

Efficacy of nutritional treatment in patients with psoriasis: A case report

ANG PENG WONG¹, TATIANA KALINOVSKY², ALEKSANDRA NIEDZWIECKI² and MATTHIAS RATH²

¹Natural Harmony, 47301 Petaling Jaya, Selangor, Malaysia; ²Dr. Rath Research Institute, Santa Clara, CA 95050, USA

Received August 30, 2014; Accepted June 8, 2015

DOI: 10.3892/etm.2015.2631

Abstract. Psoriasis is a chronic inflammatory skin disease characterized by thickened, silvery-scaled patches. There is currently no cure and treatments only attempt to reduce the severity of symptoms. This study reports the case of a 36-year-old female who presented to the clinic with severe psoriasis and had been treated with topical steroid cream for the past 14 years. After adherence to prescribed dietary changes for 6 months, including abundant intake of vegetables, minimal consumption of meat, and avoidance of junk food and sugar in food or drinks, as well as nutritional supplementation with Vitacor Plus, ProLysinC, VitaCforte and LysinC Drink mix, the patient experienced complete resolution of psoriatic patches on her body.

Introduction

Psoriasis is a chronic inflammatory skin disease characterized by thickened, silvery-scaled patches. It has been associated with inflammatory and immune mechanisms probably associated with a genetic predisposition that can be triggered by stress (1,2). Psoriasis is one of the most common chronic inflammatory skin disorders, affecting ~2% of the general population (3). Psoriasis can substantially affect quality of life of patients. Numerous different treatments are available, which may allow short-term improvement and long-term control of the disease, but these measures do not cure psoriasis (4). Treatments include topical applications, systemic therapies and phototherapy; while they can be effective, a number of treatments are associated with significant adverse effects. Thus, there is a requirement for effective affordable therapies with fewer side effects that address the causes of the disorder.

Psoriasis is considered to be a T-cell-mediated inflammatory skin disease, which is characterized by hyperproliferation and poor differentiation of epidermal keratinocytes. While susceptibility to psoriasis is inherited, the disease is influenced by environmental factors, such as infections and stress (5). Diet has been suggested to be involved in the aetiology and pathogenesis of psoriasis (6,7). Fasting periods, low-energy diets and vegetarian diets have been shown to improve psoriasis symptoms in certain studies (6), and diets rich in polyunsaturated fatty acids from fish oil have also shown beneficial effects (7). These diets modify the polyunsaturated fatty acid metabolism and influence the eicosanoid profile, so that inflammatory processes are suppressed (6,7).

Case report

Written informed consent was obtained from the patient. A 36-year old female presented to the clinic with psoriasis since the age of 22. She stated that her outbreak of psoriasis originated on the scalp and slowly descended downward towards her feet. Eventually the psoriatic lesions covered a large extent of her body, with the exception of her face (Fig. 1). She had been prescribed topical steroid cream for the past 14 years. Possible cause could be due to usage of anti-dandruff shampoo (which contains coal tar) since teenage years. The patient stopped using the anti-dandruff shampoo upon the first consultation. Stopping the shampoo would not alleviate psoriasis in the time limits of the present study, but may help hasten the recovery.

At the start of treatment, the patient was advised to consume a healthy diet with abundant vegetables, minimal meat, no junk food, and to avoid taking any forms of sugar in food or drinks. The following supplements were prescribed: Vitacor Plus-1 tablet 3 times daily, ProLysinC-2 tablets 3 times daily, VitaCforte-2 tablet 3 times daily, and LysinC Drink mix-1 scoop 4 times daily. Table I shows the list of components in these supplements. The patient was advised to stop using the steroid cream immediately at the beginning of treatment. Return appointments were scheduled once per month.

During the first month the patient experienced flaring of the skin condition with shedding of the dead skin. From the second month onwards, the psoriasis patches appeared thinner. Patches on the upper part of body (neck, shoulder, upper arms) appeared to heal faster than the lower parts of the body. This healing process continued and the psoriatic patches on the

Correspondence to: Dr Aleksandra Niedzwiecki, Dr. Rath Research Institute, 1260 Memorex Drive, Santa Clara, CA 95050, USA

E-mail: author@drath.com

Key words: nutrients, psoriasis, case report

Table I. Nutritional supplements.

Supplement regimen	Nutrient amount in each tablet/scoop
Vitacor Plus-1 tablet 3 times daily	
Vitamin C obtained from:	
Ascorbic acid	76.7 mg
Ascorbyl palmitate	56.7 mg
Calcium ascorbate	33.3 mg
Magnesium ascorbate	33.3 mg
Vitamin E (D- α -tocopherol)	29.1 mg
Vitamin A (β carotene)	158.4 μ g RE
Vitamin B1	2.3 mg
Vitamin B2	2.3 mg
Vitamin B3	15.0 mg
Vitamin B5	13.3 mg
Vitamin B6	3.3 mg
Vitamin B12	6.7 μ g
Vitamin D3	1.1 μ g
Folic acid	30.0 μ g
Biotin	21.7 μ g
L-proline	36.7 mg
L-lysine	36.7 mg
L-carnitine	11.7 mg
L-arginine	13.3 mg
L-cysteine	11.7 mg
Calcium	18.3 mg
Magnesium	12.7 mg
Potassium	6.7 mg
Zinc	2.3 mg
Manganese	433.3 μ g
Copper	110.0 μ g
Selenium	6.7 μ g
Chromium	3.3 μ g
Molybdenum	1.3 μ g
Inositol	11.7 mg
Coenzyme Q10	2.3 mg
Phosphorus	5.0 mg
Pycnogenol	2.3 mg
Citrus bioflavonoids	33.3 mg
Additional natural vitamin E (β -, γ - and Δ -tocopherol)	2.6 mg
Additional natural carotenoids (α -carotene, lutein, zeaxanthin and cryptoxanthin)	22.83 μ g
ProLysinC-2 tablets 3 times daily	
Vitamin C obtained from:	
Ascorbic acid	300 mg
L-proline	150 mg
L-lysine	300 mg
VitaCforte-2 tablets 3 times daily	
Vitamin C obtained from:	
Ascorbic acid	150 mg
Calcium ascorbate	150 mg
Magnesium ascorbate	150 mg
Ascorbyl palmitate	67 mg

Table I. Continued.

Supplement regimen	Nutrient amounts in each tablet/scoop
Citric bioflavonoids	150 mg
LysinC Drink mix-1 scoop 4 times daily	
Vitamin C (ascorbic acid, calcium ascorbate, magnesium ascorbate)	1,000 mg
Calcium (calcium ascorbate)	48 mg
Magnesium (magnesium ascorbate)	34 mg
L-lysine (L-lysine HCl)	1,000 mg
Citric bioflavonoids	200 mg

RE, retinol equivalents.



Figure 1. Image of the patient's back prior to nutritional treatment.



Figure 2. Image of the patient's back 6 months post treatment.

legs were the last to heal. At the end of 6 months the patient's psoriasis had completely disappeared (Fig. 2). The patient reported aggravation of itching and soreness in the first month, followed by gradual improvement of these symptoms over the 6 months. The patient had no complaints/side effects associated with the nutritional regimen.

Discussion

As there is no cure for psoriasis, the multiple treatment options currently available only attempt to reduce the severity of symptoms. Therapeutic approaches include natural modalities, such as sunlight, diet and stress avoidance, and pharmacological treatments, either topically applied in the form of creams or lotions, orally ingested or injected. Standard topical treatments and their side effects are as follows: Anthralin, skin irritation; calcipotriol, elevation of serum calcium; corticosteroids, skin thinning, hair follicle infections, facial redness, rosacea, a worsening of diabetes mellitus, and reduced endogenous steroid production; topical retinoids, skin reddening and irritation; and non-steroidal immunomodulators, burning sensation (5). Epidemiological studies have shown that increased intake of fresh fruits and vegetables is associated with a decreased prevalence of psoriasis (8,9). In his review of the literature, Wolters cites evidence of a potential benefit of dietary factors in psoriasis (9); it was reported that fasting periods, low-energy diets, vegetarian diets, and diets rich in n-3 polyunsaturated fatty acids from fish, improved the symptoms of psoriasis, as these diets were able to suppress inflammatory processes. In an Italian case-control study of 316 patients with psoriasis and 366 controls, the risk of psoriasis was found to be significantly inversely associated with the intake of carrots, tomatoes and fresh fruit, as well as with the β -carotene intake (7). The consumption of vegetables and fruits may be beneficial in psoriasis due to their high content of various antioxidants, such as carotenoids, flavonoids and vitamin C. Frei (10) reports that increasing intake of antioxidants, such as vitamin C, vitamin E, β -carotene and selenium may aid in preventing an imbalance between oxidative stress and antioxidant defence in psoriasis.

The present case had presented with severe psoriasis showed complete clearing of patches after six months on the prescribed dietary and nutritional supplement treatment. In addition to the changes made to the diet, including increased vegetable and fruit intake, the added supplements also provided support against oxidative stress (with vitamins E, C, B2 and zinc and selenium), aided normal energy metabolism (with vitamins B1, B2, B3, B5, B6, B12 and biotin, magnesium and vitamin C), maintained normal function of the immune system (with folic acid, vitamins A, D, and C, and selenium and copper); and optimized collagen formation (with vitamin C, lysine and proline). In addition, the major components of the supplements, ascorbic acid, lysine and proline, have been shown to be important in collagen integrity (11,12). Optimal collagen structure depends upon adequate supplies of ascorbic acid and the amino acids lysine and proline (11,12). In addition, lysine contributes to extracellular matrix stability as a natural

inhibitor of plasmin-induced proteolysis (11). Since the human body cannot synthesize vitamin C or the amino acid lysine, they are required in the diet.

In conclusion, the nutritional dietary change and supplementation with specific nutrients resolved the patient's psoriasis in six months. In contrast to the current treatments, which are associated with various side effects that only attempt to reduce the severity of symptoms, non-toxic nutritional dietary intervention was shown to be effective in resolving the patient's psoriasis, suggesting that this treatment should approach be considered for patients with psoriasis.

Acknowledgements

This study was funded by the Dr. Rath Health Foundation (Santa Clara, CA, USA), a non-profit organization.

References

1. Feldman SR: A quantitative definition of severe psoriasis for use in clinical trials. *J Dermatol Treat* 15: 27-29, 2004.
2. Zachariae R, Zachariae H, Blomqvist K, Davidsson S, Molin L, Mørk C and Sigurgeirsson B: Self-reported stress reactivity and psoriasis related stress of Nordic psoriasis sufferers. *J Eur Acad Dermatol Venereol* 18: 27-36, 2004.
3. Christophers E: Psoriasis-epidemiology and clinical spectrum. *Clin Exp Dermatol* 26: 314-20, 2001.
4. Naldi L, Svensson A, Diepgen T, Elsner P, Grob JJ, Coenraads PJ, Bavinck JN and Williams H; European Dermato-Epidemiology Network: Randomized clinical trials for psoriasis 1977-2000: The EDEN survey. *J Invest Dermatol* 120: 738-41, 2003.
5. Brown AC, Hairfield M, Richards DG, McMillin DL, Mein EA and Nelson CD: Medical nutrition therapy as a potential complementary treatment for psoriasis - five case reports. *Altern Med Rev* 9: 297-307, 2004.
6. Naldi L, Parazzini F, Peli L, Chatenoud L and Cainelli T: Dietary factors and the risk of psoriasis. Results of an Italian case-control study. *Br J Dermatol* 134: 101-106, 1996.
7. Kragballe K and Fogh K: A low-fat diet supplemented with dietary fish oil (Max-EPA) results in improvement of psoriasis and in formation of leukotriene B5. *Acta Derm Venereol* 69: 23-28, 1989.
8. Kavli G, Forde OH, Arnesen E and Stenvold SE: Psoriasis: familial predisposition and environmental factors. *Br Med J (Clin Res Ed)* 291: 999-1000, 1985.
9. Wolters M: Diet and psoriasis: experimental data and clinical evidence. *Br J Dermatol* 153: 706-714, 2005.
10. Frei B: On the role of vitamin C and other antioxidants in atherogenesis and vascular dysfunction. *Proc Soc Exp Biol Med* 222: 196-204, 1999.
11. Rath M and Pauling L: Plasmin-induced proteolysis and the role of apoprotein (a), lysine and synthetic analogs. *Orthomolecular Med* 7: 17-23, 1992.
12. Cha J, Roomi MW, Ivanov V, Kalinovsky T, Niedzwiecki A and Rath M: Ascorbate supplementation inhibits growth and metastasis of B16FO melanoma and 4T1 breast cancer cells in vitamin C-deficient mice. *Int J Oncol* 42: 55-64, 2013.