

ClearSteps – Laser Onychomycosis Treatment: Assessment of Efficacy 12 months After Treatment and Beyond

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SUMMARY

The use of lasers for the treatment of onychomycosis was first proposed as a novel form of therapy some three years ago and is still a relatively new therapy, with very few clinical studies published [1,2,4]. In this paper we have evaluated the efficacy of laser therapy performed with a long-pulse 1064 nm Nd:YAG laser at 24 months and longer intervals post-treatment.

In the period from March 2008 to March 2011, we treated more than 200 patients with over 500 infected nails, achieving excellent results. We had previously reported our results from the first 72 patients and 194 nails in a study published in 2010 [4]. Here we would like to present some preliminary results of another 162 patients with 413 infected nails, as well as the results of telephone follow-ups of 46 patients that took place more than 12 months after the treatments.

We used the same method as described in our first study [4]. Each nail was fully irradiated by the laser beam in a spiral pattern starting at the nail periphery and finishing in the nail center. In one session, three passes across each nail plate were applied. Follow ups were performed at 3, 6 and 12 months, with mycological check ups at 3 and 6 months and clinical nail evaluations at 12 months.

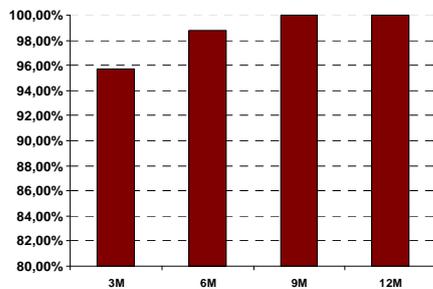


Fig. 1: Treatment efficacy at four control points: 3, 6, 9 and 12 months.

For all 162 patients with 413 affected nails, 95.7% mycological clearance was observed at 3 months, 98.8% after 6 months, with full clearance achieved at 12 months. Fungal presence was still detected in 7 cases at the 3-month follow-up and in 2 cases at 6 months. For these cases the treatment sessions were repeated in the same manner and full clearance was achieved at 9 and 12 months.

Aside from mild-to-moderate heat sensation during the laser procedure, and slight yellowish discoloration of affected nails, no other side-effects or complications were noticed.

Checking the nail clearance status beyond 12 months, we interviewed 46 patients and asked them to report on the status of their treated nails.

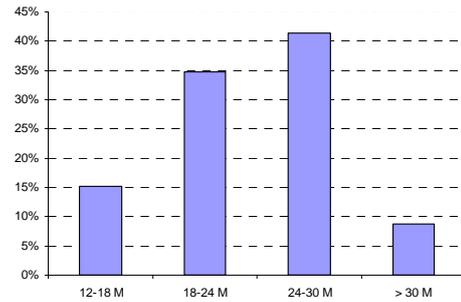


Fig. 2: Duration of follow-up intervals of interviewed patients.

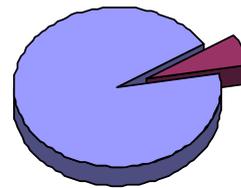


Fig. 3: The vast majority of patients reported having clear nail plates up to 32 months after the treatment

All interviewed patients reported having no problems with their nails after the treatment. 93.5% reported having fully clear nail plates, while 6.5% of the responders were not sure if their nail plates were fully clear.

Our preliminary findings on this larger number of patients (162) and longer follow-up (12-32 months) have reconfirmed our initial findings that Nd:YAG laser therapy is safe and very effective for the treatment of onychomycosis. The therapy is simple, with no side effects or complications.

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