

IS INTRAVESICAL ELECTRICAL STIMULATION (IVES) A SATISFACTORY THERAPY IN OVERACTIVE BLADDER? OUR EXPERIENCE IN 162 PATIENTS

INTRODUCTION AND AIM OF THE STUDY

Voiding disfunctions or problems in storage function are the very common in urological daily practice. Pharmacotherapy, clean intermittent catheterization or innovative surgical procedures are normally accepted for the treatment of these conditions. There is less experience in the use of Intravesical Electrical Stimulation (IVES); the first experience was described by Catona (1958) and diffused by Madersbacher, who treated patients suffering from neurological bladder. This therapy, in spite of the other methods that were introduced in the last years, is still the only one that, in selected cases, guarantees the patient to improve bladder function. Essential requisite to obtain good results using IVES is the integrity of the sensitive nervous connections between the bladder and the CNS, so that the stimulation of the receptor of the bladder wall can strengthen the efferent pathway. The activation of mechanoreceptors of the bladder wall is obtained by means of transurethral electrostimulation using a special catheter as a monopolar electrode, with the bladder partially filled with saline solution. IVES is normally used in patients with detrusor areflexia or hypocontractility due to neurological damage. In most centres IVES is also used successfully in non-neurologic detrusorial hypocontractility (idiopathic?) and in overactive bladder. Normally this therapy is performed on outpatient basis, lasting five days a week for 3 weeks; then the patient -according to the results obtained- can go on with therapy at home. In patients with overactive bladder we perform, during the stimulation, contemporary biofeedback by means of cystometry to permit the patient to control involuntary bladder contractions. In this paper we evaluate the results we obtained with the use of IVES in patients with overactive bladder.

MATERIALS AND METHODS

In the period 1994-1999 350 patients underwent IVES in our Urological Department, in 188 patients (age 6-72, mean age 42.1, 130 female, 58 male) we performed therapy using low frequency (20 Hz) to improve detrusor contractility. The other 162 cases (age 1-78, mean 55, male 70, female 92) were patients suffering from overactive bladder: in 45 it was due to transverse myelitis, in 33 out of 162 it was due to myelodysplastic problems by myelomeningocele, with incomplete neurological lesions. The frequency of stimulation was usually 70 Hz (higher than in the patients with areflexia); duration of single impulse was 2 msec. each package and pause lasted 10 sec. and the rise time varied during the stimulation. Each session lasted 60 - 90 minutes. IVES was performed (when possible) after filling the bladder with about 100 cc of normal saline; electrical impulse were transmitted by means of the positive catheter electrode, while the negative one was placed on the right arm. The patients suffering from myelodysplastic pathology performed intermittent catheterization and 30 cases they used oxybutinine. A complete urodynamic study was performed before and at the end of treatment and all the patients filled in a flow-chart during this period.

The stimulation was obtained using the UROPLUS A20 (SANICA) and the UROTRAIN (SI.EM.) . The follow up ranged from 5 months to 5 years.

RESULTS

Bladder sensibility improved in the 65% of patients. We had no changes in 8 of 33 patient with myelomeningocele; while in the other 25 cases we recorded an improvement in urinary continence and inhibitions of bladder contractions. In One out 33 patient we had to stop the treatment after two applications for an episode of haematuria. We had only 1 case of urinary tract infection during the treatment and 3 cases of asymptomatic bacteriuria. One patient interrupted for paresthesia to the lower arms. We had poor results generally speaking in the group of patient with overactive bladder, In fact in only 15 % of these patients we recorded a reduction of the episodes of urge-incontinence) while in 75% of patients we had not results. In 10% of these patients we obtained an improvement in urinary incontinence and reduction of the amplitude of involuntary bladder contractions, confirmed at the urodynamic study.

CONCLUSIONS

In our experience we had best results with IVES in the treatment of bladder hypocontractility, while long term results in patients suffering from overactive bladder of clear neurogenic or non neurogenic origin are not successful. For this reason we treat with IVES only patients with bladder areflexia or hypocontractility. We had also good results in patient with low-compliance areflexia bladder. The IVES is a good therapy for bladder disfunctions , but time-consuming, so we think that the use of these stimulation have no indications in the overactive bladder. We think also that IVES should be the first treatment of neurogenic bladder in myelomeningocele.

REFERENCES

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