

## Role of Pulsed-Dye Laser in the Treatment of Inflammatory Acne Vulgaris

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**Abstract :** Introduction: Acne vulgaris is one of the most common dermatologic conditions and affects the vast majority of people at some point during their lifetime, so effective treatment is of major importance. The failure of usual treatment modalities, teratogenic effects with some severe side effects, and resistance to P.Acne by Retinoides have been focusing on new therapeutic options for the treatment of acne. More recently, pulsed dye laser therapy has been reported to reduce acne lesion counts. The negligible morbidity of these treatment modalities and some other benefits of subsequent acne scar management lead this therapy more attractive. Objective: The objective of this study is to assess the efficacy and safety of pulsed dye laser therapy in the treatment of inflammatory acne vulgaris. Materials and Methods: A prospective clinical trial was done in the Department of Dermatology and Venereology, Combined Military Hospital (CMH), Dhaka, to find out the role of pulse dye laser in the treatment of inflammatory acne vulgaris. The study was carried out with 60 patients with mild to moderate acne vulgaris, and those were treated with pulsed dye laser therapy at baseline and after 4, 8, and 12 weeks. Results: Among 60 patients with inflammatory acne, 42(70%) were in the age group of less than 20 years, and 36(60%) were female. Regarding the number of inflammatory lesions, the baseline mean number ( $\pm$  SD) was  $12.77 \pm 4.01$ ; after 4 weeks of treatment of inflammatory acne by pulsed dye laser was  $7.80 \pm 4.11$ ; after 8 weeks of treatment,  $6.10 \pm 4.03$  and after 12 weeks of treatment was  $4.17 \pm 4.02$ . After 4 weeks of treatment by pulse dye laser, the level of improvement was excellent at 3.3%, good at 10%, fair at 60%, and poor at 26.7%; after 8 weeks of treatment, excellent was 13.3%, good was 46.7%, the fair was 30% and poor 10% and after 12 weeks of treatment, excellent was 56.7%, good 13.3%, fair 23.3% and poor 6.7%. Regarding safety level, out of 60 patients of inflammatory acne vulgaris treated by pulsed dye laser, about 52(86.7%) patients did not observe any side effects. Conclusions: On the basis of the study results, it can be concluded that pulsed-dye laser is highly effective and well tolerated by patients in the treatment of inflammatory acne.

**Keywords :** pulsed-dye laser, inflammatory acne, acne vulgaris, retinoids

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