

Treatment of Nail Fungus With the LightPod Neo 650-microsecond Nd:YAG 1064nm Laser

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Background and Objective

To successfully treat by laser the single right great toe which was infected and partially destroyed by the fungus, Onychomycosis. The aim was to have the nail and nail bed (the subungual region) cleared of fungus by use of the laser and medical treatment.

Materials and Methods

Medical treatment consisted of oral Lamisil (Terbinafine), interdigital spray with Lamisil and painting of the infected toe nail with Batrafen nail lacquer. The end point of treatment was regrowth of a healthy nail.

A female patient was offered a non-paying first visit at which a detailed explanation of the proposed treatment was undertaken. At that first visit she had examination of all toes for fungal or interdigital infection. The right great toe was partly destroyed by fungal infection and the patient's attempt at excision of the infected distal end of the nail. Treatment was done by first cleaning the nail and bed with Ethyl Alcohol. The area to be treated was air dried before The Aerolase LightPod Neo Nd:YAG 1064nm laser was employed using a single pass application across the entire nail and nail bed. The spot size was 2mm, with the fluence of 223 j/cm² at a pulse width of 650µsec. The patient was simultaneously started on Lamisil one tablet daily for one month, Batrafen (Ciclopirox) nail lacquer nightly and Lamisil spray applied to the inner lining of all her footwear. The patient had a single treatment of this type and was allowed full regrowth of the clean nail as the end point of treatment. The time interval between the single laser treatment and full regrowth was five months. As of seven months after her only laser treatment she had no recurrence.

Results

The patient satisfaction was the final arbiter in determining whether laser therapy combined with concomitant medical treatment was successful in the treatment of the nail fungus, Onychomycosis. No recurrence of the nail fungus was observed 7 months after the single laser application and single course of medical treatment. The patient stated that application of the laser pulses was painful and it is recommended by the author that a ring block using 2% lidocaine be used to anaesthetize the toe.



Before

7 Months After One Tx

Conclusion

Successful removal of the nail fungus and regrowth of a new nail is possible with combination therapy using the Aerolase LightPod Neo Nd:YAG 1064nm laser with a single pass across the entire nail and nail bed and the use of concomitant oral therapy, which consists of one tablet of oral Lamisil daily for one month, Lamisil interdigital spray to all foot wear along with nightly application of Batrafen nail lacquer.