NAIL DISORDERS

LONG PULSE MONTHLY 1064 NM NEODYMIUM: YTTRIUM-ALUMINUM-GARNET LASER IN TREATMENT OF NONDERMATOPHYTE MOLD ONYCHOMYCOSIS

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Introduction: Long pulse 1064 nm Nd:YAG laser has been used in alternative treatment of onychomycosis.

Objective: To study treatment outcome and safety of long pulse monthly 1064 nm Nd:YAG in treatment of NDMs onychomycosis.

Materials and methods: A prospective study of toenails nondermatophyte mold (NDM) onychomycosis diagnosed by NDMs criteria was conducted in a tertiary hospital in Thailand from 2016 to 2018. All patients underwent 4 separated treatments with long pulse monthly 1064 nm Nd:YAG. Clinical evaluation and mycological laboratory were done at baseline and every month for consecutive 3
times. Patients were then re-evaluated at 3 months after the last treatment.

Results: A total of 12 patients (n= 17 nails) with mean (SD) age of 64.7 (10.1) years were included in this study. All nails had The Scoring Clinical Index for Onychomycosis (SCIO) of 1. The causative pathogens were Neoscytalidium dimidiatum (70.6%) and Fusarium spp. (29.4%). Seven nails (41.2%) had mycological cure. Median time to mycological cure (SD) was 5.6 (0.6) months. 50% clinical improvement at 6 months was observed in 14 nails (82.4%). Mean pain score (SD) was 3.1 (3.1). Erythema, paronychia and irritation was reported in 5 (7.4%), 2 (2.9%), 1 (1.5%) times, respectively.

Conclusion: Long pulse monthly 1064 nm Nd:YAG in treatment of NDM onychomycosis resulted in good clinical improvement in most nails. Mycological cure was reported in almost half of cases. Furthermore, side effects were minimal in this method which considered to be safe in treatment of NDM onychomycosis.