

## IMPROVEMENT OF QUALITY OF LIFE IN WOMEN UNDERGOING PELVIC FLOOR TRAINING

### Hypothesis / aims of study

Our aim was to find out if pelvic floor training reduced the negative impact on incontinent women's quality of life.

### Study design, materials and methods

Our study has a pre-experimental design<sup>1</sup>. The participants were treated with pelvic floor muscles exercises during the year 2010.

Inclusion criteria were:

- to be diagnosed with urinary incontinence
- to have full use of their mental faculties
- to have signed an informed consent form

Exclusion criteria were to suffer from any neurological damage of the sacral reflex and to have repetitive lower urinary tract infections.

The sample size calculation was based on a one-tailed hypothesis. The size needed for a desired statistical power of 95% (alpha= 0.01) was 51 women. Having in consideration the possibility that some of them could drop out the survey, we increased the sample size in a 10%, which made a definitive 56-woman sample.

To measure the impact on quality of life, we used the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF), validated in Spanish by Espuña et al<sup>2</sup>. This questionnaire contains 3 items, which score from 0 to 21, and allows to determine the frequency and quantity of urine losses, as well as the extent to which those losses affect the woman's quality of life. We administered this questionnaire during the first, fifth and the 3-month follow-up sessions.

The treatment consisted in a first session to assess the pelvic floor function, followed by other 5 to 8 weekly sessions of biofeedback-assisted pelvic muscles exercises, with a length of 30 minutes approximately<sup>3</sup>. The main objective of the treatment was that our patients achieved a total learning of the pelvic floor muscles exercises for their strengthening.

After the pelvic floor muscles training phase was ended, the participants were assessed 3 months later.

Data was analyzed with SPSS 17.00 for Windows.

### Results

The Student's t-test and the Wilcoxon signed rank test proved that there were significant statistical differences for  $p < 0.001$ , that is, there was an improvement of our patients' quality of life during and after the treatment.

| Pretest<br>Posttest | Mean    | SD      | t      | gl | Sig. |
|---------------------|---------|---------|--------|----|------|
|                     | 6.67857 | 3.87583 | 12.895 | 55 | .000 |

Student's t-test

|      | ICIQ Posttest – ICIQ Pretest |
|------|------------------------------|
| Z    | -6.375                       |
| Sig. | .000                         |

Wilcoxon signed ranks test

Correlation between the improvement of quality of life and the improvement of the urinary symptoms, both measured during the fifth and the 3-month follow-up sessions, was negative and statistically significant ( $p < 0.001$ ), that is, the less impact on quality of life, the major improvement of urinary incontinence.

|  |                       | Symptoms improvement after 5 sessions | Symptoms improvement after 3 months |
|--|-----------------------|---------------------------------------|-------------------------------------|
| Improvement of the impact of UI on quality of life | Pearson's correlation | -.434**                               | -.611**                             |
|  | Sig.                  | .001                                  | .000                                |
|  | N                     | 56                                    | 56                                  |

Correlation between quality of life improvement and urinary symptoms' improvement

### Interpretation of results

The impact of urinary incontinence on quality of life scored an average of 9.73 points before pelvic floor Physiotherapy, which decreased to 3.05 points after the treatment. This improvement was statistically significant for  $p < 0.001$ , according to the Student's t-test and the Wilcoxon signed ranks test. This fact makes possible to state that our therapeutical intervention, based

on biofeedback-assisted pelvic floor muscles exercises, is effective to reduce the negative impact of urinary incontinence on daily quality of life.

#### Concluding message

Pelvic floor training reduces the negative impact of urinary incontinence on the patients' daily quality of life.

#### References

1. Polit DF, Hungler BP. Investigación científica en ciencias de la salud. McGraw-Hill Interamericana. México D.F. 2000.
2. Montserrat Espuña Pons, Pablo Rebollo Álvarez y Montserrat Puig Clota. Validación de la versión española del International Consultation on Incontinence Questionnaire-Short Form. Un cuestionario para evaluar la incontinencia urinaria. Med Clin (Barc) 2004; 122(8):288-92.
3. Soltero A, Campoy P, Barrero R, Medrano E, Pérez M, Rodríguez A. Tratamiento rehabilitador en la incontinencia urinaria de esfuerzo femenina. Arch Esp Urol. 2002; 55: 1035-1046.

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|--|---|
| <b><i>Specify source of funding or grant</i></b>                           | <b>NONE</b>   |
| <b><i>Is this a clinical trial?</i></b>                                    | <b>No</b>   |
| <b><i>What were the subjects in the study?</i></b>                         | <b>HUMAN</b>  |
| <b><i>Was this study approved by an ethics committee?</i></b>              | <b>No</b>   |
| <b><i>This study did not require ethics committee approval because</i></b> | <b>The participants in the study signed an informed consent form.</b> |
| <b><i>Was the Declaration of Helsinki followed?</i></b>                    | <b>Yes</b>  |
| <b><i>Was informed consent obtained from the patients?</i></b>             | <b>Yes</b>  |