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Impact of an external energy on *Enterococcus faecalis* [ATCC – 51299] in relation to antibiotic susceptibility and biochemical reactions – An experimental study

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Abstract

Background :

While spiritual and mental energies are known to man, their impact has never been scientifically measurable in the material world and they remain outside the domain of science. The present experiments on *Enterococcus faecalis* [ATCC –51299], report the effects of such energy transmitted through a person, Mr. Mahendrakumar Trivedi, which has produced an impact measurable in scientifically rigorous manner.

Methods:

Enterococcus faecalis strains in revived and lyophilized state were subjected to spiritual energy transmitted through thought intervention and/or physical touch of Mr. Trivedi to the sealed tubes containing strain, the process taking about 3 minutes and were analyzed within 10 days after incubation. All tests were performed with the help of automation on the Microscan Walkaway System in Microbiology Laboratory - accredited by The College of American Pathologists

Results:

The results indicated that Mr.Trivedi's energy has changed 9 of 27 biochemical characteristics of *Enterococcus faecalis* along with significant changes in susceptibility pattern in 5 of 31 antibiotics. The Biotype number has changed from the original control strain giving rise to 2 different biotypes in treated samples while the external energy /treatment given was the same for all treated samples suggestive of random polymorphism as analyzed through the automated machine.

Conclusions:

These results cannot be explained by current theories of science, and indicate a potency in Mr.Trivedi's energy, providing a model for science to be able to investigate the impact of spiritual energy in a rigorous manner.

In lyophilized state, biochemical and enzymatic characteristics could be altered.

Introduction

All living organisms contain large complex molecules within the cells. Some of these are proteins and enzymes including DNA / RNA. The nature of the organisms is dependent on the biochemical reactions, which can be characterized and identified.

Antibiotic resistance, regardless of antibiotic and bacteria, will occur with sufficient time and drug use. Widespread antibiotic use causes selection pressure: resistant strains survive while susceptible ones are eliminated. Antibiotic resistance is progressive, increasing from low to intermediate to high levels [1]. Bacterial strains are also characterized by their relative resistances to a range of antibiotics. However, such a change does not take place spontaneously in a strain over a 10-day period of normal incubation without continuous exposure to any drugs.

In this paper we report the impact of spiritual energy on *Enterococcus faecalis*, in revived and lyophilized state, with respect to its antibiotic susceptibility pattern along with biochemical properties analyzed within a period of 10 days. The said energy was transmitted through thought intervention of an individual, Mr. Mahendrakumar Trivedi who has been interacting with a large number of people as a healer over the last decade. As responses by humans can be accounted for by the placebo effect, these experiments on lower organisms were designed in order to directly test the impact through scientific studies to rule out the placebo effect.

It is widely accepted that lyophilization is the method most commonly used to store and transport microbial cultures as change in the biochemical and enzymatic characteristics of an organism cannot be carried out in this state.

Material and Methods

Two strains of *Enterococcus faecalis* [ATCC –51299] were procured from MicroBioLogics in sealed packs bearing the same ATCC number and stored according to the recommended storage protocols until needed for experiments. The study was grouped as per the following.

Group I:

One of the two sealed packets was handed over to Hinduja Microbiology Lab and was revived by them in two separate tubes, of which one was the control. The control tube was analyzed for identification, antibiotic susceptibility and biochemical reactions as per

the standard protocols of sample processing in the microbiology lab.

The second tube, (ATCC 'A') having viable bacterial culture, was handed over to Mr.Trivedi for treatment, after sealing by parafilm. It was assessed on the 5th and 10th days after treatment.

Treatment:

Mr.Trivedi held this tube in his hand under ambient conditions for between 0.5 to 3 minutes while treating it through his thought intervention process by communicating and instructing the experimental object within the tube in order to undergo the change. The tube was returned to the lab in the sealed condition itself.

Group II:

The second sealed packet of *Enterococcus faecalis* [ATCC –51299] (ATCC 'B') was treated by Mr. Trivedi directly in the sealed lyophilized state, using the same treatment process as above. The sealed tubes were broken and the strains were revived and analyzed on the 10th day for identification, susceptibility testing and biochemical reactions.

All tests were performed with the help of automation on the Microscan Walkaway System (Dade Behring Siemens) using PBPC-20 panels. Antimicrobial susceptibility was determined using the Minimum Inhibitory Concentration (MIC) method as per the latest CLSI guidelines.

MicroScan

After inoculation and rehydration with a standardized suspension of organism and incubation at 35⁰c for 16 hrs, the minimum inhibitory concentration (MIC) or the qualitative susceptibility (susceptible, intermediate or resistant) was determined by observing the lowest antimicrobial concentration showing inhibition of growth. The results of susceptibility testing were expressed in millimeters of growth inhibition with disk testing and in mcg/ml in MIC testing.

Quality control:

The acceptability of the identification media and antimicrobial agents was checked prior to the study by ATCC control organisms, *S Aureus* ATCC 29213, & E Coli ATCC 25922.

Panel used: PBPC-20

List of Antibiotics tested:

Amoxicillin / k clavulanic acid, Ampicillin / Sulbactam, Ampicillin, Cafazolin, Cefepime, Cefotaxime, Ceftriaxone, Cephalothin, Chloramphenicol, Ciprofloxacin, Clindamycin, Erythromycin, Gatifloxacin, Gent.Synergy, Gentamicin, Imipenem, Levofloxacin, Linezolid, Moxifloxacin, Nitrofurantoin, Norfloxacin, Ofloxacin, Oxacillin, Penicillin, Pip/ Tazo, Rifampin, Strep.Synergy, Synercid, Tetracycline, Trimethoprim / Sulfa and Vancomycin.

Following Biochemical tests were performed:

Urea, Lactose, Arginine, Crystal Violet, Novobiocin, Indoxyl Phosphatase, Voges – Proskauer, Nitrate, Pyruvate, Glycosidases, Arabinose, Raffinose, Sorbitol, RBS, PGR, MS, OPT, PHO, BE, PYR, MAN, TRE, MNS, BAC, HEM, INU and NACL.

Setting:

Microbiology Laboratory of P.D. Hinduja National Hospital & Medical Research Centre, Mumbai, India – accredited by The College of American Pathologists

Results:

In this paper, only the changes / variations in antibiotic susceptibility and biochemical reactions that were observed before the treatment (control) and after the treatment (treated) have been reported in a tabular form attached herewith.

The results of the antibiotic susceptibility tests, identification tests and biochemical tests can be seen in Table 1.

Details of MIC values have been presented in Table 2.

Antibiotic Susceptibility

Group I:

For four of the five antibiotics shown here, Ampicillin, Linezolid, Penicillin, Tetracycline, the MIC values in the Treated 5th Day remained unaltered as in control, and further increased in the Treated 10th Day changing the susceptibility from sensitive

in both the control and Treated 5th Day samples to a resistant strain by the 10th day.

For Vancomycin the MIC value being 16 in the control, had remained the same by Day 5, and increased to >16 by Day 10, changing the susceptibility from intermediate as in control and treated 5th day to resistant by the 10th day.

Group II:

In Group II samples too, although treated directly in the lyophilized form, a change may be noted in the susceptibility to Vancomycin, whose MIC values decreased after treatment from 16 in the control to 4 in the treated sample, changing the susceptibility from intermediate in the control to sensitive in the treated sample by Day 10. Whereas the susceptibility to Ampicillin, Linezolid, Penicillin and Tetracycline remained unaltered being sensitive as in control.

Organism Identification

Biotype numbers of particular organisms were arrived at after interpreting the results of the biochemical tests. The Biotype numbers then led to the particular Organism Identification.

Surprisingly, the biotypes have changed in Group I and Group II samples by the 10th day compared to control and did not match with each other.

Biochemical Reactions

Group I:

In Group I, for Voges – Proskauer, Lactose, RBS and Pyruvate, the reactions were positive in the control samples and had remained the same by Day 5 followed by

changing to negative on the 10th day.

In case of Nitrate, Indoxyl Phosphatase, BE and Urea, the reactions were negative in the control samples and had remained the same by Day 5 followed by changing to positive on the 10th day.

In the case of HEM, no change observed after treatment.

Group II:

In three of the biochemical tests changes may be noted in the Group II sample, which was treated directly in the lyophilized form. The reaction with Nitrate, Indoxyl Phosphatase and HEM has changed from a negative result in the control to positive by the time it was tested on the 10th day. Rest of the biochemicals remained the same as in control.

Discussion:

While misidentifications and errors in assessment of the above characteristics are known to have occurred in such tests, the existence of changes in so many properties and tests cannot be dismissed as a machine error. The findings of alterations in antibiotic susceptibility patterns as well as in several biochemical reactions as a result of the treatment applied are unexpected and unprecedented based on the literature so far, and currently unexplained by science. The biotypes of the organisms have also changed after treatment by Mr. Trivedi. This appears to indicate the presence of an energy to which the organisms were exposed. And most important is that the particular microbe reacted to this energy [2, 3].

In separate studies, the effect of Mr.Trivedi's energy on bacterial strains of ATCC through DNA fingerprinting has indicated DNA polymorphism ranging from 4% to 79% [4] (un published). Further, 16S rDNA tests show a change in the bacterial species. [5] (un published). Such observations are indicative of alterations in genotype. The similarity of effect of Mr.Trivedi's unique energy on biochemical changes and susceptibility patterns of *Enterococcus faecalis* [ATCC –51299] and other bacteria referenced above [4,5] lead us to postulate that *Enterococcus faecalis* [ATCC –51299] has also gone through a genotype change. Thus we expect to see DNA polymorphism in these strains, which may be responsible to cause such changes in antibiotic susceptibility as well as in biochemical reactions.

The results obtained in the present experiment indicate the existence of an energy that is still not known to contemporary physical and life sciences and which can effectively alter the characteristics of the microorganisms such as the bacteria studied in this work. It is not possible to find an explanation of such observations based on the current scientific knowledge. These results may give rise to better insight into the pathways that lead to mutation and may also help to understand the possible biochemical pathways that take place in the life cycle of the particular microbe.

While science has so far remained unable to enter into questions regarding 'consciousness / Spiritualism' and ordered forces or energies which can interconnect materials on a plane of higher information, the results of the current experiments prove the existence of a direct model for investigation into the impact of a spiritual energy in a rigorous manner.

The impact of Mr. Trivedi's energy has also been tested on various transition metals resulting into change in atomic and crystal parameters. The treated metal powders exhibited increase as well decrease in volume of unit cell, effective nuclear charge per unit volume of the atom and the atomic weight. The changes in atomic parameters are significant enough to increase and decrease the crystallite as well as particle sizes. [6]

Thermal analysis of the treated metal powders also showed a decrease in latent heat of fusion there by indicating the treated powders to be in a high energy state. [7]

The results of the experiments on inorganic materials show that the changes are at the atomic levels. As the building blocks of living organisms contain many types of chemical elements, the energy has also been able to affect the assemblies of atoms and the chemical bonds in this case.

Conclusions:

- 1 Mr.Trivedi's energy has altered the biochemical reactions along with the antibiotic susceptibility of *Enterococcus faecalis* only within the period of 10 days.
2. The changes occurred in three biochemical reactions in the lyophilized state are impossible as per the present knowledge and would be considered miraculous.
3. Lyophilization is the method most commonly used for the preservation of microorganisms, as it does not alter the Chemical and enzymatic characteristics of the microbes. On contrary, the presented results have observed the changes in few characteristics of *Enterococcus faecalis* in the lyophilized state itself indicating the need for superior method for storage of particular microorganism.

4. These results cannot be explained by current theories of science, and indicate a potency in Mr.Trivedi's energy, providing a model for science to be able to investigate the impact of spiritual energy in a rigorous manner.
5. In lyophilized state, biochemical and enzymatic characteristics could be altered.

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References:

1. Changing Antibiotic Susceptibility Patterns at a University Hospital [South Med J 94(6): 619-620, 2001. © 2001 Southern Medical Association]
2. Mahendra Kuamr Trivedi & S.Patil , Impact of an external energy on *Staphylococcus epidermis* [ATCC –13518] in relation to antibiotic susceptibility and biochemical reactions – An experimental study, *Journal of Accord Integrative Medicine* , Nov. 2008, Volume 4, Number 4.
3. Mahendra Kuamr Trivedi & S. Patil : Impact of an external energy on *Yersinia enterocolitica* [ATCC –23715] in relation to antibiotic susceptibility and biochemical reactions: An experimental study . *The Internet Journal of Alternative Medicine*. 2009 Volume 6 Number 2
4. http://www.divinelife.us/Genetics/staphylococcus_aureus.htm
5. http://www.divinelife.us/Genetics/B_Nocardia_otitidis_Treated_A.htm
6. Mahendra Kumar Trivedi & Rama Mohan Tallapragada , A transcendental to changing metal powder characteristics , Metal Powder Report, Volume 63, Issue 9, October 2008, Pages 22-28, 31 .
7. Vikram V. Dabhade, Rama Mohan. T. R, Mahendra Kumar Trivedi, Effect of external energy on the atomic, crystalline, and powder characteristics of antimony and bismuth powders, Bulletin of Materials Science (Accepted For Publication)

Table 1: Analysis of biochemical reactions, Biotype, Organism Identification Name and Antibiotic susceptibility patterns of all samples.

| | | GROUP - I | | GROUP -II |
|------|---------------|-----------|---------|-------------|
| Name | Antibiotics & | Control | Treated | Treated |
| | | | | Lyophilized |

| of the bacteria & ATCC no. | Biochemical Reactions | | 5 th day ATCC 'A' | 10 th day ATCC 'A' | - Treated Directly, 10 th day ATCC 'B' |
|----------------------------|-------------------------------------|---------------|---------------------------------|----------------------------------|--|
| E. faecalis ATCC -51299 | Ampicillin | S | S | R | S |
| | Linezolid | S | S | R | S |
| | Penicillin | S | S | R | S |
| | Tetracycline | S | S | R | S |
| | Vancomycin | I | I | R | S |
| | Biotype | 6473 57646 | 6473 57646 | 753773604 | 757357647 |
| | Organism Identification Name | E. faecalis | E. faecalis | E. faecalis | E. faecalis |
| | Voges - Proskauer | + | + | - | + |
| | Lactose | + | + | - | + |
| | Rbs | + | + | - | + |
| | Pyruvate | + | + | - | + |
| | Nitrate | - | - | + | + |
| | Indoxyl Phosphatase | - | - | + | + |
| | Hem | - | - | - | + |
| | Be | - | - | + | - |
| | Urea | - | - | + | - |

Key: S = susceptible, I = intermediate, R = resistant, + =positive, - =negative

Legend:

Control refers to ATCC strains that were analyzed before the treatment.

Treated refers to -ATCC 'A' on 5th & 10th day after the treatment &
- ATCC 'B' lyophilized that were treated directly

Table 2: Minimum Inhibitory Concentration values of antibiotics in mcg/ml .

| Antibiotics | Control | GROUP - I | | GROUP -II |
|--------------|---------|--------------------------------|---------------------------------|--------------------------------------|
| | | Treated 5 th day | Treated 10 th day | Lyophilized - Treated Directly |
| | | ATCC 'A' | ATCC 'A' | ATCC 'B' |
| Ampicillin | 2 | 2 | >8 | 2 |
| Linezolid | <=2 | <=2 | >4 | <=2 |
| Penicillin | 2 | 2 | >8 | 2 |
| Tetracycline | <=4 | <=4 | >8 | <=4 |
| Vancomycin | 16 | 16 | >16 | 4 |