

# Burns contractures causing ingrown nails: A case series of two patients.

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## Introduction

Ingrown nails (onychocryptosis) occurs when the nail plate pierces the lateral nail fold and penetrates into the skin as a result of trauma, mechanical, or anatomical factors. It can cause inflammation or infection in the surrounding skin and interfere with the performance of daily activities. Ingrown nails typically affect the toes but can also affect the fingers. This case series describes two patients who developed ingrown fingernails following severe hand burns.

## Case Series

A 42-year-old gentleman suffered Total Body Surface Area (TBSA) 43% deep dermal flame burns to his face, neck, and bilateral upper and lower limbs in a factory explosion. A 33-year-old gentleman suffered TBSA 33% deep dermal burns to his face and all four limbs in the same incident. Both patients required escharotomies for circumferential upper limb burns which were later debrided and covered with skin grafts. They underwent reconstruction in subsequent months to correct contractures of the palms, webspaces, and fingers. They also developed contractures causing the glabrous skin of the finger pulps to retract onto the dorsal surface of the fingers, towards the proximal nail folds. The resultant nail bed distortion led to ingrown fingernails, which caused severe pain and required surgical wedge excisions of lateral nail folds (see Figures 1 & 2).



Figure 1. 42-year-old gentleman with ingrown fingernails



Figure 2. 42-year-old gentleman post-op wedge excision of lateral nail folds

## Discussion

Ingrown nails are a common condition in the community, but has rarely been reported as a complication following burns. When the nail plate pierces the lateral nail fold, the resulting inflammatory cascade results in pain and recurrent infection which can be debilitating and affect daily life. Predisposing factors for ingrown nails include trauma and other factors which distort the normal nail bed and nail plate anatomy. Many treatments exist for ingrown nails, both non-operative and operative. Non-operative methods prevent the distal nail plate from penetrating the lateral nail fold, and include taping, packing, nail braces, and hygiene measures (Haneke, 2012). A wide range of surgical techniques have been described to treat ingrown nails, with the choice of technique usually dependent on the operator's experience and preference. Phenolisation and wedge excisions are well described (Richert, 2012).

## Conclusion

To the best of our knowledge, this is the first case series of ingrown fingernails following hand burns. It is believed that the burns contractures distorted the nail bed anatomy and led to the development of ingrown fingernails.

We hope this presentation will increase awareness and prompt further reporting of the functional long-term sequelae and management of hand burns.

### Reference list

- Haneke E. Controversies in the treatment of ingrown nails. *Dermatol Res Pract* 2012; 2012: 783924.  
Richert B. Surgical management of ingrown toenails – an update overdue. *Dermatol Ther* 2012; 25: 498-509.