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DULOXETINE TREATMENT IN POST-PROSTATECTOMY INCONTINENCE: PRELIMINARY DATA

Hypothesis / aims of study

Stress urinary incontinence (SUI) is the complaint of involuntary leakage on effort or exertion, or on sneezing, coughing or laughing. To date, no pharmacological treatment for SUI has been widely approved. Duloxetine, a potent serotonine/norepinephrine reuptake inhibitor has been evaluated in a clinical trial program of one phase II and three phase III placebo-controlled trials world wide, and proven effectiveness and safe treatment of women with SUI.
The aim of this study was to assess its efficacy and safe for men with severe stress urinary incontinence after radical prostatectomy.

Study design, materials and methods

Between November 2004 and February 2005 we enrolled for this study 11 patients (mean age 62,3; range 58-67), who had undergone to nerve sparing radical retropubic prostatectomy for clinical organ confined prostate cancer at our Department. All the patients presented SUI and were not respondent to pelvic floor muscle training, with a weekly incontinence episode frequency ≥14, and a daily pads use of 3 or more. Mean time from surgery was 13,9 months (range 5-48). All patients signed an informed consent.
Patients took duloxetine 40 mg/die for at least 4 weeks. Assessment variables included incontinence episode frequency, continence pad use and the ICS-male questionnaire (incontinence section only). A responder was defined as a subject with a reduction of incontinence episode frequency of 50% or more.

Results

Five out of 11 patients were completely dry after 4 weeks of treatment, 2 patients were improved with use of only 1 precautionary pad per day, 2 patients didn't respond to treatment and the other 2 patients discontinued treatment very early due to duloxetine-associated adverse event.

Interpretation of results

Duloxetine is an orally administered, balanced, dual serotonine and norepinephrine reuptake inhibitor at the presynaptic neuron in Onuf's nucleus of the sacral spinal cord that increases neural input to the urethral sphincter. The main cause of post-prostatectomy incontinence may be attributable to intrinsic sphincter deficiency (ISD), so the augmentation of serotoninergic and noradrenergic systems with duloxetine increases bladder capacity and urethral rhabdosphincter activity; this may offer a therapeutic benefit in men with post prostatectomy incontinence. Nausea was the most frequent adverse event and was the main cause for discontinuing duloxetine therapy, this was mostly experienced early after the start of treatment and was usually mild to moderate and not progressive in severity.
The data support duloxetine's efficacy in the short –term to treat urinary incontinence and improvements of quality of life in men with severe stress urinary incontinence due to prostatectomy. In this series, average time after surgery was 13 months and all the patients were non-responder to pelvic floor muscle training.

Concluding message

The pharmacological effect of this drug to increase the activity of the striated urethral sphincter and the clinical results indicate that duloxetine has an interesting therapeutic potential in men with persistent post prostatectomy incontinence. It seems to be an useful conservative approach after pelvic floor muscle training fails or in association with it, prior more invasive technique as bulking or artificial sphincter are taken in consideration. The mechanism of action of this drug may explain a rehabilitative effect using duloxetine within 12 months from surgery. We need long-term follow-up data to demonstrate this first impression.

References

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