

## Pearls in Dermatology

### How I treat ingrowing toenails

WYM Tang 鄧旭明

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Treatments commonly carried out by physicians for ingrowing toenails such as cotton wool pledget insertion, topical antiseptics and antibiotics, and nail extraction produce improvement only in mild cases and may be associated with high recurrences. More radical treatment would require injection anaesthesia and surgical skills with subsequent higher complication rates. The use of a self-fabricated flexible plastic tube as a splint for treatment of ingrowing toenail is a simple, safe, non-traumatic, in-office procedure suitable as first line treatment for most cases. A splint fabricated from a suction catheter is inserted along the lateral nail fold to achieve nail plate skirting via a longitudinally split of the splint. The position of the splint is then secured by suturing. Pain relief is rapid and the splint can be left for a maximum of eight weeks until inflammation has subsided and normal nail plate growth ensured.

**Keywords:** Ingrowing toenails, splint

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#### Introduction

Ingrowing toenail (IGTN) is a common condition especially among young working individuals. It can impose significant morbidity but traditional treatments like nail extraction, cotton wool pledget insertion, topical antiseptics and antibiotics produce improvement only in mild cases and may be associated with high recurrences. Wedge resections of nail matrix and bed, and/or phenol matricetomy are effective but these involve surgical

exploration under local anaesthesia. As many patients with IGTN initially present to their family doctors, an effective non-surgical easy-to-perform office procedure is warranted. Wallace et al reported successful treatment of IGTN with a small guard inserted along the side of the toenail.<sup>1</sup> Based on this concept, a self-fabricated splint is used for treating ingrowing toenails.

#### Method

While IGTN may be caused by excessive nail manicuring, trauma or wearing tight shoes, it can also be attributed to onychomycosis. At the first visit, the nail should be carefully assessed and management should be tailored according to its severity and possible underlying causes. In mild cases, patient education and daily dressing with

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**Social Hygiene Service, Department of Health, Hong Kong**

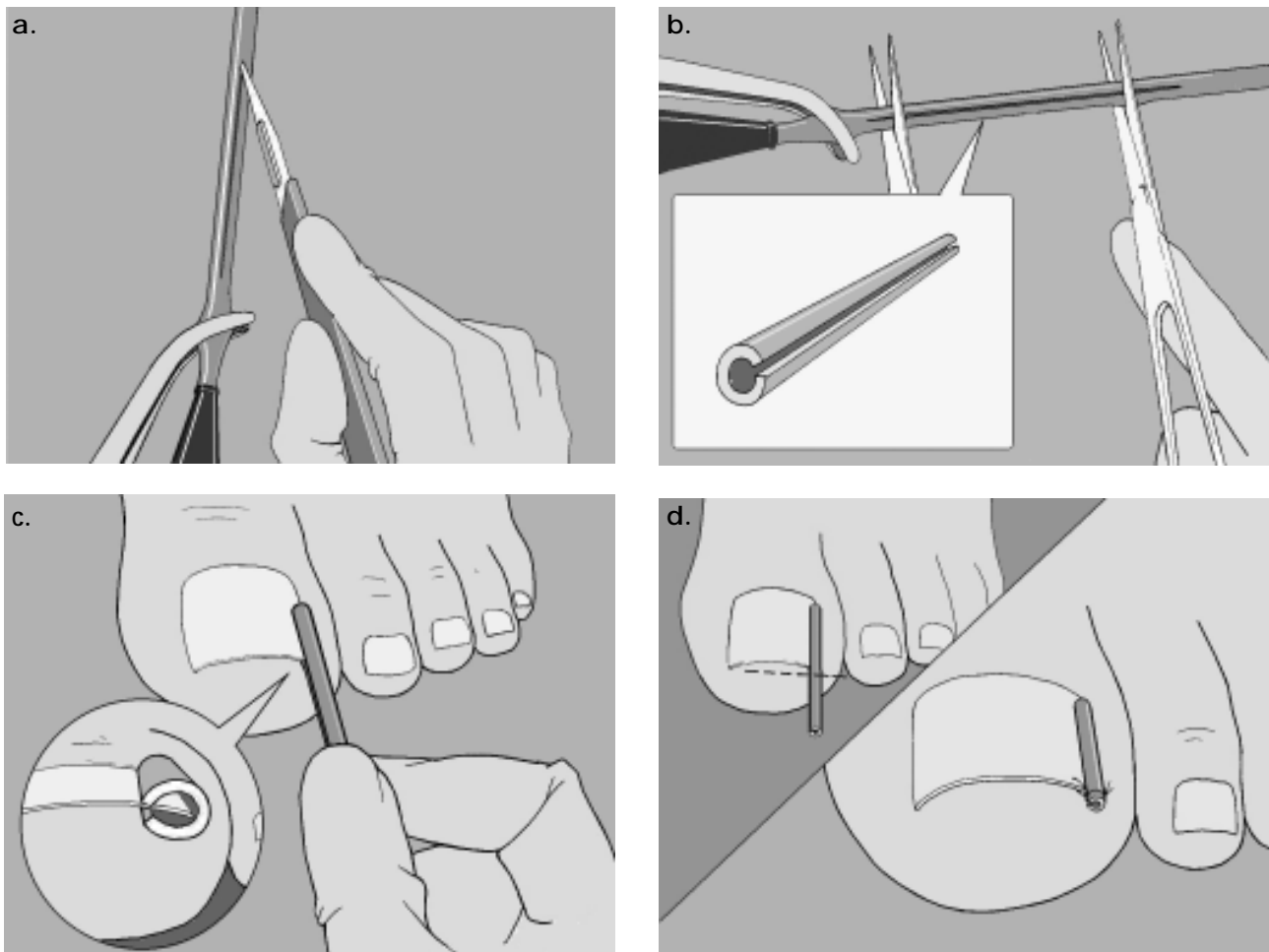
WYM Tang, FRCPE, FHKAM (Medicine)

Correspondence to: Dr. WYM Tang

Lek Yuen Social Hygiene Clinic, 3/F Lek Yuen Health Centre, Shatin, New Territories, Hong Kong

1:2,000 aqueous chlorhexidine and topical antibiotic are usually sufficient. In cases with poor progress, deterioration of symptoms or recurrence, nail splinting will be performed. The splint (a longitudinally split hollow plastic tube) is prepared by cutting a short length of a suction catheter lengthwise (Figures 1a & 1b). The author usually uses a CH 08 sterile Nelaton catheter (PharmaPlast, Maersk Medical A/S), which is commonly available in many Social Hygiene clinics. Held by a pair of non-toothed forceps, the splint is inserted along the lateral nail fold of the disinfected toenail using gentle pressure. The split side of the splint should accommodate the lateral edge of the nail plate. The splint should

be inserted as far back as possible towards the proximal nail fold so that a major length of the lateral nail plate is accommodated (Figure 1c). The splint is secured by nylon suture that passes through the distal nail plate without involving any soft tissue (Figure 1d). Sometimes, difficulty in splint insertion is encountered due to impedance by soft tissue swelling, granulation tissue, and nail impingement. A Freer septum elevator is invaluable in freeing the nail edge allowing smoother insertion. The procedure could induce a degree of pain but this is usually mild and anaesthesia is unnecessary. Anaesthesia is appropriate when there is excessive swelling or when trimming of exuberant granulation tissue is



**Figure 1.** Diagram showing the preparation of the splint, its insertion along the lateral margin of the ingrowing nail plate and its final position after suturing.

required. In this instance, injection of a small amount of 2% lignocaine without adrenaline usually suffices. Upon discharge, the patient is prescribed 1:2,000 aqueous chlorhexidine for daily wound dressing and paracetamol for pain. The splint is left in-situ for a maximum of eight weeks or until a sufficient length of nail plate has grown. Should the splint get dislodged or stitches loosened, if applicable, the procedure may be repeated using a new splint.

### Comments

In the author's experience, pain relief is rapid and will occur within the first one to two days of

treatment. Complications are usually minimal but may include splint dislodgement, persistent pain, persistent inflammation and excessive granulation tissue. Dislodged splint may be replaced by a new one, and sometimes this can be inserted by an educated patient. Pain can be ameliorated with oral analgesic and a short course of antiseptic dressing. Persistent pain, inflammation and reappearance of granulation tissue suggest failure of treatment and more radical surgery is required.

### Reference

1. Wallace WA, Milne DD, Andrew T. Gutter treatment for ingrowing toenails. *Br Med J* 1979;2:168-71.