

Case Report: Improvement of Long Lasting Hyperpigmentation by Aqueous Human Placenta Extract (Reju Growth Factor, RGF®) Treatment

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Abstract

Hyperpigmentation is a common skin problem in a woman. Prolonging topical use of skin whitening may cause hyperpigmentation such as ochronosis whose condition is a challenge for treatment. An aqueous human placenta extract (RGF®) contains bioactive therapeutic molecules. There is evidence of human placenta extract showing that melanin synthesis is inhibited by placenta extract in melanocytes. We first reported the case of the hyperpigmentation improvement following face skin mesotherapy human placenta extract treatment.

Keywords

Hyperpigmentation, Human Placenta Extract, Mesotherapy

1. Introduction

Hyperpigmentation is a common skin problem. It presents dark brown patches, usually on the face which is more in women [1]. A common cause of hyperpigmentation is an excessive production of melanin [2] [3]. It is predominantly attributed to hormonal change, ultraviolet exposure and prolonging use drugs or hydroquinone whitening influence [1]. Exogenous ochronosis is caused by prolonged exposure to topical hydroquinone. The side effect as consequence use of hydroquinone is challenging to treat [4] [5]. Aqueous human placenta extract is natural medicine which contains bioactive therapeutic molecules such as peptides, polypeptide, and DNA fragment, polydeoxyribonucleotides, proteins, vi-

tamins, growth factors and hormones [6] [7] [8]. It plays an important role in prevention, alleviation, and cure of the diseases [9]. The aqueous extract human placenta is scientifically proven potent wound healer and skin problem [7] [10] [11]. The evidence of the effect of placenta extract on depigmentation in the clinic is limited. Thus, we present the case of the volunteer who showed the dramatic improvement of hyperpigmentation three months after mesotherapy human placenta extract (RGF®) treatment.

2. Case Report

A 39-year-old female present with dark brownish hyperpigmentation distributed over face for 4 years. She had prolonged topical used of skin whitening cream containing hydroquinone and corticosteroid for more than 20 years. She volunteered and gave her written informed consent for this study. On physical examination, there were multiple dark brown pigment patches on the face, the cheeks, and bridge of the nose, forehead, chin, and upper lip (**Figure 1**). A diagnosis is ochronosis due to prolonged use of topical hydroquinone. The volunteer was healthy and routine laboratory investigations were normal. Management of this case is mesotherapy human placenta extract treatment with RGF® 200 pg/ml, 5 ml (Life Balance Methodology Co., Ltd., Bangkok, Thailand) facial skin intradermal injection once a month for 3 months (**Figure 1**). There was not any cosmetics or drugs facial skin management during the mesotherapy RGF® treatment. After 3 months of 3 doses of RGF® treatment, facial hyperpigmentation improved significantly and skin lightened and brightened (**Figure 2**). Skin firmness was measured with a Cutometer at the end of treatment. On month 3, the skin increases the relative elasticity recovery of skin ($r7$) when compared to before treatment (data not shown). The skin elasticity showed improvement after treatment to 60%. The skin was dramatically hydrated and finer skin structure within 3 months after treatment with RGF®. The wrinkle under the eyes was significantly reduced in the first month after treatment.



Figure 1. Before start RGF® treatment for 3 doses once months for 3 months; localize dark brown color patch on the cheeks, bridge of nose, forehead, chin, and upper lip.



Figure 2. After 3 months of mesotherapy RGF® treatment, facial hyperpigment was disappeared and the facial skin was lightened and brightened.

3. Discussion

Hydroquinone-inducing hyperpigment for melasma is a challenge to treat. The mesotherapy human placental extract treatment has proven to be effective in the improvement of hyperpigmentation and skin complex and elasticity. As we know human placenta extract has been used for treating various skin problem and rejuvenation [11] [12]. It consists of bioactive therapeutic molecule exerting the antioxidative effects [7]. The placenta extract is scientifically proven skin-whitening effect [7] [11] [13] and reduces oxidative stress. It also induces fibroblast proliferation and collagen synthesis [10]. It could inhibit melanin synthesis and also regulate antioxidant genes and might protect the skin against oxidative stress [14] [15] [16]. The skin-whitening effect and the physiological and genetic mechanism had been studied in B16 melanoma cells [2]. The placenta extract could regulate the antioxidant enzyme genes such as cytosolic superoxide dismutase and catalase and inhibit the melanin synthesis by reducing the activity tyrosinase, the melanin synthesis enzyme. In addition, placenta extract protected the B16 cells from H_2O_2 -induced cell death [2]. In summary, the mesotherapy of human placenta extract was safe and effective in the improvement of hyperpigmentation. In addition, it also improves skin complexion and elasticity.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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