Case Report

Nail bed injury detected by ultrasonography

Abstract

A 46-year-old man presented to the emergency department after being injured with a press machine from his left hand 30 minutes before admission. Subungual hematoma was diagnosed in his index finger, although the nail plate was intact. Emergency physicians could identify nail bed injury with bedside ultrasonography examination. This noninvasive, inexpensive, and repeatable diagnostic modality could preserve patients from a complex, invasive nail removal procedure.

A 46-year-old man presented to the emergency department after being injured with a press machine from his left hand 30 minutes before admission. Subungual hematoma was diagnosed in his index finger, and the nail plate was intact. Is it possible to identify if this patient has a nail bed injury lays under the hematoma, requiring nail removal and laceration repair?

Bedside ultrasonography examination was performed, and the nail bed laceration was displayed. The hand was prepared, and after regional anesthesia with digital block, nail was dissected from nail bed, and nail bed laceration was sutured with 7/0 absorbable sutures. The recently removed nail was placed back in the nail fold and sutured in place with simple sutures on either 2 sides of the finger. The patient was discharged with follow-up suggestions.

Emergency physicians could identify nail bed injury with bedside ultrasonography examination. This noninvasive, cheap, and repeatable diagnostic modality could preserve patient from a nail removal procedure that is even complex and invasive. Actually, a subungual hematoma does not require nail removal as long as the nail plate is intact and trephination with an 18-gauge needle or electrocautery is a suitable and efficient management for patient comfort [1]. A high frequency linear transducer (7.5 to 10 MHz) is placed to the fingertip with a stand off pad in vertical plane to display the lesions of nail bed [2] (Figs. 1 and 2).

![Fig. 1 Normal fingertip ultrasonography image.](image1)

![Fig. 2 Abnormal fingertip with nail bed injury.](image2)
References


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