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DIAGNOSIS OF FEASIBILITY OF EFFERENT ROOTS IN A PATIENT CANDIDATE TO S.A.R.S. IMPLANT DUE TO SPINAL INJURY OF ONCOLOGICAL TREATMENT ORIGIN

Hypothesis / aims of study

The presentation of a clinical case in which, aided by neuromodulation, we have been able to adequately select a patient for later S.A.R.S. successful implantation

Materials and methods

This is case report

Results

A 48-year-old male patient with paraplegia since 2007, caused by a surgery for treatment of high medullary ependymoma. Suffering from neurogenic detrusor overactivity as a consequence, he has been originally treated by CIC (Clean Intermittent Catheterization), including urinary incontinence, and presented a repetitive clinical episodes of urinary infections.

The first post-surgery urodynamic studies show a acontractile detrusor lacking response to provocative maneuvers, with impaired bladder compliance. Further to the outbreak of a number of repetitive urinary infections demanding hospitalization, a new diagnostic maneuver is decided to be pursued.

Employing neuromodulation as diagnostic assistance, under fluoroscopic guidance, with the patient in prone position, transforaminal injections are positioned through the S3 level. By simultaneous installation of urodynamics equipment, the bladder starts to be filled until reaching 300ml, with the electric stimulation subsequently causing anal and perineal contractions and the bilateral bending of the toes. Detrusor contractions from up to 55cmH2O are also achieved, providing evidence of the integrity of the efferent sacral nerves.

Following the results of the fulfilled medical test, in August 2012 the S.A.R.S. implant and a dorsal rhizotomy are conducted under single-stage surgical procedure. The surgery and post-operative phase evolved normally and the routine screening carried out during the first immediate week confirmed the integrity of the sacral anterior roots. The patient was discharged from hospital in excellent general condition.

Later assessments reveal the patient great satisfaction with the S.A.R.S., reflected in the significant improvement of this quality of life. As regards urinary symptoms, there have been no signs of urinary infections requiring hospitalization. Moreover, the utilization of the device has lead to a proper bladder emptying, which proved to have a further beneficial effect on both the intestinal and the erectile functions.

Interpretation of results

Spinal cord injury patients at a suprasacral level end up developing neurogenic detrusor overactivity after the spinal shock phase, a kind of dysfunction that produces significant morbidity and alteration of the quality of life.(1) S.A.R.S. (Sacral Anterior Roots Stimulation) goal treatment is mainly indicated to patients, to whom further therapeutical alternatives have proven to fail, thereby leading to relevant alterations of their quality of life and their normal bladder function. The best result is reached the efferent pathways to the bladder to be intact(2).

Since the neuromodulation was approved by FDA it had been used mainly by dysfunctional voiding treatment, some authors use it experimentally loocking for a new way to replace the need for posterior rhizotomy in patients underwent implantations of SARS(2,3)Large part of the success of the S.A.R.S. implant lies in the correct selection of the patients indicated to receive the treatment, in our patient we founded an alternative way to diagnose.

Concluding message

The simultaneous implementation of sacral transforaminal electrical neuromodulation with urodynamics allows the execution of an assessment of the integrity of the efferent autonomic nerves that guarantees a reliable S.A.R.S. implant, in a context where further conventional tests have demonstrated not to be effective.

References

1. Martens FMJ, Heesakkers JPFA. Clinical results of a brindley procedure: sacral anterior root stimulation in combination with a rhizotomy of the dorsal roots. Adv Urol. 2011;2011:709708.
2. Kirkham APS, Knight SL, Craggs MD, Casey ATM, Shah PJR. Neuromodulation through sacral nerve roots 2 to 4 with a Finetech-Brindley sacral posterior and anterior root stimulator. Spinal Cord. 5 de junio de 2002;40(6):272-81
3. González-Chamorro F, García IG, Fernández EF, Abarca CL, González-Chamorro F. Neuroestimulación y neuromodulación en la incontinencia urinaria. REV MED UNIV NAVARRA. 2004;48(4):75-84.

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