Central Neuropathic Pain: An Unusual Case of Painful Ejaculation Responding to Topiramate

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ABSTRACT

Introduction. Painful ejaculation (PE) is an uncommon condition and it is usually associated with prostatitis, chronic pelvic pain syndrome, benign prostatic hyperplasia, ejaculatory duct obstruction, radical prostatectomy, and prostate radiation. Topiramate (TPM) is a new antiepileptic drug with recognized efficacy in neuropathic pain.
Aim. The study is aimed to evaluate TPM efficacy in ejaculation pain.
Methods. Following a spinal cord injury, a 53-year-old man was referred to our institute for persistent PE. Neurological examination showed mild hypoesthesia of the genital area. Urogenital examination, neurophysiological tools, and computed tomography of the dorso-lumbar spine were normal.
Main Outcome Measures. The main outcome measure was the visual analogue scale.
Results. Since pain was refractory to conventional neuropathic pharmacological therapies, TPM was introduced up to 150 mg daily with a dramatic improvement of PE.
Conclusions. TPM may be considered as a valid therapeutic option for the treatment of PE. **Calabrò RS, Marra A, Quattrini F, Gervasi G, Levita A, and Bramanti P. Central neuropathic pain: An unusual case of painful ejaculation responding to topiramate. J Sex Med 2012;9:3274–3278.**

Key Words. Central Neuropathic Pain; Painful Ejaculation; Topiramate; Central Pattern Generator; Chronic Prostatitis-chronic Pelvic Pain Syndrome

Introduction

Ejaculatory pain represents a component of sexual dysfunction that has received little attention in the literature so far. The incidence of painful ejaculation (PE) is about 1–9.7%.

Postorgasmic pain is associated with prostatitis [1], chronic pelvic pain syndrome [2,3], benign prostatic hyperplasia [4], ejaculatory duct obstruction [5], prostate radiation [6], and radical prostatectomy [7].

Different etiopathogenetic theories have been postulated including bladder neck closure after radical prostatectomy, ejaculatory duct stones, antidepressant medication, and compressive pudendal neuropathy [8]. The treatment options vary from self-care to medication with alpha-blockers, antidepressants, antiepileptics, and even surgical procedures, as shown in Table 1.

We report an unusual case of PE due to spinal cord injury dramatically improved after topiramate (TPM) administration.

Case Report

A 53-year-old man was referred to our Neurological Research Institute for a penile pain strongly related to ejaculation. Personal history was unremarkable except for a severe spinal trauma secondary to a car accident, which had occurred 3 years previously. In particular, he reported a burst fracture of the T12 vertebra with retropulsion of fracture segments, narrowing of spinal canal, and spinal cord impingement. He underwent surgical

Table 1 Treatment options for painful ejaculation

Treatment of painful ejaculation
General management
A. Behavior treatment:
• Stopping activities involving hip flexion (cycling, sit-ups and legs press)
• Sitting position was discouraged, while standing and recumbency was encouraged.
• When sitting, patients were instructed to make a perineal suspension pad by cutting out the central portion of a gardener's kneeling pad.
B. Pelvic floor biofeedback
C. Pharmacological therapy:
• Anti-inflammatory agents such as cyclo-oxigenase-2 drugs (i.e., ketorolac)
• Muscle relaxant (i.e., tyocolchicoside)
• α-blockers (i.e., tamsulosin)
• Antidepressant (i.e., amitriptilyne) often in combination with benzodiazepines
• Antiepileptic drugs (i.e., topiramate)
• Opioids
Specific management
A. Prostatitis
• Antimicrobials: fluoroquinolones or cotrimoxazole as first-line agents; levoxacin as second-line agents
• α-blockers (i.e., tamsulosin)
• Combination therapy with fluoroquinolones and α-blockers
• 5α-reductase inhibitors
• Glycosaminoglicans
• Phytotherapies
B. Prostatic hyperplasia
• α-blockers (i.e., tamsulosin)
• 5α-reductase inhibitors
C. Neuropathies
• Neuromodulatory agents (i.e., gabapentin, pregabalin)
• Computed tomography-guided perineural injection therapy using a mixture of bupivicarine (1 mL) and trimaciclone (3 mL)
• Corticosteroids
• Pelvic floor botulinum injection
Specific surgical therapy
A. Prostatitis or prostatic hyperplasia
• Prostate ablation via *trans*-urethral needle ablation
• Prostatectomy
B. Neuropathies
• Removal of a section of the sacrotuberous ligament
• Neurolysis of the pudendal nerve
• Removal of a section of the sacrospinous ligament
• Fasciotomy of Alcock's canal
• Nerve transposition anterior to the ischial spine

decompression of the spinal cord and stabilization of T12 through the implantation of the SOCON SRI system.* Neurological examination showed severe paraparesis with lower limbs hypoesthesia, and neurogenic bladder with urinary retention. After 3 months intensive neurorehabilitation, paraparesis and hypoesthesia gradually improved, but he started complaining of genital paresthesias.

He described the pain as a burning and stabbing sensation localized to the glans and deep into the urethra, sometimes extending to the shaft of the penis, to the scrotum and to the perineal area. Pain occurred a few seconds before the ejaculation, remained intense for 10 to 15 minutes after sexual intercourse, and was rated by the patient at 8 on a 0 to 10 pain scale. Moreover, pain was preceded by an unpleasant penile sensation during sexual intercourse.

Sex counseling pointed out an erectile dysfunction sometimes occurring before the ejaculation with a decrease in satisfaction and sexual activity in the last months.

Urogenital physical examination, urine analysis and culture, prostate and bladder ultrasonography were normal, while neurological examination showed a mild hypoesthesia with dysesthesia in the genital area, mainly involving the glans and a bilateral Babinski sign. Urodynamic investigations failed to point out functional bladder abnormalities, i.e., detrusor and/or sphincter hyperactivity or weakness. Pudendal somatosensory evoked potentials and bulbocavernosus reflex with pelvic floor electromyography were normal. Moreover, patient denied any use of drugs and unusual sexual activities. Computed tomography of the dorso-lumbar spine did not reveal significant lesions of the spinal cord (Figure 1).

Since we hypothesized that the origin of the pain was neurogenic, he was treated with different specific drugs including venlafaxine (300 mg daily), duloxetine (120 mg daily), carbamazepine (1,200 mg daily), tramadol (300 mg daily) and pregabalin (400 mg daily). These treatments were withdrawn because of their inefficacy or significant side effects. TPM up to 150 mg daily was then administered with a dramatic relief of the pain (two out of 10 at the visual analogue scale). Afterward, patient returned to a rewarding sexual activity. During a 2-year follow-up period, patient presented pain reacerbation only when he spontaneously reduced TPM down to 75 mg daily.

Discussion

The cause of pain associated with sexual activity, including ejaculatory pain, is not satisfactorily understood. In the context of chronic prostatitis, it has been assumed that PE may be attributable to genital tract inflammation, neuromuscular spasm, or ejaculatory duct obstruction [2]. Barnas et al. [7]

*The SOCON-SRI system (Aesculap AG CO., KG, Tuttlingen, Germany) is a titanium internal fixation device consisting of self-locking clamps with transpedicular bone screws that are connected with straight reduction rods, which allows compression and distraction of the lower thoracic and lumbar spine in stabilization and fusion procedures.