

## INTRAVAGINAL ELECTRIC STIMULATION IN THE TREATMENT OF CHRONIC PELVIC PAIN SYNDROME

### Hypothesis / aims of study

To evaluate the efficacy of intravaginal electric stimulation in women with chronic pelvic pain syndrome (CPPS).

### Study design, materials and methods

Between May 2002 and February 2004, 24 women with CPPS with any apparent cause were evaluated. They underwent 10 sessions of intravaginal electric stimulation (IVES). A program for treating chronic diffuse pain, with a frequency of 8Hz, variation in intensity and frequency, pulse length of 1msec, and adjustment to the bearable intensity of each individual patient (in milliamps) was utilized. Treatment consisted of 30-minute applications, 2 or 3 times per week, and the pain was evaluated using a visual analog scale (VAS) before and after each session and immediately after completion of the total treatment. The women were asked to evaluate the pain 2 weeks, 4 weeks and 7 months following the end of treatment.

### Results

All women completed the study program. Mean age was  $35.8 \pm 8.5$  years (mean  $\pm$  SD) and parity was  $2.0 \pm 1.8$  (mean  $\pm$  SD). Among the women in this study, 54.2% had distinct diseases associated with CPPS, 41.7% had orthopedic alterations that could have influenced the pain and 12.5% had some psychosomatic factors associated with the pain. The number of women with reduced pelvic pain after IVES was similar among those with confirmed pathology (9 of 13) and those without (7 of 11). Dyspareunia was present at the beginning of treatment in 75% of the women and in 25% after treatment ( $p=0.0005$ ), however, whether it was introital or deep dyspareunia was not noted. When the intensity of the pain was compared over time, it was observed that IVES significantly reduced it ( $p<0.0001$ ). The intensity of pain was significantly lower at all times evaluated when compared with the pain at the initiation of the study ( $p<0.05$ ) (Figure 1). VAS showed values (mean  $\pm$  SEM) for the initiation of the study of  $8.3 \pm 0.4$ , as compared to  $1.0 \pm 0.4$  the end of treatment,  $2.8 \pm 0.7$  2 weeks after,  $3.2 \pm 0.8$  4 weeks after and  $2.1 \pm 0.7$  7 months after. A brief increase in complaints of pelvic pain was observed after the end of the treatment, but this increase was not significant. When the pain was categorized according to the VAS, 66.7% of the women reported intense pain at the beginning of the study, whereas 7 months after treatment, a similar proportion of women reported no pain. Two weeks after the end of treatment, 50% and 8.3% of women had no or slight pain, respectively. Four weeks after treatment 45.8% of women had no pain and 20.8% had slight pain; 7 months after treatment, 66.7% had no pain and 8.3% slight pain.

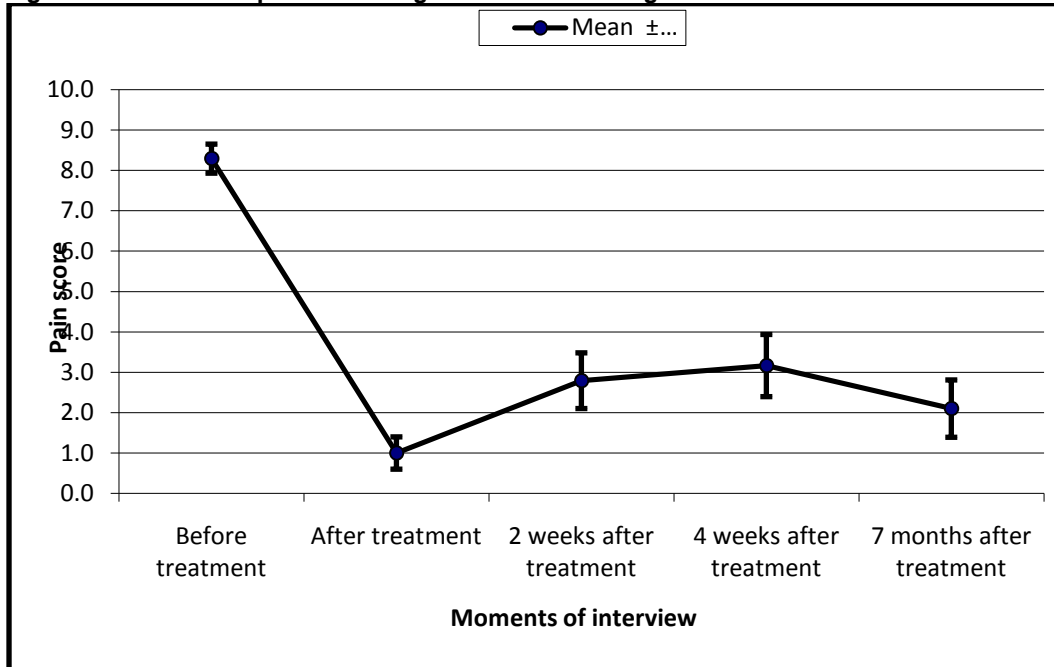
### Interpretation of results

The results of this study suggest that intravaginal electrical stimulation was effective in the treatment of women with CPPS and these results are in accordance with the previous data, suggesting that this type of treatment presents encouraging results for the indication of the use of an electrical current. The time of follow-up of the women treated for CPPS with electrical stimulation varies widely throughout the different studies. In this study, follow-up was carried out for seven months after the end of treatment and this is in accordance with previous publications. IVES was effective in maintaining pain relief in this cohort of women during the period of follow-up. Although these results are encouraging, the fact that one in four women presented intense or moderate pain at the end of the post-treatment follow-up period must be considered. More studies must be conducted to evaluate the duration of the effect of low frequency electrical stimulation on the relief of CPPS over longer periods of follow-up.

### Concluding message

IVES was effective when utilized for the relief of pain in women with CPPS even up to seven months after treatment. Electrical stimulation is a therapeutic resource frequently used in pain relief since it is free of side effects, is inexpensive, non-invasive, easily applied. Therefore, it should be considered a therapeutic option for women with CPPS to improve their quality of life.

**Figure 1. Evolution of pain according to the visual analog scale**



<i>Specify source of funding or grant</i>	Supported in part by the Coordenadoria de Aperfeiçoamento do Pessoal de Ensino Superior - CAPES, Ministry of Education, Brazil.
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Ethics Committee, School of Medicine, Universidade Estadual de Campinas, Campinas, Brazil
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes