

Steps towards a Biophysical Approach to Refractory Gynecological Infections

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Abstract— Refractory gynecological infections are often very difficult to treat. The need for new strategies in their management is therefore continuously increasing. Some researchers have recently pointed up that microorganisms could emit specific electromagnetic signals. Moreover electromagnetic signals could be able to yield response from immune system. The aim of this study was to assess the possibility to employ electromagnetic signals from swabs of refractory gynecological infections to rise a response of the immune system able to erase them. Twenty-two consecutive patients with refractory gynecological infections, since at least 3 months, participate into this study employing an electro medical device (Med Matrix) to perform the electromagnetic information delivery procedure. Vaginal swabs was picked up for microbiological assessment at baseline and after 7 days. Out of 22 swabs performed, 15 were positive for microbiological assessment at baseline. Out of the 15 positive at baseline only 2 were still positive after one week of biophysical treatment ($p < 0.0031$). Biophysical treatment of refractory gynecological infections seems to be an useful and promising second line clinical tool.

1. INTRODUCTION

Refractory gynecological infections are often very difficult to treat both with local or systemic drugs. The need for new strategies of coping with them is therefore continuously increasing. Some researchers have recently pointed up that microorganisms could emit specific electromagnetic signals [1–3] they probably use to communicate each others. Moreover electromagnetic signals are hypothesized to be able to yield response from immune system [4, 5] even when mediated through an aqueous system recording procedure [6–8]. The aim of this study was to assess the possibility to employ electromagnetic signals from swabs of refractory gynecological infections to rise a response of the immune system able to erase them.

2. MATERIAL AND METHODS

2.1. Study Design

Twenty-two consecutive patients with refractory gynecological infections, with duration since at least 3 months, participate into this study after delivering their informed consent. Vaginal swab was picked up for microbiological assessment at baseline and after 7 days.

2.2. Study Population

The average age of the 22 patients with refractory gynecological infections was $33,4 \pm 14.5$ years (range 71–21). Inclusion criteria was a gynecological symptomatology such as vaginal itching or vaginal burning lasting since at least 3 months. The average duration of the symptomatology was 15.7 ± 15.9 months (range 3–36). Patients should also be not responder to common pharmacological therapies and do not assume other treatments during the week duration of the assessment.

2.3. Electromagnetic Information Delivery through Aqueous System

An electro medical device (Med Matrix-Wegamed, GmbH, Essen, Germany) was used to perform the electromagnetic information delivery procedure placing the swab into the input coil of the device and placing an aqueous system (Nomabit Base -Named SRL, Lesmo, Italy) into a special output coil, built-in for this aim in the device as reported in previous works [9, 10]. This medical device operates in the low frequency range (between 0 and 20 kHz) using a magnetic field with an intensity similar to the Earth's magnetic field with a maximum of $50 \mu\text{T}$. The aqueous solution (Nomabit base) was self-administered by the patient in order to allow the therapeutic information recorded to be delivered according to a weekly plan beginning on Monday with a single drop and increasing by one drop/day up to 6 drops on Saturday; no therapy was administered on Sunday [11].

2.4. Microbiological Assessment

The samples of vaginal swabs was sent for microbiological assessment at baseline, at enrollment, and after 7 days of treatment with electromagnetic information delivery procedure through aqueous system (Nomabit Base) following a weekly administration protocol [11]. Microbiological Assessment was carried out for: Mycoplasma Hominis, Ureaplasma Urealyticum, Trichomonas Vaginalis, Escherichia Coli, Proteus species, Pseudomonas Aeruginosa, Gardnerella Vaginalis, Staphylococcus Aureus, Enterococcus Faecalis, Streptococcus Agalactiae, Neisseria Gonorrhoea, Streptococcus Beta Aemoliticus, Chlamydia species.

2.5. Statistical Analysis

Statistics was performed with Student's t-test. A p -value of < 0.05 was considered statistically significant.

3. RESULTS

All patients who enrolled completed the study. No side effects were reported. Out of the 22 swabs sample performed 15 were positive for microbiological assessment at baseline, $15/22 = 68,18\%$. Out of the 15 positive at baseline only 2 were still positive after one week of biophysical treatment, $2/15 = 13,33\%$ ($p < 0.0031$).

4. DISCUSSION

The need for new strategies to cope with refractory gynecological infections has been Our starting point. We also want to evaluate if the hypothesis of yielding a systemic response through activation of a selective immune response originated from a biophysical infectious mimicry could be useful into a clinical application. The background of our working hypothesis was from one side some evidence that microorganisms could emit specific electromagnetic signals [1–3] and from the other side previous report of the possibility to achieve biological evidence of the transfer of specific electromagnetic pattern of signal through aqueous systems both in vitro [6–8] and in clinical applications [9–14]. If any infectious agents has its own characteristic electromagnetic pattern of signals it could be possible to record it by means of an electronic device and transferring it to an aqueous system to be stored and subsequently re-delivered to cell culture as for in vitro studies [6–8] or to the entire organism as for clinical studies [9–14]. Electromagnetic Information Delivery through Aqueous System has been confirmed to be feasible and effective even when applied to pattern of signals from biological sample like vaginal swabs in this study. These preliminary data are in agreement with the hypothesis of an electromagnetic vaccination as described recently by Abraham Liboff [4]. Bio-electromagnetic therapies could deliver local and systemic signals at once [15] relying on the resonance effect as their main effective principle [16]. Resonance can both explain the transfer of the information pattern from the source input, like biological samples from vaginal swab, to an aqueous system [8] and from the aqueous system to the whole organism [9–14]. We assume that both the systemic and local effect giving rise to disappearance of infection at the control microbiological assessment of vaginal swab are very lily due to the activation of the immune system [4, 5]. Activation of the immune system response through biophysical procedure could be probably used in other clinical condition as reported in some work on refractory infectious disease [13], autoimmune disease [10, 13, 18], and allergic disease [13]. Biophysical methods could also represent a promising practical tool in personalized medicine since the treatment is unique for each person at each time [19]. In the case of recurrent gynecological infections, for instance, they represent a way to overcome drug resistance yielding the direct response of the individual immune system of each patient allowing somehow to amplifying the physiological inner resource of self-defense and self-regulation that was for some reasons ineffective and lead to recurrence or persistence of the disease.

5. CONCLUSIONS

This preliminary study support the hypotheses of the so called “electromagnetic vaccination” as proposed by Abraham Liboff [4]. The biophysical paradigm proposed for biology and medicine [16, 17] could enrich both basic and clinical researches disclosing new avenue especially in chronic and refractory disease that are emerging concern in almost any department of clinical medicine. A biophysical treatment of refractory gynecological infections [20] seems, therefore, to be an useful and promising second line clinical tool for gynecologists and practitioners.

6. DECLARATION OF INTEREST

The authors reports no declarations of interest.

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REFERENCES

1. Reguera, G., "When microbial conversation get physical," *Trends Microbiol.*, Vol. 19, No. 3, 105–103, 2011.
2. Montagnier, L., J. Aissa, S. Ferris, J.-L. Montagnier, and C. Lavallée, "Electromagnetic signals are produced by aqueous nanostructures derived from bacterial DNA sequences," *Interdiscip. Sci.*, Vol. 1, No. 2, 81–90, 2009.
3. Montagnier, L., J. Aissa, C. Lavallée, M. Mbamy, J. Varon, and H. Chenal, "Electromagnetic detection of HIV DNA in the blood of AIDS patients treated by retroviral therapy," *Interdiscip. Sci.*, Vol. 1, No. 4, 245–253, 2009.
4. Liboff, A. R., "Electromagnetic vaccination," *Med. Hypotheses*, Vol. 79, No. 3, 331–333, 2012.
5. Simkó, M. and M. O. Mattsson, "Extremely low frequency electromagnetic fields as effectors of cellular responses in vitro: possible immune cell activation," *J. Cell Biochem.*, Vol. 93, No. 1, 83–92, 2004.
6. Jerman, I., R. Ružic, R. Krasovec, M. Skarja, and L. Mogilnicki, "Electrical transfer of molecule information into water, its storage, and bioeffects on plants and bacteria," *Electromagn. Biol. Med.*, Vol. 24, No. 3, 341–353, 2005.
7. Jerman, I., M. Berden, and R. Ružic, "Biological influence of ultraweak supposedly EM radiation from organisms mediated through water," *Electro and Magnetobiology*, Vol. 15, No. 3, 229–244, 1996.
8. Foletti, A., M. Ledda, S. Piccirillo, S. Grimaldi, and A. Lisi, "Electromagnetic Information Delivery as a new tool in translational medicine," *Int. J. Clin. Exp. Med.*, Vol. 7, No. 9, 2550–2556, 2014.
9. Foletti, A., P. Baron, E. Sclauzero, G. Bucci, A. Rinaudo, and R. Rocco, "Assessment of biophysical therapy in the management of pain in current medical practice compared with ibuprofen and placebo: A pilot study," *J. Biol. Regul Homeostat Agents*, Vol. 28, No. 3, 431–439, 2014.
10. Foletti, A. and M. Cozzolino, "A biophysical integrated approach to autoimmune nephrotic syndrome: case report," *Recenti Prog. Med.*, Vol. 104, No. 9, 488–489, 2013.
11. Baron, P., G. Bucci, A. Rinaudo, R. Rocco, E. Sclauzero, and A. Foletti, "System Information Therapy in the management of pain: A pilot study," *PIERS Proceedings*, 1698–1702, Stockholm, August 12–15, 2013.
12. Smith, C. W., "Quanta and coherence effects in water and living systems," *J. Altern Complement Med.*, Vol. 10, No. 1, 69–78, 2004.
13. Herrmann, E. and M. Galle, "Retrospective surgery study of the therapeutic effectiveness of the MORA bioresonance therapy with conventional therapy resistant patients suffering from allergies, pain and infection diseases," *Eur. J. Integrative Med.*, Vol. 2, No. 4, 257–258, 2010.
14. Foletti, A. and J. Pokorný, "Biophysical approach to low back pain: A pilot report," *Electromagn. Biol. Med.*, 2015 (in press).
15. Liboff, A. R., "Local and holistic electromagnetic therapies," *Electromagn. Biol. Med.*, Vol. 26, No. 4, 315–325, 2007.
16. Foletti, A., S. Grimaldi, A. Lisi, M. Ledda, and A. R. Liboff, "Bioelectromagnetic medicine: The role of resonance signaling," *Electromagn. Biol. Med.*, Vol. 32, No. 4, 484–499, 2013.
17. Liboff, A. R., "Toward an electromagnetic paradigm for biology and medicine," *J. Altern Complement Med.*, Vol. 10, No. 1, 41–47, 2004 (Review).
18. Foletti, A., "Simplexity and the possible integrative role of system information therapy in autoimmune diseases management," *Proceedings of the 2nd International Symposium "Biophysical Aspects of Complexity in Health and Disease"*, 44–45, Lugano, Switzerland, May 18–19, 2012.

19. Foletti, A. and S. Grimaldi, “System information therapy as a tool in personalized medicine,” *Progress In Electromagnetics Research Symposium Abstracts*, Stockholm, Sweden, August 12–15, 2013.
20. Ferrara, I. and M. Salvi, “Biophysical therapies in gynaecology: Clinical applications and future perspectives,” *Proceedings of the 3rd International Symposium “Biophysical Aspects of Complexity in Health and Disease”*, 18, Lugano, Switzerland, October 4, 2014.