIME framework, VAS pain score and measurement of wound size.

RESULTS:

All ten subjects shown improvement in wound healing according to TIME wound assessment tool. The tissue bed looked healthier, free from infection and the surrounding tissues were no longer inflamed. The wound edge and moisture also showed significant improvement. Besides, the wound size was reduced. Patient's pain score and daily functional activity were improved.

DISCUSSIONS:

Modifiable (such as smoking, alcohol consumption, malnutrition, obesity, diabetes) and non-modifiable (such as genetic diseases and ageing) risk factors have great impact on wound healing. Current statistics demonstrate that both modifiable and non-modifiable risk factors were increasingly present in the populations, which causes dramatic socio-economic burden to the healthcare sector and society. Taking Epigranex is a simple way of promoting epithelization and granulation as it contains Arginine, Selenium, Bromelain, Chromium, Zinc, Vitamin A and C. Bromelain is an enzyme documented in recent research of its anti-inflammatory property used in surgeries. It could reduce pain, swelling and improve healing time. Arginine and other minerals & vitamin provide the building blocks for tissue granulation.

CONCLUSION:

Good nutrition is important for healing wounds. Therefore, Epigranex capsules together with multidisciplinary management and offloading interventions provide better wound healing.

REFERENCES:

1. A.Eden, Y.Kristina, G.Olga. Impaired wound healing: facts and hypotheses for multi-professional considerations in predictive, preventive and personalized medicine. Jan 2017. EPMA Journal.
2. G.Finn et al. A New Concept of a Multidisciplinary Wound Healing Center and a National Expert Function of Wound Healing. July 2001. ARCH SURG.
3. Raquel Elisa Silva-López, Rayane Natashé Gonçalves. Therapeutic proteases from plants: biopharmaceuticals with multiple applications. Appl Biotechnol Bioeng. 2019;6(2):101-109
4. Rathnavelu et al. Clinical and Therapeutic Application of Bromelain. Biomedical Reports 2016; 5:283-288.
5. Samira Golezar. Ananas comosus effect on Perineal Pain and Wound Healing After Episiotomy: A Randomized Double-Blind Placebo-Controlled Clinical Trial. Iran Red Crescent Med J. 2016 March; 19(3): e21019
6. Soheilifar et al. Effect of Oral Bromelain on Wound Healing, Pain, and Bleeding. J Dent. September 2018; Vol. 15, No.5.
7. Therapeutic Applications and Benefits from Postsurgical Use of the Phytotherapeutic Bromelain in Otorhinolaryngology: A Non-Interventional Study. Matschke R, Zeman F, Huppertz G, Koller M, Meiser P. Otolaryngol (Sunnyvale) 2017; 7: 337.
8. Hongrong Wang et al. Arginine Relieves the Inflammatory Response and Enhances the Casein Expression in Bovine Mammary Epithelial Cells Induced by Lipopolysaccharide. Mediators of Inflammation, Volume 2016, Article ID 9618795, 10 page.

Table 1: Wound Assessment Tool showed improvement during first and second weeks of study.

PATIENT	ASSESSMENT TOOL (TIME, WOUND SIZE, VAS)		
	INITIAL	1ST WEEK	2ND WEEK
1	TIME: Slough, Inflammation, Imbalance moist, Unhealthy epidermal. WOUND SIZE: 8X2cm VAS: 5	TIME: Minimum slough and inflammation, Balance moist, Granulation. WOUND SIZE: 7X2cm VAS: 3	TIME: No slough and Inflammation, Balance moist and healthy epidermal. WOUND SIZE: 6X1cm VAS: 2
2	TIME: Same as patient 1. WOUND SIZE: 14x8cm VAS: 4	TIME: Granulation WOUND SIZE: 12x7cm VAS: 3	TIME: Healthy Granulation WOUND SIZE: 10x7cm VAS: 0
3	TIME: Same as patient 1. WOUND SIZE: 2X1cm VAS: 4	TIME: Healthy epidermal WOUND SIZE: 2x1cm VAS: 3	TIME: Healthy epidermal WOUND SIZE: 1x0.5cm VAS: 0
4	TIME: Same as patient 1. WOUND SIZE: 15x8cm VAS: 5	TIME: Granulation WOUND SIZE: 14x6cm VAS: 3	TIME: Healthy Granulation WOUND SIZE: 12x4cm VAS: 1
5	TIME: Same as patient 1. WOUND SIZE: 13x7cm VAS: 4	TIME: Granulation WOUND SIZE: 13x7cm VAS: 3	TIME: Granulation WOUND SIZE: 12x6cm VAS: 0
6	TIME: Same as patient 1. WOUND SIZE: 5X3cm VAS: 5	TIME: Granulation WOUND SIZE: 5x3cm VAS: 3	TIME: Healthy epidermal WOUND SIZE: 4x3cm VAS: 0
7	TIME: Same as patient 1. WOUND SIZE: 12X7cm VAS: 4	TIME: Granulation WOUND SIZE: 10x7cm VAS: 4	TIME: Healthy Granulation WOUND SIZE: 8x5cm VAS: 3
8	TIME: Same as patient 1. WOUND SIZE: 10X6cm VAS: 5	Defaulted	TIME: Healthy epidermal WOUND SIZE: 6x4cm VAS: 0
9	TIME: Same as patient 1. WOUND SIZE: 5x3cm VAS: 2	TIME: Granulation WOUND SIZE: 5x3cm VAS: 0	TIME: Healthy epidermal WOUND SIZE: 4x2cm VAS: 0
10	TIME: Same as patient 1. WOUND SIZE: 6X3cm VAS: 2	TIME: Granulation WOUND SIZE: 6x2cm VAS: 0	Defaulted

Patient 1



Patient 2



Patient 3



Patient 4



Patient 5



Patient 6



Patient 7



Patient 8



Patient 9



Patient 10



Presentation supported by:



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