



Lasers drive major advances in aesthetic surgery

Fotona

Vascular malformations, such as port wine stains, can be a particularly distressing condition for children. With interest in laser therapies on the increase, patients can now undergo a less invasive and less painful treatment

Dr Uroš Ahčan is a surgeon specialising in plastic and reconstructive surgery at the university medical school at Ljubljana in Slovenia. Not yet 40, he has done pioneering work on disfiguring skin conditions in young children and in hand surgery. "My primary professional interest is of course reconstructive operations, hand surgery, microsurgery and burns, but a five-year-old child with a port-wine stain (PWS) covering half the face is also very important", says Dr Ahčan. "Lasers have revolutionised the treatment PWS – the most common vascular malformation, with an incidence of 3–5 per 1000 births. Congenital and acquired vascular lesions of the skin and subcutaneous tissue are quite a common problem, important from both an aesthetic and a psychosocial perspective." Advances in laser technology in the last few years have provided a safe and effective solution.

"Clinical experience is required for the correct diagnosis of the lesion plus at least two lasers with different wavelengths. The combination of KTP (532 nm) and Nd: YAG (1064 nm) lasers incorporated in the Dualis VP® system offers the best results for vascular anomalies on the face, lower limbs and other regions", Dr Ahčan continued. Fotona has also developed a multiple wavelength aesthetic laser system for the treatment of PWS; (reported in *Lasers in Surgery and Medicine*, and awarded in ASLMS award for an outstanding abstract in the Joint international Laser Conference, Edinburgh in 2003).

Increase in aesthetic procedures

In the US cosmetic procedures increased more than 300% in the three years up to 2001, according to the American Society of Aesthetic Plastic Surgery.

Likewise in Slovenia, Dr Ahčan currently works about one day a week with lasers. "The number of aesthetic procedures we do has increased rapidly" he says. "These days patients, especially young people, are so much better informed. They learn about cosmetic procedures from the media or the Internet. Laser treatment is not only safe and efficient; it is minimally invasive and can be done in out-patients because recovery time is short. And the demand for up-to-date treatment has been matched by greater medical knowledge of skin biology and pathology, benign and malignant skin lesions, vascular disorders and the photo-ageing of the skin and wound healing. In good plastic surgery units we can choose a range of surgical techniques, dermabrasion, chemical peeling, Botox, various fillers and implants and laser surgery. The method, or combination of methods, most appropriate for each patient is selected."

A safe and efficient alternative

Lasers also provide an alternative in the treatment of benign skin tumours, photodamaged skin, rhinophyma, wrinkles, acne scars and many other superficial skin disorders. In the more than 24,000 tumours excised in Dr Ahčan's department between 2000 and 2003, Fotona's Er:YAG and Nd:YAG laser combo, DualisSP, has been instrumental in providing the versatility needed for such a wide range of procedures. The Fotona Er:YAG ablative lasers are effective and can be used in out-patients. Because it is less invasive there is less risk of infection, less pain, less residual scarring, and less damage to the surrounding skin is minimal. "It is in effect virtually bloodless surgery", he says.

Dr Ahčan also teaches medical students and has four laser studies running in his clinic. ■

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