

**A COMPARATIVE STUDY ON EFFICACY OF  
Q SWITCHED NEODYMIUM-DOPED YTTRIUM ALUMINIUM  
GARNET (Nd:YAG) LASER VERSUS 15%  
TRICHLOROACETIC ACID (TCA) PEEL  
IN THE TREATMENT OF MELASMA**

**ABSTRACT**

**Introduction**

Melasma is an acquired, circumscribed, pigmentary disorder. It is characterized by more or less symmetrically distributed, dark brown macules with well defined geo-graphic borders. It mostly affects the sun exposed areas, particularly forehead, cheeks, temples and upper lips. Melasma is a common disorder of fascial hyperpigmentation that is often resistant to treatment.

**Aim:**

The aim of the study is to compare the therapeutic efficacy of Q switched Nd-YAG laser versus 15% TCA peel in the treatment of melasma.

**MATERIALS AND METHODS :**

50 patients in the age group more than 18 years were enrolled in the study.

Group 1 : Melasma Patients treated with 15% TCA Peel

Group 2 : Melasma patients treated with lowfluence Q switched Nd-yag laser

- Number of patients in group 1 = 25
- Number of patients in group 2 = 25

TCA peeling was performed every 2 weeks up to 6 sessions, whereas laser treatment was performed every 3 weeks upto 12 weeks. Then followed up for 12 weeks in both groups. MASI score was used before and after treatment for evaluation.

**Results :**

In the 15% TCA peel group, mean MASI scores improved from 16.45 to 9.78 and in the laser group from 16.09 to 11.64. MASI shows significantly reduction with 15% TCA than Nd-YAG laser. Worsening of melasma was higher in the group treated with Nd-YAG laser with 16% of patients developing post inflammatory hyperpigmentation & 40% of patients developing rebound hyperpigmentation.

**Conclusion :**

15% TCA were better than Q switched Nd:YAG laser for the treatment of melasma. Post inflammatory pigmentation and rebound hyperpigmentation were the serious common side effects associated with Q switched Nd : YAG laser treated group particularly dark skinned people(Fitzpatrick skin type V).