

# Subungual hematoma treated successfully with 2940 nm erbium YAG laser

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Sir,

Subungual Hematoma (SUH) is the most common nail injury. It presents as a collection of blood beneath a finger or toe nail that causes severe pain and changes the nail color due to pressure [1].

SUH may be a result of acute or repeated trauma, and the most common cause of nail darkening [2]. many treatment modalities have been prescribed for treatment of SUH like heated paper clips, heated needles, nail avulsion, dental burrs, ne-pointed scalpel blades, drills, cautery devices, and carbon dioxide lasers for trephining [3].

Here, we describe three cases of SUH treated successfully with 2940 nm Er: YAG laser.

## Case 1

A 21 year old female came to the clinic complaining of severe pain confined to the distal part of the middle finger for 3 days after trauma of variable pressure associated with change in the nail color.

Upon examination, there was a purple- black discoloration of the nail plate, sparing the nail fold. We decided to treat her with 2940 nm Er: YAG laser Lutronic action II, Korea, by making a hole in the nail plate. We used the following Parameters: spot size = 1 mm, fluence: 50 J/cm<sup>2</sup>. One shot done only. Patient was evaluated directly after the procedure and showed immediate pain relief and disappearing of the dark color. No complications have been reported (Figs. 1A and 1D).

## Case 2

A 37 year old female present to clinic complaining of severe pain localized to the distal left big toe for 2 days after nail trauma associated with change in the color of the nail.

Upon examination, there was a purple- bluish discoloration of the nail plate and sparing nail fold. We treated the patient by the same parameters and technique used in the case1, 2 shots hit in the same site due to thickening of the big toe nail. Immediate relive of pain and color was noticed by the patient and the physician (Figs. 1B and 1E)



**Figure 1:** Before treatment (A-C), and after treatment (D-F).

**How to cite this article:** Algoblan S, Turkumani MG, Altalhab S. Subungual hematoma treated successfully with 2940 nm erbium YAG laser. Our Dermatol Online. 2018;9(2):218-219.

**Submission:** 05.01.2018; **Acceptance:** 27.02.2018

**DOI:** 10.7241/ourd.20182.31

### Case 3

A 28 year old female came to the clinic complaining of severe pain confined to the distal part of the middle finger in the right hand for 1 day after trauma of variable pressure associated with change in the nail color. Upon examination, there was a black discoloration involving almost the whole distal phalanges of the right middle finger including the subungual area. We used the same parameters mentioned in case 1. Immediate relive of pain and color noticed by the patient and the physician (FigS. 1C and 1F).

### CONCLUSION

Treatment of subungual hematoma with 2940 nm Er: YAG laser to drain the collected blood beneath the nail plate is an excellent tool. It is an easy, simple, safe, and painless procedure done in the clinic. Pain relief

and improvement in the color is resulted immediately. The cases that respond better should be within few days after nail trauma. We encourage considering this modality for treatment of subungual hematoma.

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**Source of Support:** Nil, **Conflict of Interest:** None declared.