

Overview of Hyperpigmentation

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Introduction

Hyperpigmentation is the darkening of an area of skin or nails caused by increased melanin, where Melanin refers to a collection of natural pigments found in all living things. Melanogenesis is a multistage chemical process that begins with the oxidation of the amino acid tyrosine and ends with polymerization. Melanin pigments are made by melanocytes, a type of cell that produces them. Sun exposure, inflammation and other skin injuries, such as those associated with acne vulgaris, a long-term skin disorder in which dead skin cells and oil from the skin block hair follicles can cause hyperpigmentation. Blackheads or whiteheads, pimples, greasy skin and scarring are all common symptoms of the illness. It primarily affects skin with a high number of oil glands, which includes the face, upper chest and back. Hyperpigmentation is more common in those with darker skin tones, especially when they are exposed to too much sunlight. Excess melanin production is the root of many kinds of hyperpigmentation. Hyperpigmentation can be diffuse or localised, affecting the face and backs of the hands, for example. Melanin is created by melanocytes in the epidermis' bottom layer. The epidermis is the outermost of the three layers that make up the skin; the dermis and hypodermis are the inner layers. The epidermis layer protects the body from environmental diseases and regulates the amount of water lost to the atmosphere such as through transepidermal water loss.

Description

Melanocytes are melanin-producing neural crest-derived cells found in the epidermis of the skin's bottom layer (the stratum basale), the middle layer of the eye, the inner ear, vaginal epithelium, meninges, bones and the heart. Melanin is a dark pigment that is responsible for the colour of your skin. Melanin is stored in special organelles known as melanosomes, which can be transferred to neighbouring keratinocytes to cause pigmentation. Melanin is a pigment that produces colour in the eyes, skin and hair, among other locations on the body. Melanocyte distribution becomes less diffuse as people age and the body's regulation of them becomes less controlled. UV light promotes melanocyte activity, resulting in hyperpigmentation where the cell concentration is higher. Post-inflammatory hyperpigmentation is another type of hyperpigmentation. These are dark, discoloured areas on the skin that emerge after acne has healed [1-3].

Sun exposure, inflammation and other skin injuries, such as those associated with acne vulgaris, can all induce hyperpigmentation. Hyperpigmentation is more common in those with darker skin tones, especially when they are exposed to too much sunlight [4].

Excess melanin production is the root of many kinds of hyperpigmentation.

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Received: 21 February, 2022, Manuscript No. JCTT-22-55070; Editor assigned: 24 February, 2021, PreQC No. P-55070; Reviewed: 27 February, 2022, QC No. Q-55070; Revised: 28 February, 2022, Manuscript No. R-55070; Published: 09 March, 2022, DOI: 10.4172/2471-9323.22.8.178

Hyperpigmentation can be widespread or localised, affecting the face and backs of the hands, for example. Melanin is generated by melanocytes in the epidermis' bottom layer. Melanin is a pigment that produces colour in the eyes, skin and hair, among other locations on the body. Melanin production (melanogenesis) begins with the enzyme tyrosine hydroxylase oxidising L-tyrosine to L-DOPA, which is subsequently converted to L-Dopaquinone and Dopachrome, which creates melanin.

Treatment for hyperpigmentation issues, there are a variety of depigmenting therapies available and results vary. The most common treatment for hyperpigmentation caused by excessive melanin production (such as melasma, acne scarring and liver spots) is the application of topical depigmenting agents, which differ in efficacy, safety and prescription rules. Hydroquinone, azelaic acid and kojic acid, for example, are only available via prescription in the United States, especially at high quantities. Some, including niacinamide and cysteamine hydrochloride, are available without a prescription. Before long-term safety issues were identified, hydroquinone was the most often recommended hyperpigmentation treatment and its usage became increasingly controlled in various countries and opposed in general by WHO [5].

Conclusion

Oral medicine including procyanidin and vitamins A, C and E has also been shown to be safe and effective in the treatment of epidermal melasma. Treatment was related with significant improvements in the left and right malar regions in an 8-week randomised, double-blind, placebo-controlled trial. Fraction lasers and dermabrasion are two non-topical treatments that are available.

Conflict of Interest

The author shows no conflict of interest towards this manuscript.

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How to cite this article: Kumar, Shanker. "Overview of Hyperpigmentation." *J Cosmo Tricho* 8 (2022): 178.