Update on melasma management

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Speaker:	Dr. Susan Taylor Director of the Skin of Color Center St. Luke's Roosevelt Hospital Center, New York, USA
Organiser:	The Hong Kong Society of Dermatology & Venereology

Melasma is a common acquired disorder of pigmentation which presents with asymptomatic blotchy, irregular brown, gray or blue macules and patches on sun-exposed areas of skin. It is exacerbated by ultraviolet light and heat with relapses and remission. It is primarily a disease of women more frequently with darker skin types. The prevalence in pregnant women is about 50-70% usually in the second or third trimester. About 5% of cases occur in men who have similar clinical and histological pattern but hormonal factor is not an aetiology. Melasma is classified histologically or by Wood's light into epidermal, dermal or mixed melasma. Epidermal melasma is the most common and most treatable form. There is no treatment to date for dermal melasma.

For management of melasma, topical medications aimed at decreasing proliferation or formation of melanin, increasing removal and degradation of melanin, blocking transfer of melanosomes, protecting from ultraviolet light and preventing inflammatory process. There are several therapies used for many years but few are evidence-based and there are potential side effects. The mainstay of therapy in the United States for melasma is hydroxyquinone (HQ), which decrease melanin formation by inhibiting tyrosinase. Two randomised double-blinded studies by Haddad et al and Vazquez et al showed that HQ is effective for melasma with improvement in 76.9% to 96.3% of the patients. Ennes ASP reported 40% of patients achieved complete clearance with HQ compared with 10% with placebo. However, adverse effects are not uncommon with HQ, mainly contact dermatitis. Other second line therapies are tretinoin and azelaic acid especially for those with HQ allergy.

In 1975, Kligman and Willis developed a formula containing three components: 5% HQ, 0.1% tretinoin and 0.1% dexamethasone to treat pigmentation in a hope that individual components acted together to improve efficacy and minimise adverse reactions. Taylor et al demonstrated the efficacy and safety of a new triple-combination (TC) agent for melasma in a multi-centre randomised and double-blinded 8-week trial. TC contained 4% HQ, 0.05% tretinoin and 0.01% fluocinolone. The results showed that more patients treated with TC had significant complete clearance (29%) than each of the double combination (2-10%). Seventy-five percent of patients had one adverse reaction, mainly erythema and desquamation. The majority were mild in severity. The long-term safety and efficacy of TC was studied up to 12 months. There was no systemic adverse reaction, significant laboratory changes

observed, significant increase in the severity or incidence of adverse reactions compared with the 8-week study. The maneuvers for improving tolerability to TC include avoidance of the use of astringents, toners, drying soaps and cleansers. The use of moisturisers prior to application of topical agent and titrate the dosage slowly will also help. Finally, sun protection and use of sunscreen should not be overlooked.

Learning points:

Melasma is classified into epidermal, dermal and mixed type. For management of melasma especially the epidermal type, triple-combination agents are more effective than the double combinations. The adverse reactions are usually mild with erythema and desquamation with no systemic side effects. Sun protection and use of sunscreen are also important measures.