

12th Global Dermatologists Congress &

2nd Euro-Global Congress on

Melanoma and Skin Diseases

August 31-September 01, 2017 London, UK

A new non-invasive technique for the treatment of microbial infection diseases by ELF-EM pulses at resonance frequencies: case study

Fadel M Ali

Cairo University, Egypt

Skin infections represent a significant burden of infection diseases. Complicated skin infections characteristically involve deeper skin structures or coexist in patients with immune suppression, infected burns, ulcer wounds and diabetic foot infection. These infections are likely to be poly-microbial. There is a world midst of an immerging crisis of antibiotic resistance for microbial pathogens. Therefore, it seems necessary to find out other alternative safe and efficient methods for the treatment microbial infection diseases. In this work a new non-invasive technique, using extremely low frequency (ELF) square electric pulses for the treatment of bacterial infected skin diseases. The frequency and duration time of exposure of these pulses were chosen depending on the resonance inhibiting frequency for the growth of the infecting bacteria according to previous reported *in vitro* and *in vivo* studies. The trial was expanded to diabetic foot treatment through clinical trial project with the Egyptian Ministry of Health and supported by the Egyptian Ministry of Defence. The trial was done at Almaza Military Hospital in Cairo, Egypt. In this method, the subject is exposed to the ELF-EM field of strength 2.0 V/CM generated between two parallel copper plate electrodes connected to the pulse generator. The distance between the two electrodes is 150 cm. The exposure time and number of sits depend on the type/s of the infecting microorganism and the treated case condition. The clinical trial covered 100 patients. Clinical investigations indicated no growth for bacteria and accelerated healing of the infected area after exposure for all ELF-EM treated cases.

Biography

Fadel M Ali is a Professor of Radiation and Medical Biophysics Cairo University, BSC Physics, Cairo University (1957). He completed PhD in Nuclear Physics 1961 from Hungarian Academy of Science, Budapest. He has 232 published articles in the fields of Nuclear Physics, Radiation Dosimetry and Biophysics. His main scientific interest in the past 30 years is the control of cellular functions by ELF-EM waves at resonance frequency with the target physiological function. In 1998, he suggested the Metabolic Biomagnetic Resonance Model (MBMRM) to explain the interaction mechanisms of EM waves with Biological systems (International Conference for theoretical Biophysics Moscow 1998). He suggested new spectroscopy field "Metabolic Spectroscopy" to explain and control interaction mechanisms of ELF-EM waves with alive systems (9th EMF International conference on Bioelectromagnetics, Garni, Armenia 2016).

Fadelaga48@gmail.com

Notes: