

Dilemma of Latanoprost induced hyperpigmentation-a review

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ABSTRACT:

The purpose of this review is to understand and evaluate prognosis, mechanism, pathogenesis and inhibition of latanoprost induced hyperpigmentation and other related side effects. Review of randomly selected studies by searching research data base like Medline PubMed and Google scholar on the subject by using words like latanoprost, hyperpigmentation, prostaglandins, glaucoma, histopathology and inhibition etc. Chronic use of latanoprost turns the color of iris darker in 11 to 23% of patients during one year of treatment. The exact mechanism and pathogenesis of iris hyperpigmentation is not completely known, although some in vitro studies showed that latanoprost may induce tyrosinase activity rather than increasing the mitotic index of the human melanoma cell lines. It is unclear that, whether latanoprost induced iris pigmentation is harmful or it is just cosmetic disadvantage of potential heterochromia between the eyes in unilaterally treated patients because the heterochromia is likely to be permanent, or very slowly reversible. In addition, it is unknown whether latanoprost causes increased pigmentation of the outflow pathways that might eventually lead to blockage and a type of pigmentary glaucoma. The adding of α -methyl-p-tyrosine completely prevented latanoprost-induced stimulation of melanin production in uveal melanocytes. It is concluded that latanoprost is well established and documented anti-glaucoma topical agent. The latanoprost induced hyperpigmentation is most popular and prominent side effect amongst others, which has clinical implications and has given a new mode and opened the doors of research for the researchers to further evaluate the latanoprost in this context. *Al-Shifa Journal of Ophthalmology 2016; 12(2): 115-122. © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.*
