Clinical study of idiopathic onychodystrophy treated with 1064 nm picosecond Nd:YAG laser

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Introduction: Laser treatment has emerged as a novel treatment modality for onychodystrophy. Indeed, only a few small series have assessed the efficacy of laser treatment in onychodystrophy. Recently, the picosecond-domain neodymium-doped yttrium aluminum garnet (Nd:YAG) laser has been introduced for the improvement of various skin disorders.

Objective: The aim of this study was to verify the efficacy and safety of a 1064 nm picosecond Nd:YAG (PSNY) laser in the management of idiopathic onychodystrophy.

Method: Retrospective chart reviews and photographic analyses were performed. Nail lesions were irradiated with a low fluence 1064 nm PSNY. Clinical improvement was assessed by image analysis software Image J and two blinded dermatologists using 5-point global assessment scale.

Results: 27 patients (13 males and 14 females, mean age 46.7±15.7 years) were analyzed. A total of 151 nails, consisting of 105 finger nails and 46 toe nails, were treated with a 1064 nm PSNY. The mean treatment session was 7.5±4.2. After receiving a 1064 nm PSNY laser therapy, 16 patients (59%) showed more than 50% improvement. There were no serious adverse events associated with the treatment during follow-up period.

Conclusion: In this report, we present that idiopathic onychodystrophy successfully treated with a 1064 nm PSNY laser. This device offers a new and potentially therapeutic modality for the patients with idiopathic onychodystrophy.

Biography
Yun Ho Lee is a Resident in Kangbuk Samsung Hospital in Republic of Korea.