



Effect Of *Agnihotra* (Sacred Fire) On Microbial Growth.

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We found description of an experiment entitled effect of Agnihotra on air-borne micro-organisms by H. S. Ravikumar Patil et al from Karnataka, India. They found anti-bacterial and anti-fungal activity of Agnihotra. In this project an experiment on the effect of Agnihotra (Sacred Fire) on the growth of air-borne microbes was carried out. The project involved the exposure of petri dishes with blood agar medium to the atmosphere at constant temperature before and after Agnihotra (Sacred Fire). Result of studies shows significant reduction in number of colonies of microbial growth after the procedure of Agnihotra (sacred Fire).

Keywords : *Agnihotra* (Sacred Fire), petri dish with blood agar medium, air borne microbes.

Introduction:

We found description of an experiment on microbial growth performed by Dr. A. G. Mondkar(1). He has concluded that exposure of microbial culture to the environment surrounding *Agnihotra* (Sacred Fire) causes around 91% reductions in the microbial growth. In yet another interesting experiment Dr. Mondkar observed therapeutic effect of *Agnihotra* Ash in Rabbits. He has successfully treated scabies in Rabbits with *Agnihotra* Ash application (2).

We also came across the work done by H. Jina Devi et al from Vivekananda Yoga Research Foundation, Bangalore-560019, India, on the effect of *Agnihotra* (Sacred Fire) on the germination of rice seeds (3). We also went through a paper by V. Indira et al from Tamilnadu, India showing the positive effect of *Agnihotra* on growth of mushrooms (4).

We found description of an experiment entitled effect of *Agnihotra* on air-borne micro-organisms by H. S. Ravikumar Patil et al from Karnataka, India. They found anti-bacterial and anti-fungal activity of *Agnihotra* (5). We also found an article on a website by Dr. Thronton et al from MIT Pune, India on the positive effect of *Agnihotra* (Sacred Fire) on aura scanning of human beings (6).

There was also a press release article by Spiritual Science Research Foundation claiming the reduction in the effect of nuclear radiation due to *Agnihotra* on a website (7).

After going through the information from various articles, we thought of doing an experiment on the effect of *Agnihotra* (Sacred Fire) on the growth of air-borne microbes.

Agnihotra (Sacred Fire) is a process done daily exactly at the time of sunrise and sunset. There is a special copper vessel called as *Homakunda*, used for lighting the sacred fire. Pieces of cow dung cakes are piled up in the vessel and are lighted up by using camphor. Two pinches of unbroken rice grains mixed with few drops of cow's ghee are kept ready. These pinches are offered to the fire one after another while chanting specific *mantras* (Vedic chants). These *mantras* are different for sunrise and sunset (8,9).

Materials and Methods:-

The project involved the exposure of petri dishes with blood agar medium to the atmosphere at constant temperature (25 to 26°C) by using an air conditioned room, before and after *Agnihotra* (Sacred Fire).

The petri dishes with blood agar medium were exposed to the atmosphere at constant temperature before and after *Agnihotra* (Sacred Fire), 30 minutes each. This work was done for three consecutive days.

The petri dish that was exposed before the *Agnihotra* was named Control dish and the one exposed after was named Experimental dish. The control dish was exposed to the atmosphere for 30 minutes before lighting up the sacred fire. After the *Agnihotra* (Sacred Fire), the copper vessel was allowed to cool for 15 minutes. Now the experimental dish was exposed to the atmosphere for 30 minutes. Same procedure was repeated for three consecutive days.

The dishes were incubated daily for twelve hours at ambient temperature after which the colonies developed on them were studied. This study was conducted in MIMER Medical College, Talegaon (Dabhade), Pune, India.

Data was analyzed by Primer Biostatistical package. Paired t test was applied.

Study, Observations and Results:

The colonies developed on the petri dishes were of the aerobic microbes from the room. The numbers of colonies developed before and after the procedure of *Agnihotra* (Sacred Fire) were counted. It was apparently seen that the number was significantly reduced after the procedure of *Agnihotra* (sacred Fire).

So we thought that the claim of purification of environment by the process of *Agnihotra* (Sacred Fire) seems to be correct.

Tables:

All the colonies were found to be circular, with different diameters. Some were having diameter less than 2mm, some were having diameter of 2mm to 4mm and the remaining were having diameter more than 4mm. The number of colonies with similar sizes could be compared with each other. The comparison between the number of colonies and their diameters is tabulated as under:

Table 1: Effect of *Agnihotra* (Sacred Fire) on number of colonies

| Day | Morning Procedure | | Evening Procedure | |
|-----|------------------------------|-----------------------------------|------------------------------|-----------------------------------|
| | Number of colonies (Control) | Number of colonies (Experimental) | Number of colonies (Control) | Number of colonies (Experimental) |
| 1 | 45 | 15 | 40 | 13 |
| 2 | 43 | 14 | 42 | 14 |
| 3 | 46 | 12 | 45 | 12 |

Table 2 : Distribution of colonies according to size (Diameter in millimeter)

| Days | Procedures | Less than 2 mm | | Between 2- 4 mm | | Greater than 4 mm | |
|-------|------------|----------------|--------------|-----------------|--------------|-------------------|--------------|
| | | Control | Experimental | Control | Experimental | Control | Experimental |
| Day 1 | Morning | 10 | 3 | 31 | 11 | 4 | 1 |
| | Evening | 7 | 3 | 30 | 9 | 3 | 1 |
| Day 2 | Morning | 8 | 2 | 33 | 12 | 2 | 0 |
| | Evening | 9 | 2 | 29 | 8 | 4 | 1 |
| Day 3 | Morning | 7 | 4 | 34 | 6 | 5 | 2 |
| | Evening | 6 | 2 | 35 | 10 | 4 | 0 |

Table 3 : Comparison of microbial colonies before(Control) and after(Experimental) Agnihotra procedures

| Size of Colonies | Procedures | Control (mean \pm SD) | Experimental (mean \pm SD) | t (p Value) |
|-------------------|------------|----------------------------|---------------------------------|---------------|
| Less than 2 mm | Morning | 8.33 \pm 1.53 | 3.00 \pm 1.00 | 4.44 (0.047) |
| | Evening | 7.33 \pm 1.53 | 2.33 \pm 0.58 | 5.00 (0.038) |
| Between 2- 4 mm | Morning | 32.67 \pm 1.53 | 9.67 \pm 3.22 | 9.14 (0.012) |
| | Evening | 31.33 \pm 3.22 | 9.00 \pm 1.00 | 16.75 (0.004) |
| Greater than 4 mm | Morning | 3.67 \pm 1.53 | 1.00 \pm 1.00 | 8.00 (0.015) |
| | Evening | 3.67 \pm 0.58 | 0.67 \pm 0.58 | 5.20 (0.035) |

Discussion:

It is claimed that *Agnihotra* (Sacred Fire) is able to affect the environment by purifying it. In this study we have tried to find out whether this claim can be proved by studying the effect of this procedure on the microbial growth thereby ensuring environmental purification. We found that the number of microbial colonies developed in blood agar medium before and after *Agnihotra* (Sacred Fire) was not same. There was significant reduction in the number of colonies after exposure of petri dishes to the environment after *Agnihotra* (Sacred Fire)

Conclusion:

From the above experimental procedure it can be said that *Agnihotra* (Sacred Fire) is able to purify the environment by reducing the number of air-borne micro-organisms. Our results tally with the findings got by Dr.A G. Mondkar (1) and H. S. Ravikumar Patil et al (5) in their studies regarding the effect of *Agnihotra* (Sacred Fire) on microbial growth.

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