

Role of Intralesional Tranexamic Acid in Comparison of Oral Tranexamic Acid in the Treatment of Melasma

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Abstract : Background: Melasma is a common pigmentary dermatosis, manifested by hyperpigmented macules or patches on the face, commonly occurring in females due to an acquired disorder in the melanogenesis process. Although several treatments are currently used, it remains a great challenge due to recurrence and refractory nature. It was recently reported that tranexamic acid (TA-plasmin inhibitor) is an effective treatment for melasma. Objective: This study aims to compare the efficacy and side effects of intralesional injection of Tranexamic acid with oral Tranexamic acid in the treatment of melasma. Methods: A clinical trial was done in the Department of Dermatology and Venereology, Bangabandhu Sheikh Mujib Medical University, for a period of 4 years. A total of 100 patients with melasma who did not respond to topical therapy were included in the study as group A and group B. Group A Patients were administered intralesional injection (10 mg/ml) of Tranexamic acid (TA) weekly for 6 weeks, and group B patients were treated with oral tranexamic acid 250 mg 12 hourly for 12 weeks after taking informed consent. The severity and extent of pigmentation were assessed by the modified melasma area severity index (MASI). The response to treatment was assessed by MASI at 4 weeks, 8 weeks, and 12 weeks after stopping treatment. Results: The study showed the MASI scores at the baseline, 4 weeks, 8 weeks, and 12 weeks in group A were 18.23 ± 1.22 , 6.14 ± 3.26 , 3.21 ± 2.14 and 2.11 ± 2.01 respectively, and in group B, 17.87 ± 1.12 , 11.21 ± 6.25 , 6.57 ± 4.26 and 6.41 ± 4.17 respectively. The mean MASI significantly reduced in group A compared to group B in the 4th, 8th, and 12th weeks. The present study showed that among group A patients, 56% rated excellent (>75% reduction) in outcome, 32% good (50-75% reduction), 8% moderate (25-50% reduction) and only 4% (<25% reduction) was unsatisfactory and among group B patients, 14% rated excellent in outcome, 28% good, 36% moderate and 22% was unsatisfactory. Overall improvement in our study in group A was 96% and in group B 78%. Side effects were negligible, and all the patients tolerated the treatment well. Conclusion: Based on our results, intralesional Tranexamic acid (10 mg/ml) is more effective and safer than oral Tranexamic acid in the treatment of melasma.

Keywords : intralesional tranexamic acid, melasma, oral tranexamic acid, MASI score

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