

TREATMENT OF INCREASED BLADDER SENSATION AND URGENCY WITH INTERFERENTIAL CURRENTS

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Introduction and methods

Hypothesis / Aims of study: The aim of this study is to assess the effectiveness of medium frequency electrotherapy (interferential currents) treatment for increased bladder sensation, urgency and LUTS.

Study design, materials and methods: This study consists of 100 women, complaining of increased bladder sensation and urgency (no overactive bladder) with or without incontinence as principal symptomatology between three and twelve months of evolution and who had not received previous pharmacological treatment, to which detailed history and complete urodynamic study was performed. All patients with urodynamic diagnosis of involuntary detrusor contractions were discarded from this study. Patients from Group-A (without previous treatment) was used as a control group (n = 50). Group-B patients received 18 sessions of medium frequency electrotherapy during 9 weeks, 2 weekly sessions. The study protocols were explained to patients and they were allowed to choose between complete the full treatment (2 weekly sessions during 9 weeks) or wait until the study will finish if they can complete the protocol and these patients remain to be the control group until complete it. The following analysis pertains to intervention group patients. Mean age was 52,37 years +- 16, 56 year (range 19-82). 80 patients (80%) complained of urgency, 78 (78%) of urge and mixed urinary incontinence, 68 cases of increased daytime frequency (68%) and 63 of nocturia (63%), 32 of patients complained of pain (53.1%) and 63 patients (63%) of voiding dysfunction (VD). On urodynamics testing, Urodynamic Stress Incontinence (USI) was diagnosed in 28 (28%) and it was found that none of the suffered involuntary detrusor contractions. The distribution of both groups is homogeneous and meet the normality criteria.

Treatment with medium frequency electrotherapy, interferential currents between 5500Hz and 8500Hz (Combi-200®, Gymna®), was performed using transvaginal application. The frequency was increased progressively over the first six sessions (twice a week), starting with a frequency of 5500Hz until reaching a frequency of 8500Hz, which remained until the end of treatment. At the end of the treatment performed in group B, the complete clinical history was made again to all patients.

A $p < 0.005$ was considered significant.

Results

Results: There were statistically significant differences in intervention group ($p < 0.005$) for the following symptoms urinary urgency ($p < 0.0001$), daily frequency ($p < 0.0001$), nocturia ($p < 0.0001$), pain in hypogastrium ($p < 0.0001$), feeling of incomplete emptying ($p < 0.001$).

Interpretation of results: No studies have found using medium frequency electrotherapy for the treatment of increased bladder sensation, urgency and LUTS. The studies founded were performed with low frequency electrotherapy. In our case, the results have shown great efficacy, using medium frequency electrotherapy in patients with increased bladder sensation, urgency and LUTS. Our experience supports that the choice of stimulation parameters should be individualized for each patient depending on the type of incontinence and muscle involvement. The parameters do not be the same in case of treatment of striated muscles (pelvic floor muscles) or smooth muscle (detrusor muscle of the bladder). Physiotherapy approach using sedative type electrotherapy performs well without side effects. The results of therapy we are using are encouraging not only for the effectiveness itself, which is comparable to that of the best-known conservative treatments, but by the absence of side effects resulting from this type of therapy.

Conclusions

It has been shown that treatment using medium frequency electrotherapy can be effective in the treatment of increased bladder sensation, urgency and LUTS since it improves various symptoms related to this pathology.

References

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Pre- and post-treatment results	INTERVENTION GROUP			CONTROL GROUP		
	Pre-treatment	Post-treatment	P	Pre-treatment	Post-treatment	P
Urgency	80.0%	8.7%	$p < 0.0001$	79.0%	80.00%	$p > 0.005$
Increased daytime frequency	68.0%	12.5%	$p < 0.0001$	68.5%	72.2%	$p > 0.005$
Nocturia	63.0%	0	$p < 0.0001$	65.3%	64.00%	$p > 0.005$
Pain in hypogastrium	53.1%	3.1%	$p < 0.0001$	51.4%	50.9%	$p > 0.005$
Incomplete voiding feeling	63.0%	15.6%	$p < 0.001$	66.2%	67.5%	$p > 0.005$