

# Laser treatment can help patients with skin problems



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## BOX 1

### The practice

Taw Hill Medical Practice was established in 1999 by Drs June Morris and Peter Crouch to serve the need of the patients moving into Swindon's northern expansion, the largest private housing development in northern Europe. Initially working as job-sharing partners, the practice list is growing exponentially and both partners have gone full time. The practice has a mission statement that aspires to both high quality and high profitability. Both partners feel that the opportunity to start a new practice from scratch with the assistance of a government grant is a rare opportunity and grasped it with both hands. Dr Peter Crouch is a General Practitioner and Forensic Medical Examiner who mixes clinical medicine with management. He is Principal Police Surgeon for Wiltshire and Director of The Swindon Sanctuary, a sexual assault referral centre based in Swindon.

HELPING PATIENTS FEEL much better about themselves can be a truly worthwhile aim. Ten years after qualifying, I discovered a branch of medicine which I had not realised existed.

Whilst the principles of UV phototherapy to treat neonatal jaundice and psoriasis was standard therapy, the use of lasers in medicine was so rare and specialised it never really mentioned at medical school, I had not encountered it at all during my GP vocational training scheme and I initially believed laser medicine to be the exclusive domain of teaching hospital dermatology units. How wrong I was and three years further on, what an eye-opener laser medicine has turned out to be. At The Great Western Laser Unit in Swindon, we have found that the use of medical lasers to treat patients is a truly interesting and innovative branch of medicine.

### A learning curve

My partner June Morris and I have been learning how to safely but effectively use lasers and intense pulse light sources. It has been a vertical learning curve for both of us but, three years down the line, we both feel that it has been well worth the investment. As GPs, as "specialist generalists", we have added laser medicine to our armament of potential treatments to tackle a variety of skin conditions and vascular disorders including hirsutism, telangiectasia, lentiginos, port wine stain, thread veins, acne and acne rosacea. We are slowly but steadily building up a wide range of experience in this field and as both partners are associate GP tutors and committed to teaching, we are keen to pass on our experience to medical students, GP registrars and other interested professionals.

### Help for those with acne

Laser medicine can help treat many conditions but to illus-

trate them all would be beyond the scope of this article.

I would like to focus on the pulse dye laser treatment of that scourge of most adolescents and many adults alike – acne.

Acne is the most common of dermatoses and can affect men and women of all ages regardless of skin type or lifestyle. Seven out of ten teenagers are affected by the condition, which persists into adult life for two out of ten. An estimated two million working days are lost in the UK every year just because of acne. Acne is a serious issue for many people. Acne sufferers generally have much lower self esteem and, in some cases, it is given as the reason why some teenagers attempt suicide.

We all know that sunlight seems to help calm down acne. Many acne sufferers unwittingly expose themselves to excessive levels of potentially harmful UV light in their search for a cure for their acne. It will come as no surprise that we do not need the whole wide spectrum of wavelengths present in sunlight to evoke an improvement in acne.

Isn't it so often the case in medicine that discoveries are made observing the clinical effect of therapies designed to treat something quite different? Scientists discovered that a laser that had been developed for promoting wrinkle reduction had the side effect of reducing the severity of acne in those treated. The intense yellow laser light





The dramatic reduction in the severity of acne can be seen in these (a) before and (b) after pictures

at the wavelength of 580 nm seemed to be able to penetrate deep into the dermis of the skin and knock off the bacteria that play a part in the pathogenesis of acne.

We have about 40 patients currently being treated for acne, most completely free of charge, in 30-minute sessions. The patient needs to wear special laser protective goggles as does the operator who passes a hand piece (connected to the laser by a length of fibre optics) over every part of the face in a methodical manner. As the laser light pulses against the skin, the patient feels a mild stinging sensation (imagine a very small jet of hot water pulsing against your skin).

What is particularly interesting about this treatment is that the interaction between the laser light and the skin seems somehow to change the skin's micro-environment producing a sustained reduction in the severity of acne. The effect of one treatment can last for 3–6 months and many of our patients stop taking antibiotics during this period and are astounded that their acne continues to improve. I have several patients who feel sure that they have avoided having to restart roaccutane simply by commencing pulse dye laser treatment for their acne.

If, like me, you want to reference the research behind the treatment, do please read about the work undertaken by Dr Tony Chu and his colleagues at the Department of Dermatology, Hammersmith Hospital Campus and Faculty of Medicine, Imperial College, London. The results of their trial were reported in *The Lancet* last year. Their study concluded that the pulse dye laser could be used to treat acne effectively.<sup>1</sup>

We invested in two of the NLite pulse dye lasers at The Great Western Laser Unit

and now have over 40 patients on active treatment. We grade the patient's acne severity using the Leeds Grading Scale (1–12). Each treatment with the NLite has the potential to reduce the acne grading by 1–2 points on the Leeds grading scale.

The results of pulse dye laser treatment for acne really are dramatic and we feel we are able to give hope to many patients who have tried everything else (topical/antibiotics and isotretinoin sometimes with limited success).

#### Conclusion

I believe that the NLite laser offers a very real alternative to antibiotics for acne. For anyone seriously contemplating broadening their career by undertaking laser medicine, I would suggest preceptorship with an experienced laser practitioner – a good place to start for information is The British Medical Laser Association website, [www.bmla.co.uk](http://www.bmla.co.uk). ✚

#### REFERENCE

1. Seaton ED, Charakida A, Mouser PE, Grace I, Clement RM, Chu AC. Pulsed-dye laser treatment for inflammatory acne vulgaris: randomised controlled trial. *Lancet*. 2003;362:1347–52.

**Longlife Health**  
please supply contact details  
(address, phone, email, website)

BOX 2

#### The Great Western Laser Unit

The Great Western Laser Unit is based in Swindon, Wiltshire. The clinic has laser trained doctors and nurses. All treatments are medically prescribed and monitored using the following technologies:

##### Medical lasers

- ❖ Photogenica V-Star™ 585nm Pulse Dye, Diolite™ 532nm, Apex™ 800nm, NdYag 1064nm
- ❖ Lightshear™ 800nm Pulse, Cooltouch III™ 1320nm, NLite™ 585nm, Lyra-i™ 1064 nm
- ❖ Aura-i 532nm KTP, Gemini™ 532nm KTP/1064 Nd:Yag, Venus-i™ 2940 nm, Erbium:YAG

##### Intense pulsed light

- ❖ Lumenis Vasculight SR/HR/PL/DL IPL, Lumenis IPL Quantum SR

##### Ultraviolet B light

- ❖ Lumenis Relume™ UVB 290–320nm, Lumenis BClear™ UVB 290 – 320nm

For more information on the clinic, see the website, [www.gwlu.com](http://www.gwlu.com)