CS1-1

Physical therapy and neuromodulation

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For the treatment of stress urinary incontinence, physical therapy including pelvic floor muscle training has been the treatment of choice. Although the mainstay of conservative treatment of OAB is pharmaceutical therapy with anti-cholinergics, behavioral therapy including lifestyle interventions, physical therapies, scheduled voiding regimes are the first choice of treatment. Scheduled voiding regimes include bladder training, timed voiding, habit training and prompted voiding. In patients who are obstinate to these conservative therapies, biofeedback training (BFT) is effective. For the treatment of SUI, perineometer or EMG are usually used to increase the muscle strength. For obstinate detrusor overactivity (DO), BFT is performed after the conventional UDS. Patients were instructed to contract anal sphincter without increasing abdominal pressure to inhibit DO, looking at the monitor and listening to the EMG. If the patients learned how to inhibit contractions, they practice in their home every day. In patients with obstinate urge incontinence, 66% of children or young adults were cured but aged patients were difficult to cure, although 40% of them were improved. BFT is effective even in patients with obstinate incontinence but is time consuming and relatively invasive, and thus should select patients who have motivation. Neuromodulation including electrical stimulation (ES) and magnetic stimulation (MS) can be another treatment strategy for obstinate urinary incontinence. There are various kinds of equipments. Pelvic floor ES is portable, home-use, interferential therapy is the only equipment admitted for use in Japan. Sacral root neuromodulation is effective for obstinate urge incontinence, but it is invasive. MS is less invasive, greater stimulation can be applied and do not need to undress. However hospital arrival is required (1-2days/week). We have confirmed the efficacies of ES and MS with placebo-controlled, double-blind test.

CS1-2

Treatment strategy for obstinate urinary incontinence: Neuromodulation

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Urinary incontinence owing to a detrusor overactivity (DO) is becoming more prevalent in the elderly and may have a devastating impact on quality of life in the senior, active person. Sacral neuromodulation has been introduced as an effective treatment option for intractable DO incontinence which is refractory to conservative therapies, such as medication and pelvic floor exercise. An inhibitory effect on the voiding reflex due the electrical stimulation of sensory afferent nerve fibers from the genito-perineal areas, represents the most widely accepted theory about the mode of action of neuromodulation in DO. It bridges the gap between conservative treatment options and highly invasive surgical procedure, with a lower relapse rate than conservative therapies and offering fewer complications than invasive surgery. A review of the recent literature will be conducted to evaluate the safety and efficacy of sacral neuromodulation with an implantable pulse generator in patients with DO incontinence. On the other hand, magnetic stimulation of the sacral root and pelvic floor also has been described as a minimally invasive and painless treatment alternative for incontinence and irritative voiding symptoms. While, several reports have shown that activating the sacral root by magnetic stimulation seems to effectively improve stress urinary incontinence (SUI) in females, only little information has been reported regarding the treatment efficacy on male SUI. Recently we have been focusing the efficacy of high-frequency magnetic stimulation of the sacral root for male patients with intractable long-lasting SUI following a radical prostatectomy. Our data demonstrate that high-frequency magnetic stimulation of the sacral root and pelvic floor may offer a certain degree of efficacy on male SUI with minimal invasiveness, thus suggesting that it to be worth trying as a first-line conservative treatment option for male obstinate SUI after a radical prostatectomy.