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## Hypno-Relaxation on Cancer's Patients

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### Abstract

**Introduction:** Since ancient times, different thinkers saw the harmful effects of extreme emotion on humans. Actually is known as that affective process implies the imbalance that constitutes stress, and the damage that this produces mainly to the immune system. Therefore, the stress has it effect the growth of cancerous tissue in the patient with said disease. Consequently, the reduction or remission of stress through relaxing hypnosis suggests the usefulness in the favorable evolution of the patient.

**Objectives:** To evaluate the effect of relaxing hypnosis on the state of stress of the cancer patient.

**Method:** The technique used in this research is based on the theory and technique of Herbert Benson of Harvard Medical School; also, the hypnosis' technique of Konstantin Platonov, from Russia, the classical techniques of relaxation of Heinrich Schultz and Edmund Jacobson, and the Meditation from Maharishi University, Iowa, USA. The hypno-relaxation takes account the conception of Walter Hess, Swiss physician Nobel Prize in Medicine, about the mechanism of physiological defense of the body. Hypothetically, the emotional inhibition under the effect of the hypno-relaxation reduces the stress and the related disorders in cancer's patient.

**Results:** Among the outcomes it was observed reduction of pain, anxiety and depression, weight gain, and elevation of social and family functioning. It was reduced the ascites edema in a case.

**Conclusions:** Although it was not possible to know the evolution after hypno-relaxation treatment in all cases it was observed improvement. These results suggest utility in the hypno-relaxation in cancer patients.

**Keywords:** Cancer, Psycho-Neuro-Immunology, Stress, Relaxation.

### Introduction

Since ancient times different thinkers have noted the harmful role of extreme emotion in humans, among them Plato, in Dialogues, and Aristotle, in Rhetoric. In the present this study also contemplates its pathogenic effects [1]. Emotion is the psychic process that originates in the Emergency Reaction [2], and whose effect leads to the activation of the central nervous system, to energizing the body-mind. If the interaction between the individual and their circumstances is balanced, harmonious, the required excitement to the action is low. But if there are not sufficient resources for an effective coping, is produced an extreme emotional reaction, compensating the inability to control the situation. From this result stress arises in mind-body [3,4]. Although in the early

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centuries of human history were not addressed under the word emotional stress, this is a starting point for studying the relationship cancer-emotion.

The fact that the pathogenic nature of stress is nonspecific [5], that is, its effects are manifested in an area where it finds vulnerable tissues, supposes the possibility of that state participates in some way in the etiology or pathogenesis of cancer, and at the same time, the application of psychophysiological techniques, as hypno-relaxation, to reduce stress implies the favorable evolution of these patients.

Cancer is a chronic disease and is still unknown in its cause; although there are multiple internal and external factors that are involved in its origin. This disease consists of the atrophied and progressive growth of the cells in any part of the body, to create a tumor, or to circulate through body fluids such as blood or lymph. This growth can metastasize to distant sites and could lead to death [6].

Cancer, and its effect on the patient and his family, is a global problem [7]. According to 2009 reports, in the United States alone, this disease affects approximately twelve million people, covering an estimated 7.2% in the population over 18 years of age [8].

Many types and classifications of cancer have been studied, but the news of having contracted the disease is always highly stressful [9]. As a result, stress manifestations such as excessive emotional tension, anxiety, fear, hostility, fatigue, confusion arise. These are aggravated by additional stressors such as physical limitations, invasive treatments, and vegetative disorders [10-12]. In summary, cancer is a source of sustained distress [13,14].

## Review of Related Literature and Studies

Galen (129-216 AD), one of the fathers of medicine, in his book *The Tumoribus*, says that women with melancholy were prone to cancer [15] and Hippocrates (460 BC) had previously expressed something similar. Cooper [16] in his book *Stress and cancer* exposes about some researches in cancer and stress through the history. According to him, in 1701 Genfron, English physician, said that the events of disturbance promotes cancer, and eighty years later Burrows attributes the disease to similar reasons. Later, as he says, is attributed to emotional factors growth of breast tumors, and the cervix-uterine cancer was more common in people frustrated. In England, in 1601, is defined: Cancer is a swelling or sore from melancholy blood, around which the veins appear black or dark color, spreading like the claws of a crab. Walshe, WH [17] in his book *The Nature and Treatment of Cancer* considered that the disease of cancer is attributed to mental misery, loss and the mood changes. Currently, the cancer is now considered a disease of multi-factorial etiology [18], where it can be inserted the stress as a participant in the causal matrix.

The role of stress in their relationship with cancer it must be observed on two levels: first its participation in the etiology and the other in its treatment.

Among the causative factors of cancer is found the toxic-environmental, which includes habits or conditions such as smoking, drugs, frequent alcohol consumption, exposure to harmful substances, poor dietary intake of foods rich in fiber, and others.

The genetic-hereditary factor is where the cancer is associated with the genetic structure of the patient. Although not yet clearly known this process, different studies show the effect of socio-environmental circumstances in the cancer-related gene mutation [19]. Indeed, the emotional stress is included within them.

The third factor is the endocrine-immune, where it is not fully known the neuro-chemical mechanism that links this system with the stress. On that state occurs abnormal secretion of hormones and neurotransmitters which participate in different ways in the deterioration of the immune system, especially defensive capacity reduction of NK cells; among these secretions are the catecholamine (epinephrine and nor-epinephrine), and ACTH and their derivatives, mainly cortisol [20].

Related directly to emotional stress is the psycho-neuro-immunologic factor. This approach gains strength from the studies of Caroline Bedell Thomas [21,22], which finds a high level of correlation between loneliness and cancer. This author believes that this disease occurs more frequently in those with diminished capacity for emotional expression and tendency to depression.

The effect of these findings continued in the same direction with experimental animal models, especially mice [23]. It has been observed as the stressful stimulus of electric shock, loud noise or isolation decreases the immune capacity, leading to cancer growth.

Accordingly, these studies have gained momentum, since the early 70's, with the development of techniques that induce the opposite response to extreme emotional activation in the individual, including bio-feedback, hypnosis, relaxation, visualization, meditation and other [15]. Especially the relaxation, which when combined with the hypnotic induction, increases its effectiveness [24,25].

It has been found destruction of cancer's cells with the application of relaxation-visualization [26]. Also, it has been found interference on the growing and involution of cancer with the application of relaxation-meditation [27], reduction of the effects of chemotherapy [28], increases the defense capability of NK cells with Direct Visualization [29].

The effectiveness on children is higher, because of they do not carry even their personality the interference factors that may exist in adults for mental concentration. They show favorable results in reducing pain in children suffering from cancer through these applications [30].

Hypothetically is considered that relaxing and hypnotic induction, increase the capacity of the NK cells in the immune system, reducing the tone of activation in the nervous system, decreasing thus the anxiety, depression and stress, the pain and collateral effects of chemotherapy. The patients then

increase the confidence in their healing and their welfare.

Through the transmission of a soft, stable, monotonous, rhythmic, homogeneous and affectively neutral stimulus, especially through the voice, and producing an intense focus of concentration, a state of inhibition is irradiated that reduces or remits symptoms in the cancer patient.

These stimuli, because of his neutral sense, progressively are confined to the sensory areas of projection of the cerebral cortex. Consequently, is irradiated intense inhibition through the neural circuitry of the cortex, including organs of central nervous system, as activating systems such as brainstem reticular formation and thalamic fuzzy system. This will reduce the level of consciousness, and thus anxiety and depression. Also reaches the limbic system, prefrontal cortex and the hypothalamic-pituitary, including endocrine-vegetative ramifications.

Produced inhibition acts standardizing the catecholamine secretion, and the ACTH and its derivations, especially cortisol, and with the reduction of these increases the defensive ability of NK cells or Killer in the immune system [31-33].

In addition, relaxation reduces the tone of the estriopallidum-subthalamic, decreasing muscle tension and pain. In this way also increases the secretion of endorphins to achieve more relaxation. The inhibition of the autonomic nervous system also helps reduce side effects of chemotherapy.

The state achieved in the patient improves your mood, increases confidence in the healing, and there is the feeling of wellbeing. Insofar as this process deepens functional disintegration of the brain leads to psychic dissociation, the hypnotic state, and indeed suggestive visualization accordingly. Under these conditions increases the possibility of intervening on the symptoms related to cancer, the physiology of the body and in general on the patient.

## Objectives

An investigation was carried out with the objective of evaluating the effect of relaxing hypnosis on the state of stress of the cancer patient.

## Method

On this basis was used in cancer patients the hypno-relaxation technique whose foundation lies in the theory and technique of Herbert Benson [34], the technique of hypnosis Konstantin Platonov [35], the classical techniques of relaxation of Heinrich Schultz [36] and Edmund Jacobson [37,38]. Its essential mechanism derives from the conception of Walter Hess [39], on the defensive process in the physiology of the organism.

Hypnosis was recognized as a valuable therapeutic tool by the joint session of the Academy of Sciences, and the Academy of Medical Sciences of the USSR in 1950. It was recognized by the British Medical Association in 1955, in 1958 by the United States Medical Association, and in 1961 by the American Psychiatric Association [24].

Of cancer patients attending the consultation of stress

were taken five cases, following the criterion of having had a better mental concentration during treatment of hypno-relaxation. In general, the procedure followed in these patients was as follows:

- The application was carried out in the clinical center in one case, and in the patient's residence in four cases.
- Report. It held an initial discussion with the patient to establish trust and acceptance required. This goal was not difficult to achieve given the desire to find solutions to the dilemma of life and death in which they were.
- Orientation. Patients were initially targeted at different steps to follow.
- They were directed to acquire the position, which in all cases was supine.
- The first step consisted in the contraction-distension to reduce the initial anxiety. This is the worse interference factor to the required concentration to the hypnotic induction. Of course, this exercise could not be standard in all cases due to differences in the physical condition of patients. They performed the exercise three or four times.
- Later, the patient breaths deep, primitive, leaving your whole body relax.
- Relaxation. Then begins the induction through the inductor voice, sounding rhythmic, smooth, and homogeneous.
- Hypnosis. It is deeper the hypnotic state, where he begins to modify the conscience.
- Visualization under hypnosis. Through guided visualization is produced corresponding suggestion.

## Case history

**Case ME:** Patient 65 years old, male, retired workforce, with a cancerous tumor in the prostate. It was removing the tumor but before had metastasized to the right femur. The initial meeting was immediately after of the surgery. From that time, it is applied hypno-relaxation during an interval of fifteen days at a daily session of 20 minutes. The objective was contributing to his mood and reduces post-operative pain. Pain was reduced significantly in the extent to which the sessions were happening, even considering the effect of drug treatment. Mood and body movement also improved more rapidly than expected. This patient had to return his country at the end of this period, yet more than two years later was known that he was walking very well.

**Case Y:** Patient of 63-year-old, female, teacher by profession but retired. After being surgically operated on to remove a cancerous cervical tumor, we discover that it had metastasized to the right lung and duodenum. After being surgically operated on to remove a cancerous cervical tumor, we discover that it had metastasized to the right lung and duodenum. The hypno-relaxation treatment starts a few months after surgery, reaching a total of 23 sessions of twenty minutes each, to a daily or so. The patient had undergone unsuccessful to other relaxation techniques, giving rise to skepticism about these procedures. She said later that before the first session was afraid of what is

going to perform, so that his mind was very scattered and hard to concentrate. But to the extent that continued the verbal induction she felt relaxed, loosened her muscles, the jaw dropped, and she felt peace and tranquility. The depth reached was growing.

Between the third and fourth session the oncologist treating the family informs the inability to remit the disease in any way and thus save his life. At the third session disappeared the rhinitis, which bothered her sharply, and this contributed to increased suggestibility. At the seventh session started noticing less swelling of the abdomen, which was disproportionately large to result from ascites, edema created by the cancer. After that session the patient could be folded on the bed, which previously could not. After the tenth session was applied for first time the chemotherapy, so they were suspended hypno-relaxation sessions during a week to observe the effects of the medical treatment.

By re-start relaxing induction decreased the side effect of chemotherapy, but it could not tell if it was for the passage of time or the hypno-relaxation. In the twelfth session is notorious the animation, optimism and agility. After the fourteenth session the bedside nurse mentions clear reduction of the abdomen. Also began to walk inside the house, which previously could not be bedridden, and is aware of the disappearance of pain in the top of both thighs and can move them. After the eighteenth session it is observed the reduction evident in the abdomen four inches. At the twentieth session managed to leave the neighborhood and give some dance moves at home. It should be noted that the sessions were complemented by corresponding audio cassette, applied independently on numerous occasions during the day.

Of course, it can't be determined the role of hypno-relaxation and how much chemotherapy, but it is evident that the patient felt much more calm, lively and consistent with their situation. The patient couldn't continue the treatment because had to back to her home in other part of that country.

**Case OV:** Patient 50 years old, female, housewife, with left lung cancer, metastasis undifferentiated in lymph nodes. She was given thirteen sessions of hypno-relaxation, to last for twenty minutes daily. Initially the patient comes for consultation brought by the family, significantly depressed, despondent, with pain in the area affected by the tumor in the neck, frequent coughing and reduced weight.

To the extent that we apply sessions she increased their body weight, decreased cough, pain, and the mood rose significantly. Began to regain their energy, dancing, at festivals at home and were reactivated discord with the eldest daughter. These were disappeared because of depression and need for support. The patient returned to his real character again assuming dominant attitudes, controlling and executive in the home.

After the first chemotherapy session, came back the discord with her eldest daughter, refused any treatment of chemotherapy, radiation therapy or psychological, marching to his residence in another region of the country.

In a short time worsened the symptoms of the disease. Two months later agreed to return only to the hypno-relaxation treatment. But there was no time, immediately after this decision she died. Nevertheless, we observed a favorable change in the patient, coincident with the application made.

**Case FR:** Male patient, 66, retired businessman occupationally, lung cancer, depressed, discouraged and in pain on the right side of the back because of his illness. One session was applied directly. Initially manifested skeptical, but after finishing the treatment the pain was gone by then and he was very serene. However, for personal reasons could not go back to the sessions and then it was indicated a tape as replacement, and he was trained for it.

The patient applied the tape three or more sessions during the day at home. Before the end of the month was encouraged, he began his work previously undertaken by auto mechanics as a hobby and distraction; weight increased significantly and exceeded the chemotherapy treatments without pain or significant discomfort. Over six months after it was learned that the patient was at home, with encouragement and working on what he liked.

**Case JC:** Male patient, 62 years, with liver cancer, businessman. We applied a total of 54 sessions of hypno-relaxation. Between the first and third sessions did not seem to reach deeply relaxed state, but it is reached at the fourth. From that moment was conducted a procedure consisting of an induction for a period, in this case 15 minutes, after to promote self-induction in the patient, and later directed induction again. At the session 11 say that the pain in colon has been declining and feeling much better. At the session he 15 says that the chemotherapy had been applied two days ago but there were no side effects whatsoever. At session 17 he says that feels great and makes normal life. Feel like I'm not sick of cancer. After the fourth application of chemotherapy the patient suffered only slight nausea.

During the 21 sessions with hypno-relaxation she had three courses of chemotherapy without side effects, at most a slight discomfort. At the session 25 all the pains have disappeared. In the session 30, before hypno-relaxation, the results show that the tumor shrank. After the session 54 is not able to continue treatment, so it was directed and coached the patient to continue to self-induction at home.

## Results and Discussion

Although it was not possible to know the evolution after hypno-relaxation treatment in all cases it was observed improvement. Especially was reduced anxiety, depression, pain and side effects of chemotherapy, there was increase in individual and social functionality, and generally it was reduced stress and increased well-being. The case of the reduction of the abdominal edema has high importance because the reduction of abdominal edema is not usually reported. It was observed individual differences in the sensitivity to the hypno-relaxation. The pain was not reduced in all cases at the same time, neither side effects of chemotherapy. However, elevation of mood, vigor and function had a close approximation in time; all cases were

modified to some extent after the second or third session. These results suggest utility in the hypno-relaxation in cancer patients.

## Conclusions

Cancer is a disease that still holds many questions, in its etiology, pathogenesis and treatment. But the truth is that one of the factors which have an unfavorable impact on these patients is stress. There is no evidence of its etiological role, but there is no doubt in its harmful effect on the immune system, endocrine and emotional balance, accelerating the deterioration of the patient. Therefore, Complementary techniques, being directed to the inhibition of neural tone, exert high benefit to its well-being and satisfaction, favoring their treatment.

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