IS A CELL APP USEFUL IN THE TREATMENT OF URINARY INCONTINENCE SYMPTOMS?

Hypothesis / aims of study
To develop and to test a cell app able to help urinary incontinence women to perform pelvic floor muscle training at home.

Study design, materials and methods
15 urinary incontinent patients from a Women Health Center in Brazil were followed from January to March 2017. Sample study mean age and body mass index were 43 (± 10.13) and 27(± 3.95 kg/m²) respectively. To access severity of urinary incontinence symptoms, patients were initially evaluated using International Consultation on Incontinence Questionnaire Urinary Incontinence - Short Form (ICIQ UI-SF), Female Sexual Function Index (FSFI) and Questionnaire for Urinary Incontinence Diagnosis (QUID). To access pelvic floor muscle (PFM) function, patients were submitted to bi-digital palpation (PERFECT scheme using modified Oxford grading scale) and surface electromyography (EMG). At this first session, patients had the opportunity to experience Biofeedback supervised by a physiotherapist who assure they were perform PFM correctly. So, familiar with this technique, patients were asked to perform exercise at home using a cell app (Figure I) specially developed for this proposal. The dispositive uses an Android Operating System, able to keep data at a Microsoft azure platform cloud to predict patient adherence to protocol and uses the same visual graphic presented by Biofeedback as a guide for PFM training. 30 days after initial evaluation, patients returned and the same initial protocol were applied and the results compared. Additionally a scale for the subjective improvement index (table I) (1) was obtained.

Results
Comparison between initial and final values showed significant difference in ICIQ UI-SF scores (p=0.0007), QUID scores to stress urinary incontinence (p=0.0002) and Overactive Bladder (p=0.0132) but no difference when comparing FSFI results. The PERFECT Scheme showed significant improvement at “Power” (p=0.0313) and “Fast” (p=0.0068) component. 66% [n=10] of the patients referred subjective improvement of the symptoms. 26,66% [n=4] of them referred no changes and 6,66 [n=1] referred to be worst of the symptoms.

Interpretation of results
The followed patients had a satisfactory improvement of the urinary incontinence symptoms, pelvic floor muscle function and after 30 days were satisfied with the treatment.

Concluding message
The app seems to be a useful complementary dispositive for the treatment of urinary incontinent patients and future investigations with this tool must be considered.

Figure I- Graphic used at cel app to guide patients to PFM training (time to hold and time to repeat)
Table I: Women recorded how they perceived the condition before and after treatment on a 5 point scale

Subjective assessment n(%)  
Continent 0 (0)  
Almost continent 0 (0)  
Improved 10 (66,66)  
Unchanged 4 (26,66)  
Worse 1 (6,66)

References

Disclosures
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