

## **Comparative evaluation of cryotherapy versus laser and chemical peeling in treatment of melasma**

**Published as: (Abstract presented as e.poster in European Academy of Dermatology and Venereology, Paris , 2018)**

### **Abstract**

**Background:** Management of melasma is considered a challenge for its delayed outcome and considerable relapse rate. Laser has become a popular option in melasma treatment. Chemical peels and liquid nitrogen cryotherapy are also commonly available therapeutic modalities for melasma.

**Objective:** comparative evaluation of the clinical effectiveness of Er:YAG laser, chemical peeling using TCA 20,25% and cryotherapy using liquid nitrogen in treatment of melasma.

**Methods:** Thirty refractory melasma patients were divided randomly into 3 groups. Group A received 4 laser sessions, group B received 2 sessions of TCA 20% followed by 2 sessions TCA 25% and group C received 4 sessions of cryotherapy. Four sessions were done at 2 weeks interval for all patients and clinical evaluation was recorded via MASI score and photos before and after treatment.

**Results:** Overall MASI score was decrease ( $p < 0.05$ ) in all treatment groups 2 months after the end of sessions. There was a considerable improvement in cryotherapy group compared to each of laser group ( $p = 0.053$ ) and TCA chemical peeling group ( $p = 0.003$ ), and insignificant difference between laser and TCA group ( $p = 0.433$ ).

**Conclusion:** According to our findings, liquid nitrogen cryotherapy achieved better clinical outcome compared to fractional Er:YAG laser and TCA 20-25% chemical peeling in melasma treatment.

**Key Words:** Melasma – Cryotherapy – Laser – TCA peeling