Abstract: An injury to a finger or toe can result in a collection of blood under the nail plate that, if unrelieved, can cause extreme discomfort due to pressure. In this case, a 22-year-old man developed a subungual hematoma of the right index finger due to a crush injury. Controlled nail trephination was performed using an 18-gauge needle that penetrated the nail plate without breaching the nail bed. The subungual hematoma was successfully drained, and there was a substantial relief in pain immediately. This technique appears to be a quick and convenient method of evacuating subungual hematomas with minimal discomfort and minimal risk.

Key words: subungual hematoma, needle aspiration, decompression
Lin & Tzeng

Discussion

Subungual hematomas occur frequently after a crush injury to a digit, and can cause extreme discomfort due to the buildup of pressure under the nail plate. Drainage of the hematoma provides immediate and lasting relief, whereas analgesics only provide temporary relief. The pain incurred by the current methods of drainage limit their applicability. These methods include using a heated paper clip, electrocautery, or a presterilized needle to bore a hole in the nail plate, as well as nail plate removal.15

The treatment of a simple subungual hematoma requires subungual decompression, which is usually achieved by creating small holes in the nail plate.15 Draining the blood from the nail plate with an 18-gauge needle is significantly less painful than 1 injection of digital nerve block. Because the needle causes little trauma and there are no nerves in the nail plate, the patient feels minimal pain and tolerates the procedure quite well; therefore, there is no need for anesthesia. In its early stage, the subungual hematoma is in a small space with high pressure; therefore, the hematoma appears obscure at first. In the late stage of the process, the hematoma becomes more widespread because of the progression of the blood, peripherally between nail plate and nail bed, due to the pressure. Thus, the late lesions appear larger and can be observed more easily. However, in late cases, this progression may cause secondary dystrophy if it reaches to the matrix.6 Therefore, early treatment is important.

Conclusion

This procedure is a fast, simple, well-tolerated technique that is particularly successful for the treatment of subungual hematoma. The only instrument required is an 18-gauge needle and, because the needle is sterile, the risk of infection is minimal. It is cosmetically superior to nail trephination because the nail plate is left intact. For these reasons, the authors suggest this technique as an alternative to the traditional nail trephining methods.

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References