

## Healing of injuries of guinea pig contaminated with *Pseudomonas aeruginosa* by 0.7Hz square magnetic impulses (new method)

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*Pseudomonas aeruginosa* is considered one of the main dangerous causes of burn wound infection also it is known for its highly resistance to antibiotics. In this work the effect of magnetic impulses on the growth activity of Ps.A is studied. The results indicated that exposure to one hour of Ps.A to 0.7 Hz magnetic impulses causes 24% inhibition of the cellular growth relative to control (unexposed). Dermal burns in the thigh of 25 guinea pigs each of (275+25) gm were done by thermal conduction through the transfer of 1080 joules to circular of 0.760+0.002 cm in diameter. The animals were divided to 5 equal groups Ga, Gb, Gc, Gd and Ge. Each wound of Ga, Gb were then infected with a swap of  $0.5 \times 10^8$  CFU/ml of Ps.A. The wound of each animal from Gc was infected with a swap of  $0.5 \times 10^8$  CFU/ml of Ps.A previously irradiated with 0.7 Hz pulsed magnetic field for 1 hour. Gb and Gd were exposed to 0.7 Hz pulsed magnetic fields for 3 hours at a rate of 1 hour per day. The results indicate that the average diameter of the wounds of the Ga, Gb, Gc, Gd and Ge were 2.49, 0.38, 0.58, 0.60, and 0.86 cm respectively. It was concluded that the use of 0.7 Hz PMF significantly accelerates healing of wounds infected with Ps.A.

### Biography

Fadel M Ali has done Ph.D. physics, Academy of science Hungarian, Budapest 1961, Prof. Emirate of Radiation and Medical Biophysics, Faculty of Science, Cairo University. He is President of the Egyptian biophysical society member of EBSA (European Biophysical Society Association). He is Chief for the Egyptian Journal of Biophysics. He has published 196 Papers in International journals. He is a member of Editorial board in the journals, physics of alive, International journal of dental surgery and medical applications and Chartered radiation protection professional SRP, UK.

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