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**ELECTROACUPUNCTURE & PSYCHOSOMATIC THERAPY APPLIED TO  
THE TREATMENT OF HERPES - VARICELA ZOSTER**

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## 1- INTRODUCTION

### 1.1- Etiopathogenesis

Herpes is a virus disease, widely spread, contaminating a third of the world's population.

It is known to be a systemic disease, essentially affecting the mucosal membranes and the skin.

The Herpes virus is observed to consist of:

- central part constituted from DNA;
- capsid of cubic symmetry;
- external envelope derived from the cell's nuclear membrane where the virus can replicate.

Yet, interestingly enough, the various types of Herpes virus are solemnly distinguishable by means of identifying its biological and immunological properties and its genome.

The responsible virus for Herpes can be subdivided into two groups:

- subgroup A, which includes the Virus Herpes Simplex 1 (VHS1) and (VHS2);
- subgroup B, where it merely includes the Virus Varicella Zoster (VVZ).

Contamination by the VVZ may produce two different clinical profiles:

- amongst the non-immunized individuals, the infection leads to generalised Varicella, highly contagious but having a benign nature;
- having carried the virus for a few years, for reasons yet not entirely clarified, the localised and painful Herpes Zoster develops.

The primary infection proves to cause Varicella, where 98% of the victims experience it during infancy whilst the remaining 2% see it occur during adulthood.

Herpes Varicella Zoster appears due to the reactivation of the virus that in its latent state resides at the dorsal roots or at the thoracic, dorsal or lobular ganglia.

The disease progress in a similar fashion as an acute infection of the S.N.C., characterised by the emergence of vesicular eruption and neuralgic pains, entirely at epidermic areas supplied by sensitive nerves with origin at the ganglia of relevant roots.

The pain inflicted by the Herpes Zoster seems to have two possible causes:

- the disease destroys the majority of the sensitive afferent mechanoreceptor fibres. In theory, this type of activity diminishes the regular inhibitory effect of the fibres upon the painful paths, mostly in the gelatinous substance of the spinal cord. Consequently, the painful stimuli may exuberate during the absence of the inhibitory activity.

- the neural cellular bodies of the ganglia belonging to the irritated dorsal roots are stimulated, generating an excessive activity which may result in the development of pain.

## 1.2- Symptomology

The appearance of lesions is preceded by fairly intense irritations, a set of pains with variable intensity which may affect parts or all of the nervous segment, and high fever accompanied by general ill being.

The time interval between the pain and the eruption is in average, 3 to 5 days. In rare occasions, we encounter patients where the pain and neurologic symptoms are scarcely present.

In the first place, the lesions appear at the posterior portion of the relevant nerve, and due to this fact, progress anteriorly and peripheral. Vesicles with surrounding erythema and papules also appear. In the first 24 hours, the vesicles converge and cover large areas of the body alongside the membranes of the nerves.

The vesicles become pussy and transform into crusts which fall off in 1 or 2 weeks.

Infection caused by Herpes Zoster usually concerns the thoracic and cervical nerves. When localised lesions develop at the tip of the nose, it signifies that the ciliary branch belonging to the trigeminal ophthalmic branch has been reached, indicating the possible development of a temporary blindness.

Patient feasible to heavier forms of symptoms, the lesions may be haemorrhagenous and nevrotic, evolving rather slowly for it cure, inevitably leaving scars.

Upon scaring of the wound, an uncomfortable pain (postherpetic nevralgia) may follow.

#### **4- METHODS OF TREATMENT**

For the treatment of the Herpes Zoster by Electric Acupuncture, a frequency of 50 Hz is applied during a few seconds and after a frequency of 4 Hz is applied during a 25 minutes.

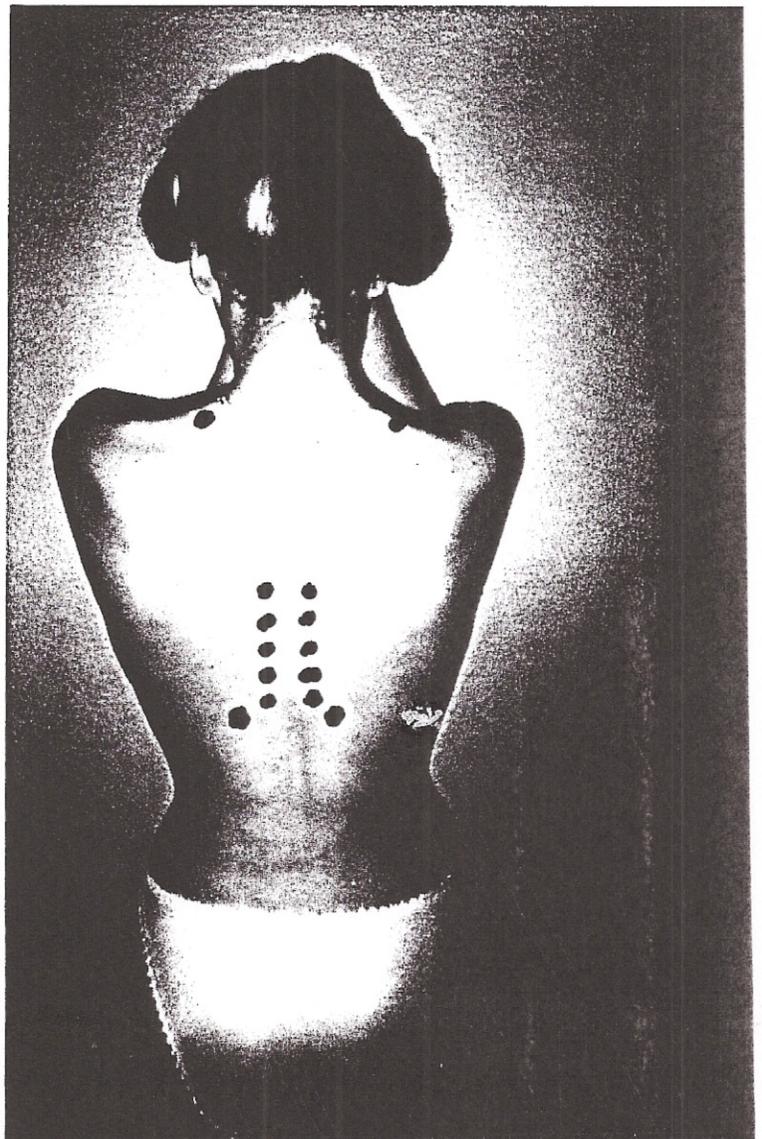
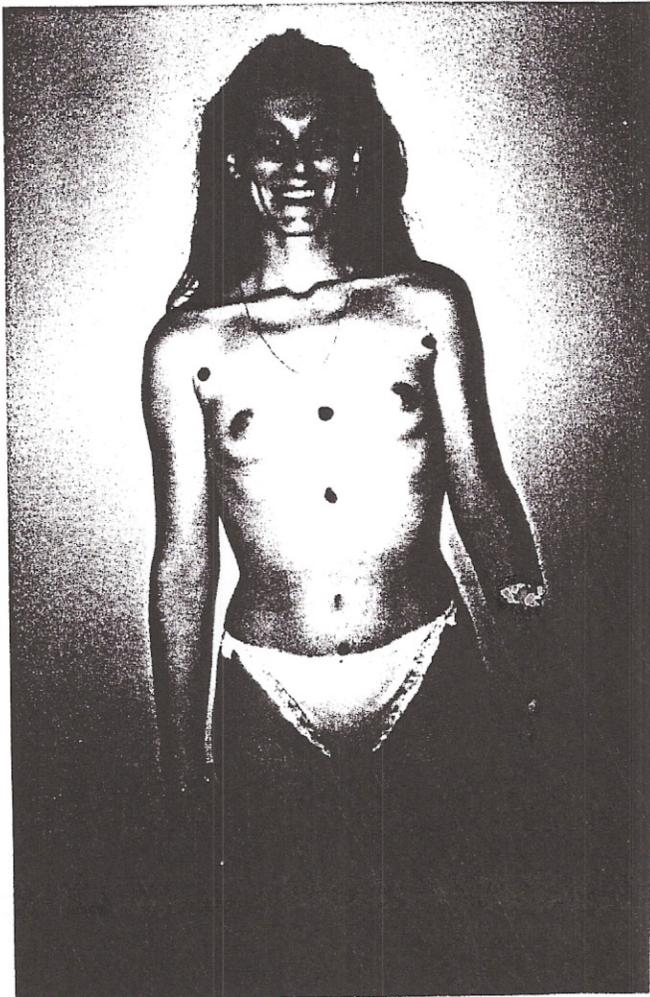
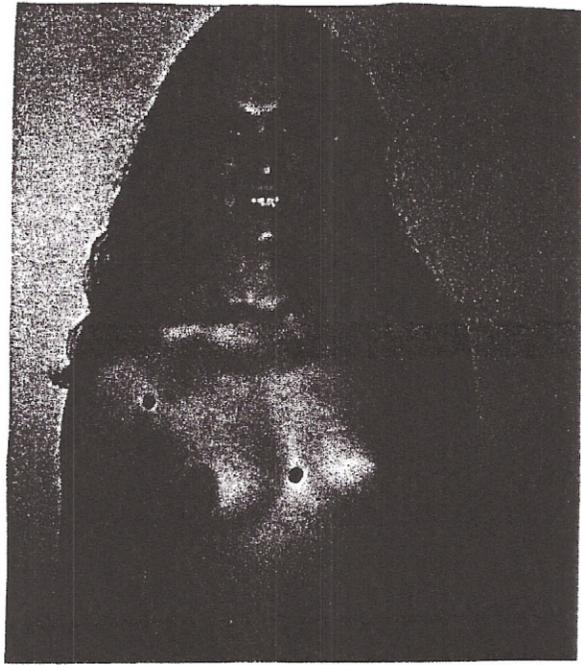
Throughout the several treatments, we observed an interesting fact. Whenever the applied time was either extended or reduced from the 25 minutes, no change would take place in the patients state. Therefore, we concluded that the most effective time interval was of 25 minutes.

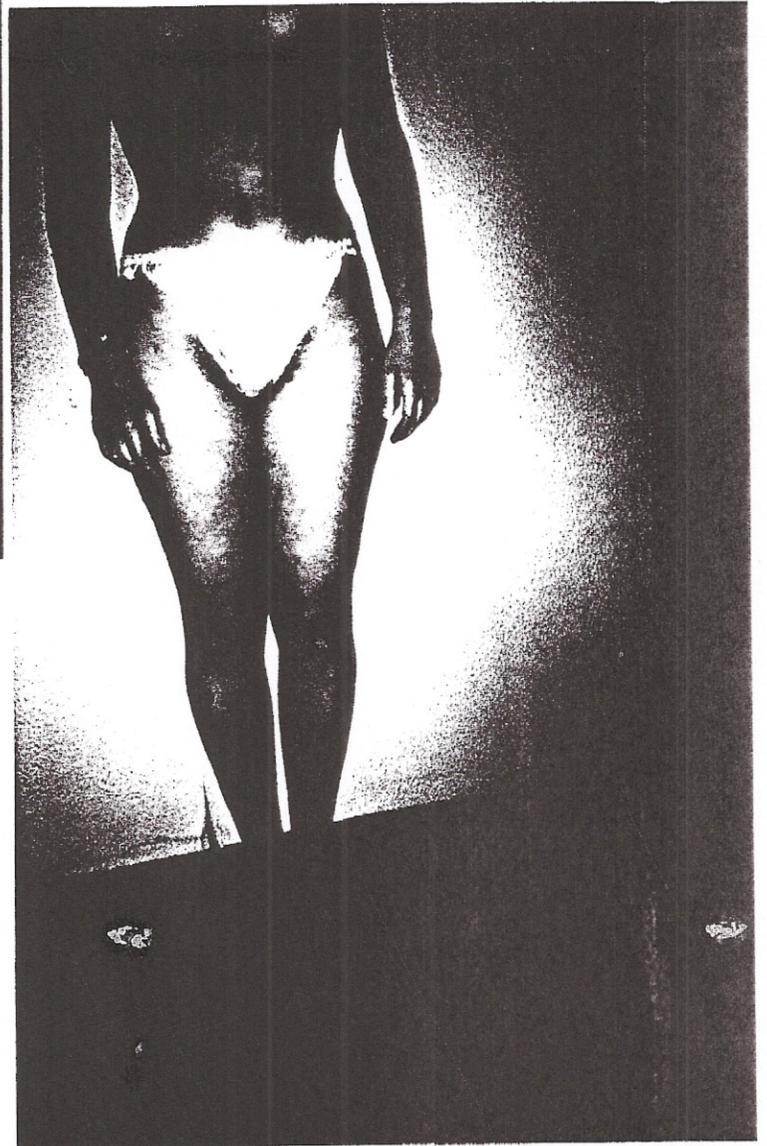
Upon several treatments, maintainig keen observation over the patients, we discovered and verified that the patients recovered quicker when more points from "Trigger Points" were applied.

#### **5- RESULTS**

In this manner, since 1980 until March of 1995, from 428 patients which presented themselves with the disease , consisting localised lesions at the level of lobular, thoracic and cranial regions, we obtained these results:

-outstanding results (cured) 66%;





The following acupoints were used in the therapy:

\* P6   \* S36   \* B10   \* B26   \* B23   \* L14   \* GV3   \* B18   \* B24  
 \* B52   \* G20   \* G21   \* G4   \* L1   \* GV16   \* GV12   \* GV17  
 \* S36   \* SP6   \* B40   \* B60

- considerable improvement 25%;
- slight improvement 7%;
- unknown effects 2%.

We also account that, before 1988, 23 to 27 treatments were necessary for the patients to recover. However, since then, only 15 to 20 treatments were needed for the recovery of the patient. This change occurred after the use of more acupoints of the "Trigger Point".

Furthermore, other substantial results were observed during the treatments from 1980 to 1988:

- patients suffering from headache significantly improved or were cured;
- the pains ceased for patients complaining from eyes pains;
- coughing was largely diminished or even disappeared;
- patients presenting gonarthrose recovered;
- majority of the patients were able to digest well.

## 5- DISCUSSION

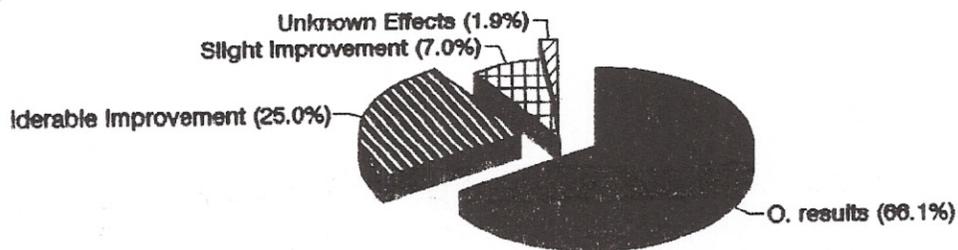
Electric Acupuncture is tremendously effective in the control and treatment of the pain which usually accompanies the Herpes Zoster.

Acupuncture stimulates the nervous fibres of the muscles and they send impulses to the spinal cord, activating subsequently the 3 endorphin producing centers (spinal cord, midbrain and pituitary hypothalamic complex) to promote analgesia. The spinal cord uses enkephalin and dinorphin to block pain messages at the time of the stimulation at low frequency and other substances at high frequency. The midbrain uses the enkephalin to activate the descendent system raphe which inhibits the transmission of the pain by the spinal cord through the synergic effects of the monoamines, serotonin and norepinephrin. The midbrain also has a circuit which bypasses the endorphinergic links at high frequency stimulation. Finally at the level of the third center, the pituitary hypothalamic complex, the hypophysis releases  $\beta$ -endorphin in the blood and in the cephalorachidian fluid which will provoke analgesie at a distance. The hypothalamus also sends long axons to the midbrain and by  $\beta$ -endorphin activates the analgesie descendent system. This third centre is activated with a low frequency electric current.

Outstanding Results	283	66.1%
Considerable Improvement	107	25.0%
Slight Improvement	30	7.0%
Unknown Effects	8	1.9%
<b>TOTAL</b>	<b>428</b>	<b>100.0%</b>

Results of Electric Acupuncture on the Treatment of Herpes Zoster

### Results of Electric Acupuncture on the Treatment of Herpes Zoster



When the needles were placed near the pain local ("Trigger Point") they were maximizing the functioning circuit from the endorphin producing nucleus of the spinal cord (namely enkephalin and dynorphin) and were equally stimulating the endorphins producing nucleus located at the other 2 centres. When the needles were distally placed to the pain local, they only activated the midbrain and the pituitary hypothalamic complex, without the benefits of the stimulating effects of the centre placed in the spinal cord. So we may refer that the nuclei located in the midbrain and in the pituitary hypothalamic complex produce analgesia along the body while the endorphins producing nucleus at the level of the spinal cord produces only local analgesia.

It was remarked that the needles placed locally produced an analgesia of greater intensity than those placed distally because they stimulated all the 3 centres (that is the reason of the results obtained in the treatment of the other pathologies occurring during the therapeutic used for the Herpes Zoster). However we used 2 types of treatment together.

Another factor we had in mind during the treatments and of big importance in the attainment of analgesia by acupuncture was the relationship between intensity/frequency of the electric current, once it determines which neurotransmitters must be liberated. Some authors demonstrated that the low frequency stimulation produces analgesia through the liberation of endorphins while the high the high frequency stimulation promotes the liberation of monoamines (serotonin and norepinephrine).

However the roll played by the monoamines in analgesia is being studied by us. Serotonin projections coming from the raphe to the higher centres may mediate analgesia. Descendent projections in the spinal cord (by dorsolateral tract) may act in synergism with the descendent effects of the norepinephrine to block the pain transmission in the spinal cord.

It is interesting to mention that the type of analgesia obtained with the use of the two types of frequency was different. So we have observed that using a low frequency/high intensity electric current could produce a weak analgesia in the beginning, but more important, of long duration, passing over the 25 minutes of the treatment duration and even lasting from 30 minutes to several hours. It is also important to refer that the effects are cumulative and results are improved after various sessions of treatments. On the contrary, the high frequency/low intensity electric current in the beginning was faster but of short duration without

cumulative effects.

It is interesting to mention that the association of electric acupuncture with psychotherapy sessions has improved a lot the results obtained in the treatment of the Herpes Zoster. Some scientist have demonstrated, and as previously referred, that the brain produces endorphins and that emotional states are created by the release of this chemicals. An intereting revelation is that endorphins and other chemicals like them are found not just in the brain but in the immune system, the endocrine system and throughout the body. These molecules are involved in a psychosomatic communication network. So endorphins can be considered as a chemical which binds the mind and the body. David Ferton, professor of the Neurophysiology Department in Chester University (USA), discovered through his research in immunology and the braind, that the  $\beta$ -endorphine does not merely function with the receptors in the braind. Numerous receptors were detected throughout the body and even on the surface of a group of white blood cells known as Natural Killers (NK). The  $\beta$ -endorphine was found to act upon these receptors. He proved that whenever -endorphine was detected in the brain, the activity of NK cells increase considerably and augment the immunity strength offering consequently protection to the body from diseases.

According to various studies made by us, there is evidence that Acupuncture-Moxibustion induces an "auto-regulation" of the immune system, acting as an effective immunomodulator, probably due to its active actions towards the macrophages and the population of T "helper" cells. The later through the IL2, induce a proliferation of T lymphocytes with citotoxic activity and NK cells. Then these changes bring about an influence over the function of the other organs and its activities.

At last, it is interesting to refer that the quantitative and qualitative alterations that occurred in the patients throughout the course of the therapeutic, maintained constant after the treatment.

## 6- CONCLUSION

According to these results, we conclude that the use of more points of the "Trigger Points" on patients suffering from Herpes Zoster, increases

the efficiency of the treatment by 25% compared to previous methods.

Therefore we conclude that Electric Acupuncture is extremely effective for the treatment of Herpes Zoster.

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