Nutrition Aspect In Wound Healing Beyond EPIthelization & GRANulation

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Introduction:

Wound healing, is a normal biological process in the human body. Many factors can interfere with one or more phases of wound healing. Among these factors, nutrition plays an important role.

Aim:

To ascertain the importance of epigran protein in wound healing.

Materials & Methods:

10 Subjects were identified using inclusion and exclusion criteria by Orthopedic Surgeon. Inclusion criteria are (1) age among 18 to 59 year-old, (2) infected wounds. Exclusion criteria are (1) allergic to protein, (2) Unstable patient. Subjects were recruited and given Epigran Protein 30g twice a day, for 4 weeks. Blood investigations (Albumin and Hemoglobin level) were taken weekly. Photographs taken at each visit monitored any changes to wound appearance and color to compare with clinical findings. Each patient was assessed by the same Orthopedic Surgeon at each visit.

The Product:

Epigran Protein promotes epithelization and granulation for wound healing. It contains essential protein in pea and oat form, micro nutrient such as Arginine, Glutamine and Leucine. Besides it also contain correct trace element like Vitamin A, C, E, Zink, Copper, selenium and Fibruline. In addition with Japan Oryza bird's nest extract.

Results:

No. Patient	Alb (g/L) 1st week	Alb (g/L) 4th week	Hb (g/dL) 1st week	Hb (g/dL) 4th week	Wound color 1st week	Wound color 4th week
1	23	28	9.7	9.8	Yellow	Red
2	27	31	8.4	10.7	Yellow	Pink
3	25	25	8.3	9.9	Black	Red
4	23	26	9.4	10.3	Yellow	Pink
5	14	-	10	-	Yellow	-
6	23	29	9.9	10.8	Black	Pink
7	19	14	9.7	9.6	Black	Red
8	22	33	8.8	11.8	Yellow	Pink
9	19	21	9.6	9.8	Black	Red
10	18	23	8.8	10.4	Yellow	Pink

Case Study 1:

37 year-old with infection wound over the right thigh post Motor Vehicle Accident.

Overall patients albumin and hemoglobin level increased after taking Epigran Protein, except in patient 7, due to deteriorate of patient general condition. Whereas in patient 5, he defaulted follow up. In relation to wound healing, after Epigran intakes the wound color were improving in all cases.

Discussions:

Although nutrition is a significant factors that affect wound healing and the potential cellular and / or molecular mechanisms involved, the other factors include oxygenation, infection, age and sex hormones, stress, diabetes, obesity, medications, alcoholism and smoking have to be consider for a better therapeutics that improve wound healing and resolve impaired wounds.

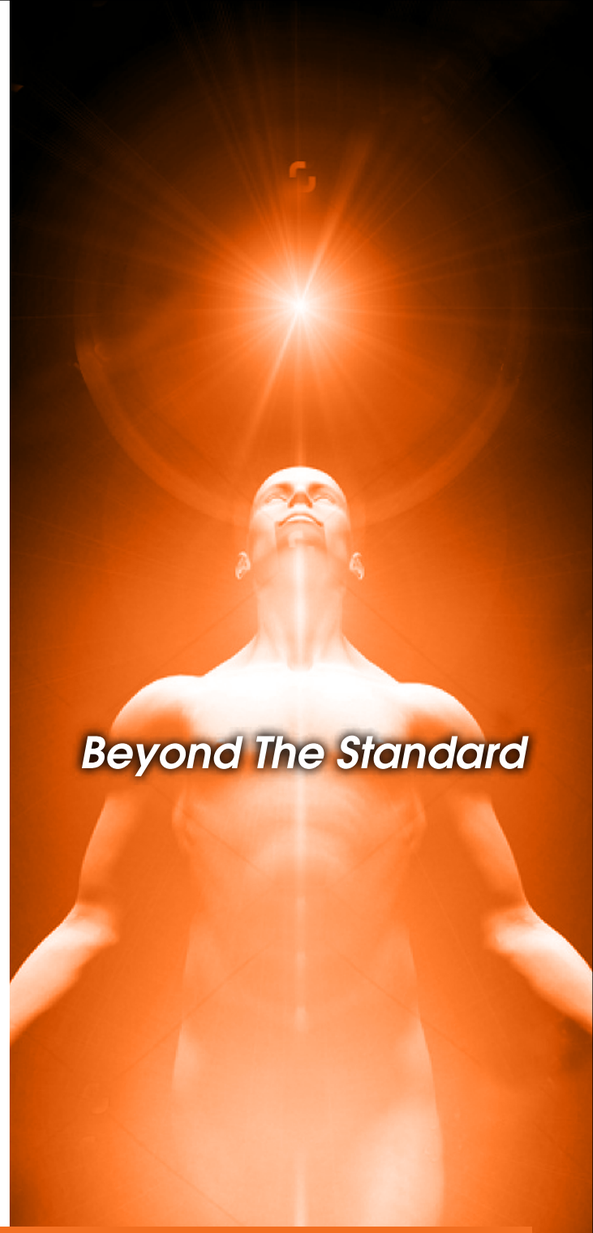
Conclusion:

A summary of the clinical implications of the data is presented, with the acknowledgment that each patient's plan of care must be individualized to optimize the relationship between nutrition and wound healing.

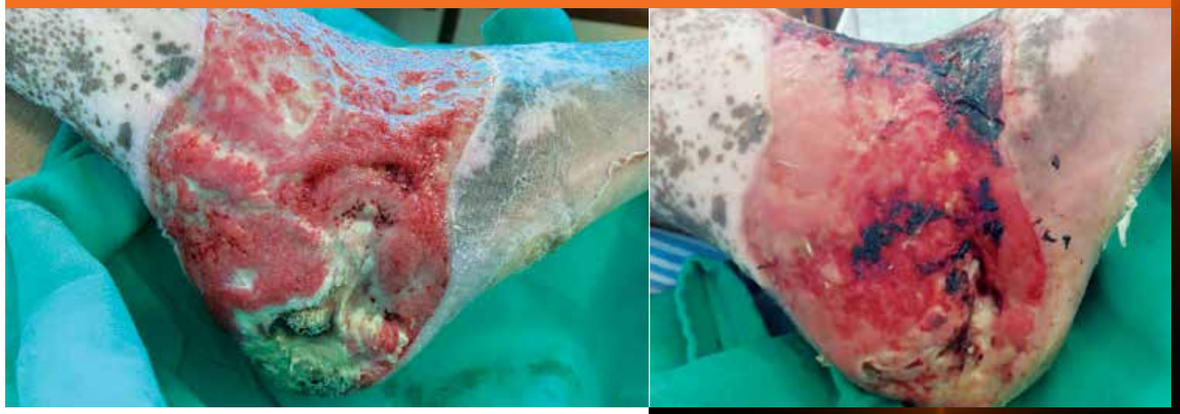
REFERENCES:

1. *S. Guo and L.A. DiPietro. Factors Affecting Wound Healing. J Dent Res. 2010 Mar; 89(3): 219–229.*

**** Pictures in case study 1 and 2 showed before and after Epigran Protein intake after 4 weeks.***



Case Study 2:



65 year-old with left Diabetic Foot Ulcer.