Laser Florence

A WINDOW ON THE LASER MEDICINE WORLD

LASER FLORENCE 97

RAPPORT ON 5th INTERNATIONAL CONGRESS OF EUROPEAN MEDICAL LASER ASSOCIATION

Laser Florence 97 - EMLA toward the New Millennium

The fifth International Congress of the EMLA was held on 18-20 September 1997 in the Convention Center of Palazzo Ricasoli Residence, Florence, Italy.

The Meeting concerned itself particularly with Phlebology and Rehabilitation Medicine as the main themes of Laser Cosmetic Surgery, otherwise Laser Plastic Dermatological Surgery.

Thirtyfive world top specialists, pioneers in the use of laser in the above disciplines participated as guest speakers.

The presence of representatives from the five continents provided a unique opportunities for exchange of experience among scientifically highly qualified schools from different parts of the world, all engaged in the management of pathologies for which laser is the method of choice, although its use is susceptible of improvement in each individual case.

In laser dermatological surgery a computerized diagnostic system was presented which, trhough laser, provides a topographicthree dimensional diagnosis of cutaneous lesions, including naevi (A. Bertani,A Scalise, E.P. Tomasini).This system can be improved further thus providing a valid help in the daily medical practice.

Prof. W. Waidelich, one of the first physicists in the world to build lasers, skillfully illustred laser-tissue interaction.

In a working group chaired by Prof. D. Apfelberg (for the last ten years among the "Best Doctors of America", pioneer of Laser Plastic Surgery) attention was given to "Laser Resurfacing" that is "computerired laser dermoabrasion" methods, the only technique to be used for dermoabrasion, provided adequate lasers and appropiate techniques are employed. Compared with other dermoabrasion methods, "Laser Resurfacing" has the highest advantages and the lowest risks. The various tissue layers can be seen using the intervention, the depth of the abrasion can be programmed, there is no bleeding and no local anaesthesia is needed when using Erbium-YAG laser and certain new CO2 Lasers. No infection occurs and the post-operative course is reduced to a day of so of limited and painless oedema even though a post-operative erythema of the treted site may last approximately a month.

Laser resurfacing technique is used for total elimination of several type of acnis, wrinkles and scars as well as cutaneous striae, hypertrophic scars and keloids, of which, howewer, total elimination is not always possible.The same technique is also used succesfully in the surgical cleaning of cutaneous ulcers, because it is absolutely painless and it is possible to save healthy tissue as well as totally eliminate the necrotic and/or infected tissue.

With different types of lasers it is possible to remove pigmented discheratosis, including post-scleroterapic ones without leaving traces as well as tatoos which leave behind only a whitish aura.

2.

Prof. M.P. Goldman illustrated a large number of cases on this subject.
Various techniques of blepharoplastic were reviewed with laser and with radioknife, pointing out advantages and disavantages by representatives of the Russian (A. Tenenbaum, A. Zhuralev), the North-American (D. Apfelberg, D.J. Key) and the German Schools (D. Katalinic).

As regard permanent depilation, for the first time in Europe a new combination of two different lasers has been shown, which, acting according to selective photokinaesis, penetrate several cutaneous layers without damaging them, localizing only on hair bulbs and selectively distroying them.This system has been tried in USA for the last two years. On the other hand another system is based on intense, polarized but incoherent light beams, which has the advantage of possessing at the same time more wavelengths and the limitation of not being precisely dosable at the tissue level.

Policy implications and possible damages related to use of laser where reviewed by M. Graev.

Prof. N.T. Recoveanu official representative of the World Health Organization (W.H.O.), oneof the sponsors of the Congress, listed criteria of evaluation, risk-benefit and cost-benefit analysis as well as quality assessment of medical technology in general and in laser technology in particular. Protocol of treatment were proposed for angioma, analysing personal clinical experience related to a few hundred cases as well as for telangiectasesof faces and lower limbs which are the concern of many doctors in various specialties.

It has been enphatically underlined from schools all over the world that CO2 laser, for instance, is not to be used in the treatment of telangiectases because the risk-benefit ratiois extremaly unfavourable, while there are various types of dye lasers wich eliminate the lesions without any risk especially if coupled with a therapeutic videocapillaroscope, which is an instrument to show the lesion with a 50 to 500 times magnification, before, during and after the treatment.This devices was proposed two years ago for the firts time in USA and in the world by L. Longo and is applicable to all the lesions managed in plastic dermatologic surgery.

Prof. A. Hofstetter the first urologist in the world to use lasers, reviewed all ther urological indications in which laser is really used including cancer of of the bladder, where this instrument is used together with photodynamic therapy.Laser is also used for diagnosis, to preserve healthy tissue and to save not only patient's life but also its quality. Laser prosthatectomy is also widely practiced, especially in Italy.

Results were analysed of the use of laser in Proctology, for the radical treatment of haemorroids, fistulae, rhagades and cancer of the rectum, based on a thousand cases experience treated mostly in Florence by L. Corcos.

Some of the world top research workers summarized the present state of research on the mechanisms of laser action in the treatment of the pathologies in Rheumatology, Rehabilitation and in Sport Traumatology.

3.

Demonstration was given of hystological, biochemical and physical effects of non surgical lasers on mytocondria by L. Wilden, on tumor cells by H. Klima, on trigger points by Z. Simunovic, on neurons by C. Bieglio, on granulation tissue, fibroblasts and collagen by G.D. Baxter, C.S. Enwemeka, P. Lievens and A. Mester, on dental tissue by J.Tuner.

The above explains positive results of defocalized lasertherapy in the treatment of skin ulcers of various etiology (Y.M. Stoiko), of fibromyositic rheumatisms like "Induratio Penis Plastica"(M. Postiglione), of epicondylitis (T. Trobonjaca), of gonarthritis and other phlogistic rheumatisms (C. Antipa), as well as in the prevention of alveolitis after extraction of an impacted tooth.

Italian Universities were represented by Professors C.A. Bartoletti (President of the Italian Society of Aesthetic Medicine), S. Dini (Department of Pathology, Florence University), D. Lo Russo (Department of Plastic Surgery, University of Florence), S. Mancini and G. Botta (Director, Department General Surgery and Surgical Specialties, Siena University) togheter with other outstanding Italian Specialists who chaired several working groups.

The satisfaction of over two hundred partecipants and of the sponsors who made possible the materialization of this hightly scientific meeting is the greatest reward for those who had the honor to organize it.

L. Longo, M. Postiglione