

THE EFFECT ON THE VAGINAL SENSITIVITY OF EMG PELVIC FLOOR EXERCISE AND ELECTROSTIMULATION WITH HMT2000 (HMT, INC., KONTINENCETM)

Aims of Study

Purpose of our study is to show that the biofeedback pelvic floor muscle exercise and electrotherapy by HMT 2000 (HMT, inc., Kontinence™) increase the vaginal sensitivity and so is helpful for some forms of sexual dysfunction. EMG biofeedback exercise and electrotherapy have been thought to make vagina more sensitive and pelvic floor muscle stronger and aware clinically. Those functions have been thought to improve some forms of sexual dysfunction.

Sensitivity of the vagina can be measured through electro and pressure touch stimulation. We check electrosensitivity through electrostimulation function of HMT2000 (HMT, inc., Kontinence™). A vaginal probe is inserted into patient's vagina and electrostimulation intensity is increased slowly. The point of electrostimulation intensity to be sensed by the patients first is recorded. That point is termed as the "electrosensitivity value" in that treatment session.

Methods

Fifty-two patients were enrolled to this study.

Before every treatment session we insert the vaginal probe and increase electrostimulation intensity slowly. We ask the patients to tell when they feel the first sensation of electrostimulation and record that electrostimulation intensity which patients feel first. That is the "electrosensitivity value" in each session. Maximum volt (100%) that HMT 2000 can apply is 85 volt. Measured unit of "electrosensitivity value" is %. We select the patients who are checked at least more than 3 times.

Treatment was applied for 20 minutes electrical stimulation with Variant mode and 5 ~ 10 minutes EMG biofeedback PFM exercise twice per week for six weeks with total 12 sessions using clinical device HMT 2000 (HMT, Inc., Kontinence™). After patient was able to follow the target wave, we recommended home self-training or home trainer, HMT21 (HMT, Inc., Kontinence™).

Results

Total fifty-two patients show age (51 ± 9) weight ($58 \text{ kg} \pm 8.3$) height (158 ± 4.4)

The "electrosensitivity value" - the electrical intensities that patients feel electrostimulation first in each session are following.

	1	2	3	4	5	6	7	8	9	10	11	12
Average	20.4	19.7	18.6	19.5	17.8	18.5	18.5	18.3	17.3	16.5	14.2	15.2
Stdev	8.0	7.5	6.0	7.1	5.8	5.9	5.3	6.3	5.1	3.8	3.8	5.2

The p values of "electrosensitivity value" of each treatment session for that of first session are following

	2	3	4	5	6	7	8	9	10	11	12
	0.31	0.1	0.27	0.04	0.11	0.11	0.12	0.03	0.004	*	0.0038

* = 0.00006

The results show the significant increase ($p = 0.004$) of "electrosensitivity value" since 9th treatment session.

Conclusions

Biofeedback pelvic muscle exercise and electrotherapy by HMT200 (HMT, inc., Kontinence™) increase "electrosensitivity value" since 9th session significantly. Such result may be possible

through axonal budding and increase of blood supply to vagina by EMG biofeedback exercise and electrotherapy. The increase of "electrosensitivity value" is considered as the objective support that EMG biofeedback exercise and electrotherapy by HMT 2000 makes the vagina more sensitive and so is effective in some forms of sexual dysfunction such as arousal, orgasmic dysfunction especially with neurovascular etiology.