

USING SCENAR THERAPY IN THE EARLY POSTOPERATIVE PERIOD AFTER SURGERY FOR TUBO-PERITONEAL INFERTILITY

(Impact of Technology on Fertility, Pregnancy and Childbirth)

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One of the current issues of restorative medicine in gynecology is the development of new effective non-drug therapies for tuboperitoneal infertility (TPI) which is the most common, well-researched, but most treatment-resistant type of infertility in women.

Rehabilitation treatment in the early post-surgical period after tuboplasty (also known as tubal reversal) is of high priority in solving this problem. Therefore, alternative rehabilitation therapies need to be developed as the incidence of post-surgical complications is very high: recurrent adhesions, reocclusion and functional incompetence of fallopian tubes in 70-80% post-surgical patients.

In the early postoperative period after laparoscopic operations for TPI, rehabilitation therapy must solve some problems such as:

- providing analgetic and anti-inflammatory effects,
- intensifying microcirculation processes,
- preventing the development of adhesive process in the small pelvis,
- maintenance of fallopian tube patency,
- faster rehabilitation,
- reducing emotional stress.

New pathogenetically substantiated methods can be considered effective if they simultaneously act on:

- the driving mechanisms of pathogenesis,
- increase of therapy effectiveness and result in less drug intake,
- improvement on the patient's health as a whole.

SCENAR-therapy is scientifically interesting and prospective treatment modality in early postsurgical period after tuboplasty, which combines the principles of physio- and reflexotherapy.

Clinical research was conducted to develop and provide scientific background for SCENAR-therapy in multiple rehabilitation treatment of patients after tuboplasty.

SCENAR therapy, based on the principles of neurotherapy and non-invasive neuromodulation, which is applied using SCENAR device consists of three areas or levels of action, which makes it a multifunctional technique used as:

- a technique for neurophysiotherapy or neurofunctional regulation
- a local technique for restorative and regenerative treatment
- a method of non-invasive neuromodulation.

130 patients participated - they were women after laparoscopically assisted tuboplasty, of similar age (average age 28.4 ± 1.7 years), with similar duration of the disease (in average 4.97 ± 0.19 years), concomitant pathologies and clinical and functional data. Study group included only women without any pathological changes in their endocrine profile. All the examined women were divided into 3 groups.

In our review we will only describe the group that received a combined treatment with drugs complemented by SCENAR therapy.

So, in early post-surgical period, starting from the 1st day, patients received drug therapy and electric pulse therapy with SCENAR-1-NT device following the combined method that included:

- external abdominal and sacral method (10–15-minute stimulation) - Zones of General Regulation «PALM Zone»;
- local vaginal method (15-minute stimulation) with the special external electrodes for SCENAR devices
- stimulation of acupuncture points LI11, St36, SP6 for 2 minutes each using the subjectively dosed mode D0 with Frequency 90Hz or D2(dose)

Total treatment time was 35-40 minutes, 10 daily sessions during the treatment course.

All patients underwent general clinical and laboratory examination, ultrasound investigation of the blood flow in the uterine and ovarian arteries using the Doppler sonography; analysis of general antioxidant activity of the blood plasma and intensity of free radical oxidation processes; cardiointervalography to evaluate patient's autonomic status; questionnaire survey to evaluate patient's autonomic status; analysis of patient's psychological state using the questionnaire survey to calculate the index of general psychological wellness.

2-3 months after the rehabilitation treatment all the patients had hysterosalpingography with water solutions of contrast agents following the standard practice. The restoration of reproductive function was stated when the woman got spontaneously pregnant within one year. The male factor in women's infertility was excluded basing on spermogram analysis and andrologist consultation.

The major complaints were weakness, lack of energy, indisposition, headaches, and increase in the axillary temperature up to 99.5 F, cramps, and intestinal dysfunction. After the treatment, a regression of clinical symptoms was observed significantly early – by 8th-9th day. This is most likely due to SCENAR capability to produce anti-inflammatory and analgetic effects.

An important aspect that determines the clinical effectiveness of rehabilitation treatment is the fertility index that depends, particularly but not exclusively, on fallopian tube patency which was 74%. The assessment of treatment effectiveness as to such criterion as pregnancy occurrence showed 66%. So, the combined method produced higher indices for maintenance of fallopian tube patency and occurrence of spontaneous pregnancy.

Thus, SCENAR-therapy in multiple drug therapy in early postsurgical period improves treatment effectiveness as a prophylaxis of reocclusion of uterine tubes and increases the generative function by 43%.

SCENAR-therapy in rehabilitation treatment of patients in early postsurgical period after tuboplasty:

1. contributes to improvement of regional hemodynamics, which is proved by the 22% increase of resistance index in the uterine arteries and 23% increase of the resistance index in the ovarian arteries, in turn, decreases the intensity of inflammations in the organs that are reflex-related to the area treated, and blocks pain receptors;
2. improves trophic functions of pelvic organs, which improves functional activity of fallopian tubes, prevents adhesions, and promotes higher percentage of preserved tube patency and occurrence of spontaneous pregnancy in the long-term period
3. neutralizes negative changes in the state of lipid peroxidation system and antioxidant system;
4. greatly decreases lipid peroxidation and increases antioxidant activity;
5. decreases the stress of body regulatory mechanisms;
6. decreases the influence of sympathetic and increases the tone of parasympathetic systems, which is indicative of increased stability of autonomic regulation;
7. provides evident psychocorrective effect, manifested as decrease of anxiety level, depression, increase of self-control, general health and emotional well-being;

8. helps the patients to overcome the postsurgical period easier, decreases the intensity of pain syndrome, and promotes reduction of the in-hospital period.

Summarizing all the above, we should emphasize that SCENAR-therapy is an effective treatment modality for rehabilitation of patients after tuboplasty in early postsurgical period. A significant positive effect provided by combined method of SCENAR-therapy is most likely due to the mechanism of therapeutic action of vaginal physical treatment that is based on reflex response realized neurohumorally, and the groups of vaginal acupuncture points make trigger zones that unite primary acupuncture channels – specifically, the stomach, spleen-pancreas and conception vessel meridians that can restore the reproductive function.

However, tuboplasty was the main approach to correct tubal infertility situations for about a century. With the development of IVF technology, IVF has increasingly supplanted tuboplasty as a treatment for tubal infertility. Currently, reconstructive plastic surgery on the fallopian tubes has been avoided due to the high percentage of ectopic pregnancies. SCENAR is a very successful therapy in the treatment of female infertility.

The developed rehabilitation therapy that includes SCENAR-therapy as a component of multiple treatment in the early postoperative period after tuboplasty can be recommended for practice in the system of medical and prophylactic institutions.