

1. SPINAL CORD INJURY AND LASERPONCTURE® TREATMENT—METHODOLOGY AND RESULTS

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Purpose

To assess motor and sensory recovery in individuals with both complete and incomplete spinal cord injury (SCI) after treatment with Laserponcture.

Procedures

Designed by Albert Bohbot with the assistance of a French government grant, the Laserponcture device uses an infrared laser with 10 laser heads (currently, technical details are proprietary). Laserponcture therapy uses this device within the context of acupuncture and neo-acupuncture theory.

Results

Representative case studies will be presented, including follow-up progress as monitored by videos.

Summary

Individuals with both complete and incomplete SCI can accrue life-enhancing, functional improvement after Laserponcture therapy.

2. METHYLENE BLUE IN PHOTODYNAMIC THERAPY: FROM BASIC MECHANISM TO CLINICAL APPLICATION

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Photodynamic therapy (PDT) is a promising modality for the treatment of diseases that involved uncontrolled growth of tissues, including several types of cancer and infections. Methylene Blue (MB) is a molecule that has interesting characteristics and it is being considered as a low cost drug for PDT. In this presentation we will show results of *in vivo* PDT applications, correlating the results with the fundamental photophysical, photochemical and photobiological aspects of this photosensitizer. The clinical cases shown include treatments of basal cell carcinoma, Kaposi's Sarcoma, melanoma, virus and fungal infections. We concluded that used together with a recently developed continuous light source (RL 50[®]), MB has the potential to treat a variety of cancerous and non-cancerous diseases, with low toxicity and no side effects.

3. RETINAL DETACHMENT AS AN UNUSUAL PRESENTATION OF CHRONIC GRANULOMATOUS DISEASE (CGD)

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X-Linked Chronic Granulomatous Disease (CGD) is characterized by defective intracellular killing of bacterial and fungal organisms. It is estimated to occur at a frequency of 1 in 50000 live births. Most cases present in infancy or childhood, but late presentation from 13 to 60 years of age have been documented. During infancy and childhood, patients begin to have infections with catalase positive organisms such as *Staphylococcus aureus*, *Serratia marcescens*, *Pseudomonas* species and *Salmonella* species. Abscess formation is characteristic, occurring in the skin, lymph nodes, liver lungs or other viscera. In this article, a 13 year boy with documented CGD will be presented with history of repeated infections as pneumonias and recurrent abscesses of liver, lymph nodes, large joints and subcutaneous tissue. CGD was diagnosed at 3 years of age. Intermittent treatment with gamma-interferon and prophylactic co-trimoxazole brought the disease under relative control. At 12 years of age, he developed blurred vision of his left eye which was shown to be due to spontaneous retinal detachment. There was no history of any previous ophthalmologic problems. He underwent laser therapy to prevent further progress of detachment but unfortunately he lost his left eyes' vision completely and perhaps permanently. The ophthalmic manifestations of CGD include infections of the lids, conjunctiva, and cornea (blepharokeratoconjunctivitis), but it is by far the first report of retinal detachment in CGD.

4. METHOD AND INSTALLATION USED FOR TESTING OF THE ABSORBED DOSE OF RADIATION DURING LOW LEVEL LASER THERAPY.

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Purpose: The important condition use low level laser therapy (LLLT) is correct dose of therapy. So systems of control and automatic regulation of parameters of laser procedure are necessary and they must be funded on principles of feedback with patient. Method of laser bio-photometrical, which in current use, is essential step in solving of this task. But this method doesn't provide reliable information of magnitude of absorbed energy by internal, because it doesn't cost its loss under heating of upper lays of skin.

Methods and Materials: Next step for increase of exactness of support of desired intensity of laser influence on internal, in our opinion, is control not only of optical, but and heat-physical qualities of bio-tissue (thermal conduction, heat, heat return). We propose in this research work the method of control of absorbed dose under LLLT at the expense of registration energy which both reflected and lost on local heat of upper lays of skin.