

EFFECTIVENESS OF INTRAVESICAL ELECTROSTIMULATION (IVES) ON NEUROGENIC NON-OBSTRUCTIVE URINARY RETENTION: RESULTS FROM A MONOCENTRIC RETROSPECTIVE STUDY.

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Hypothesis

Aims of study

Neurogenic non-obstructive urinary retention (N-NOR) represents a therapeutic challenge for urologists because of the inefficacy of the available medical therapy and the potentially serious complications which can involve the upper urinary tract. Often these patients are treated only with aseptic intermittent catheterizations, sovrapubic catheters or long-term indwelling catheterization.

Sacral neuromodulation (SNM) is an invasive and expensive treatment proposed for patients with N-NOR. Besides of SNM another conservative approach to N-NOR is represented by intravesical electrostimulation (IVES).

In literature there are mixed results about IVES with some authors who reported good response to therapy and other studies which had negative results [1,2,3].

IVES is also mentioned on 2017 EAU Guidelines on Neuro-Urology without any degree of recommendation. The aim of this retrospective study is to describe our experience with the use of IVES in the treatment of a series of patients suffering from N-NOR in our institution

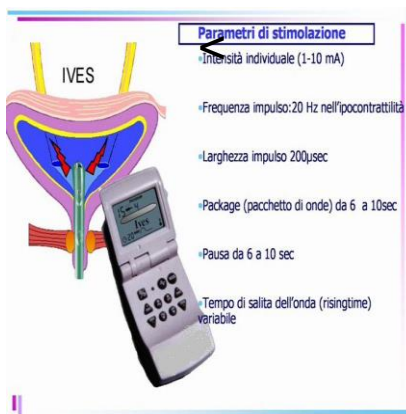
Study design,

Materials and Methods

We retrospectively evaluated a database of 51 patients (24 men, 27 women) who referred at our institution for N-NOR and who underwent 15 daily IVES sessions from 2002 to 2016. Median age was 51,35 years (range 16-77 years).

All the included patients were assessed with a clinical evaluation, a three-days voiding diary which reported the number of daily catheterizations and the post-voidal residual (PVR) and a urodynamic study at baseline and after therapy.

We considered improved the patients who reduced the number of daily catheterization and had a reduction of at least 50% in PVR. We considered cured the patients who did not require any catheterization per day. Moreover we compared through urodynamic study the presence of first sensation of bladder filling at baseline and after IVES.



Results

3 of the 51 patients who underwent IVES were excluded because of the lack of a urodynamic investigation after the treatment.

5 patients were excluded because did not complete the 15 sessions due to the onset of symptomatic urinary tract infection. So we included only 43 patients in our study. Of those 15 patients had multiple sclerosis (SM), 12 patients developed N-NOR after iatrogenic pelvic nerve lesions, 3 patients had peripheral neuropathy by diabetes and 13 patients had spinal cord injury (SCI).

24/43 patients (55,8%) were not improved after IVES. Of these patients 15/24 (62,5%) had complete retention (4-6 catheterizations per day) and 9/24 patients (37,5%) had incomplete retention with spontaneous micturition but high PVR (>200 ml) which required at least 2 catheterizations per day. Before of the treatment only 3 (12,5%) patients of this group reported a sensation of bladder filling, while after the treatment 11/24 (45,8%) reported this sensation. 19/43 patients (44,2%) were improved after IVES. 7/19 patients (36,8%) had complete retention and 12/19 (63%) had incomplete urinary retention. 11/19 (57,89%) reported a sensation of bladder filling at baseline urodynamic investigation. After the treatment all the 19 patients reported bladder sensitivity.

No patient was cured. Totally of the 29 patients who did not report a first sensation of bladder filling at baseline, 16 (55,17%) reported it at the second urodynamic investigation, performed after IVES.

Interpretations

of Results

In our study only 44,2% of the patients showed some degree of improvement of the contractility after IVES, although no patient was cured. Moreover IVES induced bladder sensation in 55,17% of treated patients. In the group of responders there are more patients experiencing at baseline a sensation of bladder filling (57,89% VS 12,5%). This finding is in accordance with a recent study of Lombardi et al [3].

Concluding message

IVES represents a therapeutic option in patients with N-NOR. The improvement of contractility is often limited. The improvement of bladder sensitivity seems to be more consistent.

References

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