

## Assessment of Electroceutical Treatment for Ovarian Cysts And Concomitant Symptoms

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### ABSTRACT:

The mechanisms of action and clinical applications of specific-parameter electrical fields (electroceutical medicine) in the treatment of ovarian cysts and concomitant symptoms are reviewed. Possible mechanisms of action include an increased level of cyclic AMP, stimulation of endorphin release, anti-inflammatory action, and steroidogenesis resulting from normalization of intercellular communication. Favorable results in the clinical setting were achieved in the treatment of ovarian cysts. Treatment success was reflected in a significant reduction in overall cyst sizes as well as amelioration of various concomitant symptoms, including fever, chills, inflammation, and abdominal pain. Specific electroceutical treatment was shown to have potent analgesic and anti-inflammatory effects. No adverse effects have been reported.

**Keywords:** Electroceutical medicine; cyclic AMP; endorphins; anti-inflammatory action; steroidogenesis; ovarian cysts

## **Introduction:**

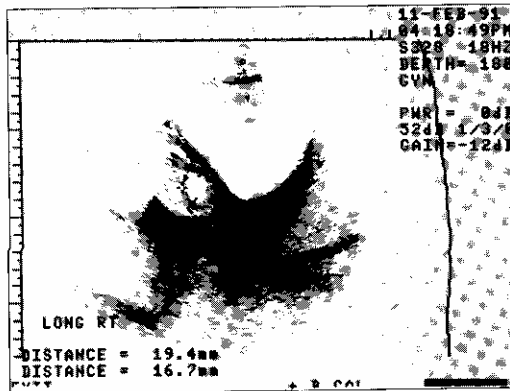
Electroceutical medicine is a well-documented medical treatment with both stimulating and healing effects. Electroceutical medicine facilitates individualization of electromedical treatment according to the pathogenesis and pathophysiology of the symptoms present. The desired treatment effect, i.e., anti-inflammatory action, is then converted to the appropriate mode and delivered safely and non-traumatically into the patient's body. Correct anatomical localization of the desired treatment effect is ensured by following established treatment protocols and suggested medical/scientific guidelines.

Two main classes of physiological effects have been categorized and described by the Clinical Electromedical Research Academy (CERA). First, *Stimulatory Class (St)* effects -- the physiological effects achieved by inducing repeated action impulses (depolarization and repolarization activity) in excitable cells, and second, *Multi-facilitory Class (Mf)* effects -- all other physiological effects occurring in the body without inducing repeated action impulses. All effects are accomplished with regard to both systemic and local patient-tolerance thresholds.

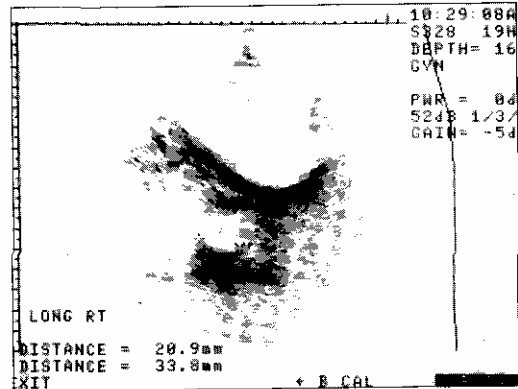
Specific electroceuticals are capable of producing healing effects in deep-tissue structures. This is accomplished by summing an optimum intensity-dosage and delivering it unidirectionally into the depths of the tissue for correct anatomical placement and desired treatment effects. Electroceuticals are associated with regeneration, enhanced facilitation of metabolism, diffusion and filtration processes, and potent analgesia (including neuron blockade).

## **Electroceutical Medicine and Ovarian Cysts:**

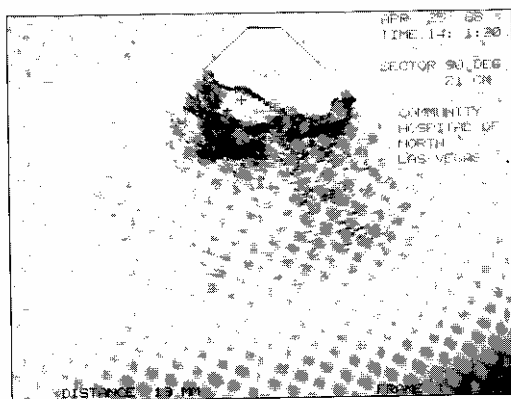
Eighteen female patients with ovarian cysts confirmed by diagnostic ultrasound were selected for electroceutical treatment. Patients ranged in age from 18 to 36 years and had a minimum 2-year history of ovarian cysts measuring 4.2 to 5 cm without any interim decrease in overall cyst size. Patients were symptomatic, with moderate to severe lower abdominal pain, fever, and noticeable inflammation. All patients refused continued treatment with antibiotics, hormones, or surgical intervention. The established treatment was administered daily for 15 - 20 minutes (Monday through Friday) at an intensity level that exceeded the sensory perception threshold but remained below motor threshold. In all cases, fever, chills, and pain subsided after 3 days of treatment. By the 8th treatment total remission was obtained subjectively. After the 15th treatment (designated as the full therapeutic course for this study), repeat diagnostic pelvic ultrasound revealed the absence of ovarian cysts or a reduction in size to 0.5 cm. Figures 1 through 4 illustrate the response of two patients to treatment. It is hypothesized that treatment success in our patients was mediated by anti-inflammatory action, increased levels of cyclic AMP, stimulated release of endorphins, and improved intercellular communication enhancing steroidogenesis in the gonads.



**Fig 1.** (Case No. 1). Pelvic ultrasound pre-treatment.



**Fig 2.** (Case No. 1). Pelvic ultrasound post-treatment.



**Fig 3.** (Case No. 2). Pelvic ultrasound pre-treatment.



**Fig 4.** (Case No. 2). Pelvic ultrasound post-treatment.

## Discussion:

Electroceutical treatment of ovarian cysts and concomitant symptoms is based on the effect of cyclic AMP as well as on steroidogenesis in the gonads. Suppression of ovarian cyst symptoms, reduction in ovarian cyst size, suppression of painful menstrual cramps, and facilitation of free menstrual flow are related to stimulation of progesterone synthesis in the corpus luteum by luteinizing hormone (LH) in a way that closely parallels the adrenal system. Marsh and Savard (1964) established an *in vitro* system with bovine corpus luteum slides that responded to LH, and then performed a series of experiments designed to determine if the Haynes hypothesis was applicable to the corpus luteum. Haynes found that LH specifically increased the activity of luteal phosphorylase concomitant with an increased steroidogenesis and that exogenous cyclic AMP stimulated progesterone synthesis. In addition, they found that cyclic AMP caused the same pattern of incorporation of radioactive steroid precursor as LH.

In collaborating experiments, Marsh et al, 1966, studied the relationship between cyclic AMP and steroidogenesis in the corpus luteum. Those results appear to indicate that LH increased cyclic AMP levels before progesterone synthesis. LH was inactivated by exposure to hydrogen peroxide at room temperature; prolactin, ACTH, epinephrine, and glucagon failed to stimulate either cyclic AMP accumulation or steroidogenesis. Therefore, it appears that electroceutical medical treatment works in a similar way to suppress symptoms of ovarian cysts.

This study dealt with clinically common cysts measuring more than 4 cm. Cysts may be single but are usually multiple, and can be either benign or malignant. Typically, cysts larger than 4 cm are associated with painful abdomen, fever, chills, and amenorrhea or menorrhagia.

Ovarian cysts can be simple, follicular, or luteal. Follicular cysts are so commonplace that they are often considered physiologic variants.

None of the 18 patients participating in this study received any oral or intra-muscular pharmacological treatment. The subjective patient response was almost immediate relief of pain and reduced "bloated" feeling. All experienced relief from menstrual cramps followed by free menstrual flow. A possible explanation involves the actions of hypophysiotropic hormone together with certain other neuropeptides such as Substance P, neurotensin, and endorphins that constitute a class of neurotransmitters.

**It is also hypothesized that electroceutical treatment has the following direct and indirect effects on cysts:**

- 1. Normalization of pathologic metabolic processes in the abnormal cystic lesion, probably mediated by electric conformation changes within the cell membrane (imitation of hormone effects), causing second messenger formation (cyclic AMP).**
- 2. Direct influences on cell communication, for instance, a "cleaning effect" on gap junction channels, resulting in partial or total restoration of intercellular communication processes that assists in enhancing steroidogenesis.**
- 3. Facilitation of all metabolic processes in general, such as equilibration of metabolic concentration differences and increased kinetic energy of molecules.**
- 4. Activation or normalization of immune system cells that could increase phagocytic activity and the release of substances inhibiting cyst growth.**
- 5. Stimulation of the sympathetic nervous system leads to norepinephrine release. Norepinephrine activates adenylate cyclase, which causes an elevation in cyclic AMP in all cells involved in anticystic activity.**

## **CONCLUSION**

We have presented and discussed the application of electroceutical medical treatment for ovarian cysts and concomitant symptoms. Favorable results were achieved in all patients receiving treatment, with no report of adverse side effects. It is also probable that the cysts might have undergone enlargement in size and/or malignancy in the absence of treatment.

It has been demonstrated that electroceutical treatment results in synthesis of progestational steroids in response to LH. Other well-documented studies (Dorrington et al) have provided considerable evidence for the involvement of cyclic AMP in the treatment of ovarian disease. Exogenous cyclic AMP specifically stimulates steroidogenesis. Explicit electromedical treatment has been shown to increase the level of cyclic AMP by as much as 500% (Brighton et al). We believe that our success in reducing ovarian cyst size and resolving concomitant symptoms primarily resulted from increased levels of cyclic AMP.

The advantages of electroceutical medical treatment in the management of ovarian cysts and concomitant symptoms are presented herein for the first time in the medical literature. Although no adverse effects were found in any patient, we suggest caution in the application of these treatment modalities to more selected cases and in other areas. We believe that there is enough evidence to support the use of electroceutical medicine in all areas of ovarian cysts and related pathology. It would be wise to note that even in cases of ovarian cyst where surgical intervention is deemed necessary, the overall reduction in cyst size would undoubtedly benefit the surgeon in completing the procedure. Finally, we believe that electroceutical medical treatment places us on the threshold of discovery: it is time to apply our knowledge in all clinical settings.

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