PELVIC **MUSCLES STRENGHTENING** BY **HIFEM®** PROCEDURE AND ELECTROSTIMULATION FOR TREATMENT OF **PELVIC FLOOR DYSFUNCTION**

ELECTROMYOGRAPHIC EVALUATION OF THE PELVIC MUSCLES ACTIVITY AFTER HIGH INTENSITY FOCUSED ELECTROMAGNETIC PROCEDURE AND ELECTRICAL STIMULATION IN WOMEN WITH PELVIC FLOOR DYSFUNCTION

Silantyeva Elena MD, PhD, Doctor of Medical Sciences[1]; Zarkovic Dragana MSc[2]; Soldatskaia Ramina MD[1]; Astafeva Evgeniia MD[1], Mekan Orazov MD, PhD[3].

1. Hospital Lapino MD Medical Group, Moscow, Russia
2. Charles University, Faculty of Physical Education and Sport, Department of Anatomy and Biomechanics, Prague, Czech Republic
3. RUDN University, Medical Faculty, Moscow, Russia

Published in Sexual Medicine journal: February, 2020

HIGHLIGHTS

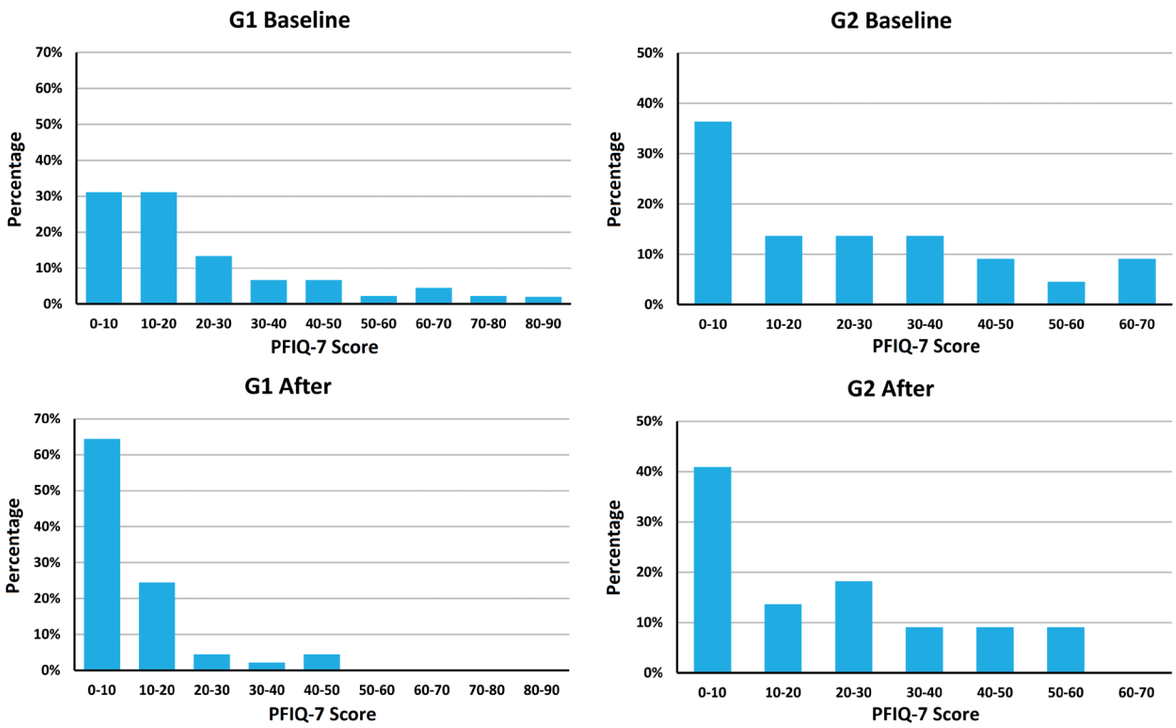
- **HIFEM procedure** considerably **enhanced pelvic** floor **muscles (PFM) activation** in subjects with **pelvic floor dysfunction** (PFD).
- Subjects were able to **produce stronger contractions** of **greater endurance** after HIFEM.
- **HIFEM procedure** resulted in far greater **improvement** in PFIQ-7 questionnaire when compared to electrostimulation.
- **36% of HIFEM patients** reported a score of 0 on PFIQ-7 after the treatments.

DESIGN AND METHODOLOGY

- **Two groups** of post partum women with various PFD symptoms were established and treated by HIFEM (N=50, 1.76 deliveries on average) or electrostimulation (N=25; 1.56 deliveries on average).
- Both treated groups completed **10 therapies** according their allocation.
- **Electromyographic** (EMG) evaluation was used to determine **activation of PFM**.
- **A control group** (N=20, 1.25 deliveries on average) was included to determine EMG normative values.
- **Pelvic Floor Impact Questionnaire 7** (PFIQ-7) was used to asses life impact of PFD.
- Data was collected at the baseline and after completion of treatments.

RESULTS

- **HIFEM significantly** (P<0.001) modified **PFM activity**, since the EMG results of HIFEM group moved towards the values of healthy population.
- The mean change of **EMG values** after HIFEM ranged **from 48% to 59%**, while electrostimulation resulted in mild-to-moderate improvement of 7-36%.
- In comparison to electrostimulation, HIFEM patients were able to generate PFM contractions of **higher intensity and endurance**.
- PFIQ-7 questionnaire showed significantly (P=0.01) more pronounced results in **HIFEM group (improved by 57.16%)**, than in electrostimulation group (improved by 32.18%)
- Additionally, **35.56% of subjects** reported **zero PFIQ score** after HIFEM and almost 90% of subjects from HIFEM group showed none or mild life impact of PFD post treatment.
- **HIFEM procedure** was **substantially more effective** in restoration of PFM strength and treatment of PFD in postpartum women when **compared** to the **electrostimulation**.



The frequency of PFIQ-7 scores documented in the HIFEM (G1) and electrostimulation (G2) groups. There is a substantial shift towards lower scores in HIFEM group after the treatment; since the scores over 50 were entirely eliminated from responses.