

The role of regenerative medicine in androgenetic alopecia treatment: an uncontrolled clinical trial

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Running title: Regenerative medicine in alopecia

Abstract

Background: androgenetic alopecia, a disease that affects 70% of men and 40% of women, is characterized by the gradual miniaturization of the hair follicle, resulting from the alteration of the dynamics of the hair cycle.

Aim: one of the most recent and promising advanced medical therapies is regenerative medicine. The important action of Adipose Derived Stem Cells (ADSCs) on the hair follicle is that of inducing anagen by stimulating the stem cells of the hair follicle. The Fibroblastic growth factor expressed by ADSCs also plays an important role in regulating the bulge and the basal layer of the epidermis, inducing follicular neogenesis.

Methods: this study is aimed at evaluating the effectiveness of the technique used for the treatment of androgenetic alopecia. The protocol involved the association of carboxytherapy and regenerative therapy through the grafting of a vascular stromal fraction and mesenchymal stem cells derived from the adipose tissue.

Results: 15 patients were enrolled (9 men and 6 women). From the scores relating to the satisfaction and satisfaction questionnaire completed by the patients, it is also clear how this type of therapeutic protocol is practically painless, has significantly improved the patient's self-confidence and relationship with others, hair density and how much it has reduced hair loss.

Conclusions: the analysis of the results of the study shows how this therapeutic protocol combining regenerative therapy and carboxytherapy is a valid, promising technique and is part of a multidisciplinary approach more suited to the therapy of a pathology such as androgenetic alopecia.

Keywords

Androgenetic alopecia, regenerative medicine, hair loss, growth factors, SEFFIHair.

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