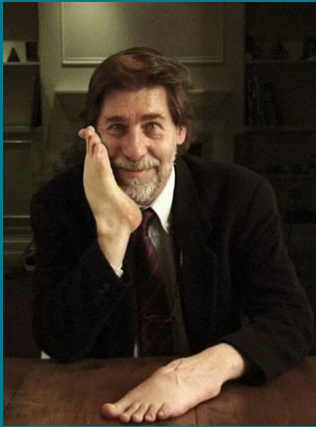


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Managing nail disorders – a podiatric perspective


Dr Ivan Bristow
Senior Lecturer / Podiatrist

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So how do we assess toe nails?

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POSTERIOR
TIBIAL

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Monofilament (10G)



Stand the patient up



Function of the toes

To maintain stable platform and lever from mid-stance to toe off to allow normal propulsion.

Get the patient walking!



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Have a look!

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Hallux Valgus

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Hallux Limitus

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Beware of the dorsal crease!



Causes of toe malalignment / nail dystrophy

1. Abnormal gait (pronation/supination)
2. Orthopaedic disorders
3. Footwear (shape/construction/fitting)
4. Neuropathy / ischaemia

Clinical conditions

Onychomycosis



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Photodynamic Therapy

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Lasers in Onychomycosis

Evidence of effectiveness still lacking
in hot and cold laser devices.

Gupta, A. K. and S. G. Versteeg (2017).

Bristow, I. (2014)

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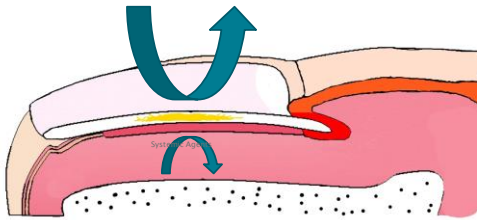
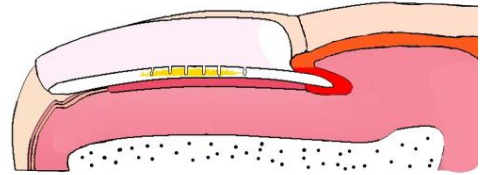
40% Urea Cream (OTC)

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Dermatophytoma



Roberts & Evans 1998

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Nail fenestration – not a new idea

Er:YAG 2940nm laser developed.

Developed as a means of fenestration / fractionating the nail plate.

Early report highlights as a means of improving topical drug delivery using 5% amorolofine.

No further work to date.

De Morais et al. (2013)

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Physical Nail Trephination

Boring holes in nails was first discussed in the early 1990's and offered as a treatment for sub-ungual haematoma.

Later investments were made by pharma companies to invent a patient "safe" device – it never arrived on the market.



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Nail reduction – not a new idea

Studies have demonstrated that nail reduction, consistently improves the outcome of topical and systemic drug therapies.

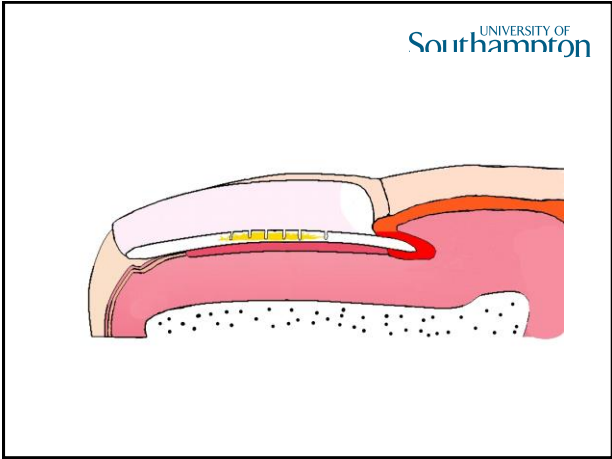
Malay (2009), Jennings (2006)



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Week 8



Week 20



Week 26



Review



Week 0



Week 6



Week 16



Week 52



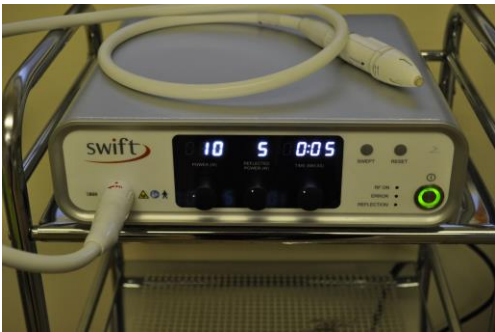
Review



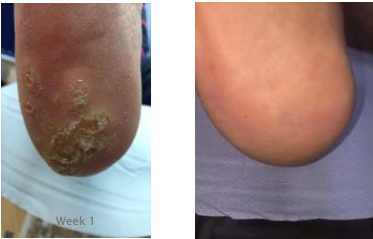
Bristow, I. R., R. Baran and M. Score (2016). "Rapid Treatment of Subungual Onychomycosis Using Controlled Micro Nail Penetration and Terbinafine Solution " Journal of Drugs in Dermatology 15(8): 974-978.

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Treatment of warts



Resolution



Week 36



Resolution



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Action

Microwave works by inducing heat shock into exposed keratinocytes.

Immuno-modulatory effects have been observed

Stimulation of dendritic cells and antigen presentation

Advantages

- 2-3 second treatment times
- No anaesthesia needed
- No plume or smoke
- No collateral spread of energy in tissues
- 3mm max penetration into tissues
- No tissue breakdown

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Microwave References

Ardern-Jones, M., A. Lee, L. W. Chean, D. Holbrook, N. Savelyeva, P. Thomson, C. Webb, M. E. Polak and I. R. Bristow (2016). "**Induction of antihuman papillomavirus immunity by microwave treatment of skin.**" British Journal of Dermatology 175(Supp 1): 151.

Bristow, I. R., W. Lim, A. Lee, D. Holbrook, N. Savelyeva, P. Thomson, C. Webb, M. E. Polak and M. R. Ardern-Jones (2017). "**Microwave therapy for cutaneous human papilloma virus infection.**" European Journal of Dermatology: (accepted for publication).

Bristow, I.R., Ardern-Jones, M.A., Webb, C. (2017) "**Successful treatment of a plantar wart using a novel microwave device**" Case Reports in Dermatology (accepted for publication)

Microwave manufacturer: www.treatwithswift.com

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Microwave Device Clinic Locations:

<http://www.treatwithswift.com/global/for-patients/get-treatment.html>

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Thank you

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