

4th International Conference on Clinical & Experimental Dermatology

April 14-16, 2014 Hilton San Antonio Airport, TX, USA

Updates in the management of melasma

Yong-Kwang Tay

Changi General Hospital, Singapore

Melasma is very common in the Asian and Hispanic population and consists of light to dark brown symmetric patches on the face which may last for years. Predisposing factors include sunlight (major triggering factor), hormonal and genetic influences.

Topical treatment using various lightening creams (e.g. hydroquinone cream, ascorbic acid cream, tretinoin cream) and sunscreen daily remains the mainstay of treatment. Tranexamic acid (250 mg twice daily), a plasmin inhibitor with antifibrinolytic activity is a useful adjunct in refractory melasma. Tranexamic acid (TXA) inhibits melanin synthesis by interfering with the interaction of melanocytes and keratinocytes through inhibition of the plasminogen/plasmin system. It also reduces erythema, vessel numbers and mast cell activity which are elevated in melasma. TXA is well tolerated, common side effects being gastrointestinal discomfort, hypomenorrhea, with many patients improving within 3 months of starting TXA.

TXA can be used alone, or in combination with lasers (laser toning). Laser toning using low fluence (1.6 – 2.5 J/cm²), large spot size (e.g. 6 mm diameter), multiple passes QS 1064 nm Nd:YAG laser is useful for refractory melasma. Laser toning is safe, well tolerated, with multiple treatment sessions needed, the clinical end point being mild erythema. Side effects of laser toning include punctate depigmentation and rebound hyperpigmentation which can be reduced by using fewer passes and spacing out the treatment intervals (e.g. every 4 weeks). Electron microscopy studies have shown a reduction of melanosomes and melanocyte dendrites in melasma with the low fluences used in laser toning.

Biography

Yong-Kwang Tay is presently a senior consultant and was the founding Chief (2002-2012) of the department of dermatology at Changi General Hospital, Singapore. Dr. Tay did his postgraduate training at the National Skin Centre, Singapore, University of Colorado School of Medicine at Denver, the Baylor College of Medicine at Houston, the Birmingham regional skin laser centre, UK and the Laser and Vascular Anomaly Section, Malmo University Hospital, Sweden. Dr. Tay has a special interest in the fields of dermatologic laser surgery and pediatric dermatology. He has more than a hundred publications in peer-reviewed journals and is the Editor of the 'Textbook of Laser and Light Dermatology in the Asian Skin'. He has written a chapter on hair disorders in the textbook of Pediatric Dermatology and a chapter on hypopigmentation disorders in the textbook of Neonatal Dermatology. He is a member of the editorial board of the Journal of the American Academy of Dermatology, Pediatric Dermatology and the Journal of Dermatological Treatment.

yong_kwang_tay@cgh.com.sg