SUMMARY

Melasma is an acquired facial hyperpigmentary disorder which is common among darker skinned individuals living in countries with high solar radiation. The factors implicated in the etiology of melasma are abundant in the tropics. UVA and UVB light, pregnancy, racial and the use of certain cosmetics.

The aim of this study was to identify the possible etiological factors implicated in the pathogenesis of melasma and to evaluate the efficacy of 20% azelaic acid cream compared to 2% hydroquinone for treatment of melasma.

The study included fifty females complaining of melasma, twelve with idiopathic melasma and thirty eight with secondary melasma. The average age of idiopathic melasma patients was 24.3 years, while was 30 years in secondary melasma.

Sun exposure was a prominent cause for appearance and exacerbation in 100% of idiopathic melasma, and in 89.5% of secondary melasma patients.

Hormonal assays for T3, T4, estrogen and LH levels were evaluated in idiopathic melasma patients and age matched normal controls. Blood samples were taken in the fifth day of menstrual cycle. Mean T3 & T4 levels showed no significant difference between idiopathic melasma patients and the control group. Mean estrogen level...
was significantly lower ( \( p < 0.05 \) ) and mean LH level was significantly higher ( \( p < 0.05 \) ) in idiopathic melasma as compared to the control group.

Twenty melasma patients were chosen randomly for treatment. Patients were neither pregnant nor on contraceptive pills. Treatment was accomplished using 20 % azelaic acid cream in ten patients and 2 % hydroquinone cream in ten patients as a control. 20 % azelaic acid cream and 2 % hydroquinone cream were applied topically twice daily for 6 months. The response to treatment was evaluated by detecting the amount of reduction of lesion size and reduction of pigment intensity. Side effects to either treatment were reported. Zinc oxide ointment was applied topically in the morning as sun screen.

20% azelaic acid cream was found to be more effective in the treatment of melasma compared to 2% hydroquinone cream: Azelaic acid 20% was moderately effective while hydroquinone was poorly effective in the treatment of melasma. Side effects in the form of erythema, burning sensation, scaling were more frequently seen in patients treatment with 2% hydroquinone compared to those treated with 20% azelaic acid. Zinc oxide ointment was used as a sun screen, However, it was untolerable cosmetically by most females.