

Effects of the Hypnosis in Patients Infected by the HIV

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Abstract

A pilot study carried out under quantitative strategy with clinical experimental character. Testing evaluation pretest-retest in order to measure the effect of relaxation by means of the hypnosis. The sample consisted of 22 subjects in a group control and an experimental group, standardized in male subjects between 20 and 50 years old, HIV carriers without any acute or chronic disorders that might interfere the relaxation treatment, with a basic level of understanding and expressed willingness to the fulfilment of the regularity of the meetings of the treatment. Aims: adjustment of variables, monitoring of the behaviour of the experimental variable on the immune system, on the affective-emotional changes and the setting up of new experimental models.

Keywords: HIV; Hypnosis; Relaxation; Immune system

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Introduction

One of the diseases indirectly related to the stress, that is, where it only works as an aggravating factor, is the HIV/AIDS. Since the first case of Pneumocystis Carinii was reported in June, 1981 and, at the same time, several cases of Sarcoma de Karposi, some scientific circles all around the world started the study and definition of the disease called Acquired Immune Deficiency Syndrome (AIDS), due to the virus which caused it.

This illness has become a global pandemic initially provoked by the HIV type 1, which suffered a mutation until becoming the HIV type 2. The HIV was found in West Africa [1] and they are former retrovirus that were kept in the remains of the DNA of ancient animals such as the Bonobos and the Red Colobus [2] which at the end were fixed to the human genome [3], and were brought up to the present days.

The virus surface is covered by glycoproteins neutralizing monoclonal antibodies, which will make easier the deterioration and destruction of the T-lymphocytes (T-cells), even more the CD4 ones. Therefore, one of the difficulties in the treatment of the HIV is its ability to penetrate into the internal part of the immune cells and its quick replication. It is carried out to an extent that exceeds the participation of the CD4 [4], taking under consideration that these immune cells are the principal biomarkers of the HIV/AIDS [5].

So, even though the virus life cycle is short, where at least ten thousand millions are produced and destroyed everyday inside the patient's body, with an average life of just a few hours, its quick replication can lead to the shown clinical symptoms. The deterioration is shown in different ways, but essentially by the immune system [6].

Even though nowadays this disorder is no more considered for the patients as a lost beyond hope of recovery, it continues to cause physical and mental helplessness on the patients, hence, a severe emotional stress. Its most common causes are the following ones:

- Being a carrier, -with a high probability of falling ill and with no potential cure, at least at this moment-, to feel the nearness of death [7,8].
- His social support system turning into pieces [9-11].
- To be discriminated in its social, work, family and sexual environment [12,13] even by the health care specialists [14]. Patients sometimes avoid treatment for fear of being rejected.
- He feels himself limited in his sexual satisfaction, so his self-esteem is diminished [15].
- He suffers symptoms which increase his dissatisfaction, such as anxiety, depression, fatigue and irritability [8,16].

Todd [17] has mentioned psycho-social factors in the rapidly spreading of this pandemic, such as: the disability of the patients to face the disease, the loss of the social support due to the grief or separation, depression caused by the end of hope, and repressed anger due to the frustration.

A study on over 65 HIV patients [18], shows how the infested one is susceptible to the psychiatric disease since the very moment of being aware about his health condition.

Besides, it has been found a relationship between depression and not adherence to the treatment [19]. So the social support is a very important factor in the treatment of HIV patients, and its loss diminishes the effect of the anti-retroviral drugs [20].

López y Calles [21] has studied through specific scales, the stress produced by the knowledge of being a HIV carrier, and specially the feeling of the nearness of the death. He used the instrument Death Anxiety Scale (DAS), put it into practice in the Spanish version in a clinical area with a sample of 109 men and 39 women. That report concludes the validity of measuring on these patients through the scale, the anxiety produced. Other instruments have been used in order to measure the global stress level. [22,23].

In the application of therapeutic techniques in HIV positive patients, it can be noticed the effect of the relaxation techniques [24], of the Group Therapy [25], relaxation mixed with acupuncture [26] and multivariate programs of psychological intervention [27]. It has been highlighted the role of the Mantram in the achievement of deep mental focus.

To similar conclusions arrived Beswess [28] in another study. Cruess et al. [29] made a further study about the application of relaxation techniques in 30 VIH positive patients during ten weeks and in them they found a significant reduction of the anxiety and the depression, as far as the normalization of the adrenocorticotrophic hormone (ACTH) and, hence, the cortisol, increasing in fact the capacity for action of the CD4 ones.

In order to complete some studies about the relaxation, the effect of the hypnotic induction on infested VIH patients have been carried out. Shrier Rucklidge & Saunders [30,31], referring to the pain related to their disorder [32] and in the functioning of the immune system [33].

Marcus [34] has created a model of hypnotic induction for VIH positive patients, where he established two populations for the validity of this model. One included some persons recently diagnosed as infested, and some others with longstanding infections. Both samples were chosen and within them, it could be proved the positive effect of the diminishing of the stress and the possibility of a better control of their treatment.

The cognitive behavioural therapy mixed with the Tai Chi has also been applied on HIV McCain et al. [35] carried out a study about the application of this technique for ten weeks, in groups of spiritual growth. The sample chosen included 252 subjects, divided into a Control Group and an Experimental Group. An increase of the lymphocytes (T-cells) was noticed.

Taylor [36] has examined the effect of a handling of the stress

program through Progressive Relaxation, Bio-feedback, Meditation and hypnosis, aimed to the lowering of anxiety, an improvement of the state of mind and the raise of the self-esteem. Vieille [37] carried out the study of a therapeutic system formed by the hypnosis, the self-hypnosis and the visualization, whose aim was to know if any physical, psychical or psycho-social changes were taking place in the sample of HIV infected patients. The amount of CD4 was measured within it before and after applying the experimental variable, and an improvement in psychological aspects was found even though there were no reported changes in the CD4 ones.

Antoni [38] presents a psyconeuroimmunological training model in the management of the stress for HIV infected patients along ten weeks. It included the cognitive managing of the stress, complemented with relaxation techniques and support therapy. In the study, changes on cortisol and norepinephrine were reported, therefore, the depression and the anxiety were reduced and positive changes in CD4 and CD8 were achieved.

Method

The pathogenic mechanisms of the stress on the immune system and the revision of the VIH/AIDS literature, led us to a pilot study about the effects of the hypnosis with relaxing purposes in VIH positive patients. This study took place under a quantitative strategy with an experimental clinical character.

It was taken a random sample of 22 VIH positive patients undergoing medical treatment and medication through the NGO "Amigos de la Vida" in Caracas. It was randomly distributed into the experimental group and the control group, standardized in men between 20-50 years old, HIV carriers, without acute or chronic disorders which could interfere the induction, having, at least, a basic understanding level and who would show their willingness to join it.

It was based on the criteria obtained from the literature that reducing the stress by means of the inhibition of the nervous central system, by the induction of the hypnosis it could be achieved the raising of the defensive capability of the immune system, and, hence, a lowering of the set of symptoms.

The aims were to create a baseline for further investigations about the effect of the relaxing hypnosis in VIH positive patients; specifically, the adjustment of variables, effect and behaviour of the experimental variable and symptomatic changes of the patient.

The null hypothesis formulated is that there was no Mean Difference between the stress indices measured in the sample neither before nor after the application of the independent variable. The research hypothesis issued is that there was a Mean Difference between the stress indices measured in the sample before and after the application of the independent variable.

The strategy followed was: measurement pretest-retest and comparison of the Control Group with the Experimental Group. The variable control revolved around the biochemical examination of viral load, Beck's Depression Inventory and

Beck's Inventory of Anxiety (Aaron Beck), the physical exam and the medical interview, the consumption of medicinal products control and a survey.

The experimental variable consisted on the induction of relaxing hypnosis, put into practice under group conditions, through daily sessions for three months and with a duration of fifteen minutes each, resulting in an average of four weekly sessions per patient.

Procedure

At first, some tests were put into practice for the selection of the sample; once it was defined, it was subdivided into the control group and the experimental group.

Later, a lecture about the stress was given to the experimental group: its adverse consequences, its effect on the immune system and its harm on VIH infected persons. It was also included an explanation about the relaxation and the hypnosis; its function in the individual and the immunological effects that from this condition are derived. They were even told about the state we pretended to achieve and the procedure to follow.

On the next day, the application of the independent variable started as a group. It took place in a room with stretchers of low height so that the evolution of the patient could be observed. The environment was quiet and absolutely silent, in the darkness, with a very low light, with a properly temperature and breezy, but no drafty, and with the only presence of the inductor and the subjects of the experimental sample, who were wearing comfortable clothes, without any kind of pressure or discomfort in them, but under those conditions it did not seem to matter their type, colour or form

During that first session, the subjects were told that:

- They would feel a state very much like feeling sleepy, as being asleep outside and awaken inside.
- They would feel a deep calm, which could continue for some time.
- They did not have to do or think in nothing else, not to try to put their minds to go blank, whatever should appear it would disappear by itself while the process deepens.
- They only need to adopt a passive attitude and "let it do".
- The passive attitude to adopt excludes homing procedures, purpose or observation of the process.
- They should not have outstanding matters, urges, insects nearby, a cough, rhinitis, nor any other trouble (discomfort).

In the first step, it was carried out the exercise of contraction and straining of muscles, in order to help reduce anxiety and its interference in mental concentration.

Afterwards, the breathing exercise was indicated, applied with deep breath, natural and spontaneous, while the body and the muscles got relaxed. Once felt the proper rest and the passivity the relaxing hypnosis was inducted by the inductor's voice.

Before starting the session, the subjects adopted the supine position, lying one meter away from each other, and then the preliminary exercises began. Their purpose was to increase the performance of induction through the muscular tension; and, as a matter of fact, to decrease the initial anxiety, and they are inspired on Jacobson's theory and practice [39].

Its usefulness lies in removing temporarily, emotional interferences to the relaxation that proceeds to the hypnosis, mostly anxiety, strain (tension) and depression.

In this exercises the body is contracted for some seconds and it was left to fall down distended. The legs were put together and slightly raised, pointing their toes, hands opened or closed but contracted, the backs were arched upward in a convex way, the sphincters contracted, also the neck, the jaws (without pressing the teeth in order to avoid any damage), the eyelids were tightly shut. They were kept this way for two or three seconds, until suddenly the body was released, allowing it to collapse for its own weight, and without exerting any kind of control or restriction on it. This exercise was to be repeated three times.

After the mentioned exercise, they would inhale deeply, the would exhale and gave in to rest. This breathing was completely passive, not controlled nor dosed. Leaving mouth and lips to their own weight, in a proper rest position without being deliberately opened or closed; it's to say, leaving the jaws hang by themselves. Allowing the air to flow in and out pleasantly through the mouth and the nose, filling up the lungs without forcing its entry or its exit in no way. Just looking for distension and stillness. There cannot be a pre-established position in the way of breathing in the mouth nor the body, neither improvised procedures of taking in the air through the nose and exhaling it by the mouth, or holding some air and allow it to go out little by little, turning out to be these schemes self-defeating [40].

There are no exact formulae in the hypnotic messages to convey, and in this study the emphasis was placed in transmitting rest, to feel the tranquillity transmitted by the inductor, the showing up of a soft and deep sleep impossible to avoid and the invasion of a very peaceful calm. Thirty minutes after the hypnotic induction, the subjects were awakened and the final interview took place [40].

Results and Discussion

The viral load test turned out to be from 173 201 copies before to 42 467 copies after, as well as 65 822 in the control group compared with 42 468 in the experimental one, both measured at the end of the treatment, three months later, for 9 cases. In general, the viral load lowered in five cases under medical treatment with medicines and in one of the ones that did not take them, and it remained stable in two that were taking them and in one that did not take them.

The body weight resulted in an average increase of 67 to 69 kilograms for the 11 cases. The depression diminished in an average of 16 to 11 at the end of the treatment for 10 cases. Meanwhile, the anxiety decreased from 14 to 12, for equal quantity of cases. The physical vigour had a significant improvement in a

9%, a clear improvement in an 82% and no variance (variation) in a 9%, for 11 cases. The quality (of) sleep turned into a significant improvement in an 18%, a clear improvement in a 64% and no variation in the 9%, for the same quantity of cases. The state of mind turned into a significant improvement in a 36% and a clear improvement in a 64%, for equal quantity of cases.

Some symptoms submitted in those cases who were suffering them: the peripheral neuropathy symptoms (2 cases), dizziness (5 cases), and muscle aches (3 cases), nausea (9 of 10 cases), diarrhea (5 from 7 cases) and headache (9 from 10 cases).

In the experimental group, according to the pretest-retest evaluation it was observed an increase in case 8, but not a significant one, while it turned out in 751 copies during the period what is taken biochemically, as stable, as well as also it was the one that proved with the least possibility of mental concentration due to several factors as scepticism and a consequence of toxoplasmosis which prevented an optimal muscle strain. The cases 9 and 10 caught opportunistic diseases before and at the beginning of the period, which affected their attendance, their state of mind and their disposal for the treatment.

Some doubts arose about the increase of the viral load in case 5. However, in this case, and in those in which no decrease was

produced as well, there were observed the worst conditions for their stress management for one reason or another.

The decrease body weight and the asthenia conditions, pathognomics of this Acquired Immunodeficiency Syndrome, give a high importance to this variation. The average in weight gain that was consistently produced in the experimental group is an additional indicative of the effects of the applied treatment. In the two cases in which it was not specifically achieved, it was due to a diarrheal disease caused by the consumption of some drugs. It must be highlighted that even three of the four cases in which there was no lowering of their viral load, they gained some weight in spite of everything; even one of them had to be put on diet.

Conclusion

The satisfaction level was obvious in all cases to a greater or lesser extent, five of the subjects who were incapable of working, started to do it or to look for a job, even that who was reported as unchanged, under the Vigour category. All of them improved their state of mind. An improvement of their sleep condition was produced, except for one case, due to the consumed drugs; the rest slept better. An important decrease or remission of the adverse consequences of the medicines was found, as it could be observed.

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