

**OFF-LABEL USE OF TRANEXAMIC ACID IN THE
TREATMENT OF MELASMA**

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ABSTRACT

Melasma is a common hyperpigmentary disorder in Asian skin. There is an increasing body of evidence that indicates that Tranexamic acid is a novel approach to treat melasma. This paper aims to investigate the safety and efficacy of Tranexamic acid in the treatment of melasma. A comprehensive search of Pubmed and the Cochrane Library as well as other resources, revealed 8 studies involving Tranexamic acid in melasma. Amongst these, 3 were randomized controlled trials, 2 Cohort studies, 1 prospective pilot study, 1 randomized open-label comparative study and 1 retrospective review. 5 out of the 8 studies involved the oral consumption of Tranexamic acid whilst 2 involved the intradermal injections of Tranexamic acid for the treatment of melasma. Various parameters were assessed to determine the efficacy of treatment. Based on the selected studies, Tranexamic acid was found to have beneficial effects in the treatment of melasma, both objectively through MASI scores, Melanin and Erythema Indices, as well as subjectively, through patient assessment and feedback. Almost all the studies showed positive results objectively. A dose of 250mg twice daily of oral Tranexamic acid along with topical skin lightening agents or low fluence Q-switched Nd:YAG lasers monthly, was found to improve melasma in Asian skin. It is hoped that the findings from this review will provide a greater opportunity for clinicians to explore the use of Tranexamic acid, for the challenging treatment of melasma.

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