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BLADDER TRAINING BIOFEEDBACK AND PELVIC FLOOR MYALGIA

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ABSTRACT

Chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) is a debilitating condition, traditionally treated with antimicrobials, nonsteroidal anti-inflammatory drugs, and α-blockers. Pelvic floor tension myalgia is hypothesized to be a contributing factor in CPPS. Biofeedback training for CPPS is based on the principle that maximum muscle contraction prompts maximum muscle relaxation. Similar chronic pain conditions have been treated successfully with biofeedback-assisted techniques of neuromuscular reeducation. Preliminary study by our group has shown biofeedback, pelvic floor reeducation, and bladder training to be helpful in the treatment of CP/CPPS. Overall, 8 of 11 patients had improvement in either pain scores or their chronic prostatitis pain index scores. With no cure for CP/CPPS available, biofeedback and pelvic floor reeducation merit further evaluation in the treatment of this condition. UROLOGY **60:** 42–44, 2002. © 2002, Elsevier Science Inc.

Chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) is a debilitating condition affecting 8% to 18% of men.[1–4] Traditionally, this condition has been treated with antimicrobials, nonsteroidal anti-inflammatory drugs, and α-blockers. Pelvic floor tension myalgia has been hypothesized to be a contributing factor in CPPS.[5,6] Other chronic pain conditions, such as anal pain,[7] levator ani syndrome,[8] vulvar vestibulitis,[9] and chronic musculoskeletal pain,[10] have been treated successfully with biofeedback-assisted techniques of neuromuscular reeducation.

Published data by our group have shown biofeedback, pelvic floor reeducation, and bladder training to be helpful in the treatment of CP/CPPS.[11] This preliminary study involved 19 patients with a mean age of 38 years (range, 18 to 67) with negative urine and prostatic cultures. Based on leukocyte counts in the expressed prostatic secretions, 6 patients were classified as inflammatory CPPS category IIIA (>10 white blood cells per high power field) and 13 patients as noninflammatory CPPS category IIIB (<10 white blood cells per high power field). Patients were evaluated with pressure flow urodynamics, 24-hour voiding diary, American Urological Association (AUA) symptoms score, and a 10-point visual analog pain/urgency score. The 10 patients completing the study showed overall improvements in AUA symptom score, AUA bother score, visual analog pain score, visual analog urgency score, and daytime urinary frequency.

Biofeedback training for CPPS is based on the principle that maximum muscle contraction prompts maximum muscle relaxation. In essence, the relaxation phase is a meditative state between muscle contractions. Biofeedback training is carried out by skilled nurses who instruct the patient for 1 hour in 6 biweekly visits over a period of 11 weeks. The patients are instructed in quick and slow pelvic floor contractions as well as quick and slow pelvic floor relaxations. A quick pelvic floor contraction involves a quick "wink" of the pelvic floor musculature, whereas a slow contraction lasts 3 to 5 seconds, with a full relaxation phase of 3 to 5 seconds. Proper muscle contraction and relaxation is confirmed with an EMPI Innova clinical electromyography system (version 1.25; Empi Canada, Kirkland, Quebec, Canada). A specially made brief with electrodes sewn into it facilitates contact of the electrodes with the pelvic floor and perineum. The key point to pelvic floor reeducation is the emphasis on the relaxation phase; this behavior typically takes several weeks to learn under the guidance of a skilled nurse and with close biofeedback monitoring.

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TABLE I. ***CPSI and pain scores following biofeedback and pelvic floor reeducation***

CP/CPPS patients (n = 11)				
Test	**Pre**		**Post**	
	Range	**Mean**	**Range**	**Mean**
CPSI (range: 0–43)	20–39	26.3*	4–35	19.8*
Pain (range: 0–10)	2–9	5.7†	0–8	4.9†

**Using t-test, P = 0.0148.*
†Using t-test, P = 0.2421.

Patients are instructed to do 3 to 4 sets of contraction and relaxation exercises daily at home. When pain is felt, they do 1 or 2 quick and slow contractions and relaxations of the pelvic floor. As part of the study, voiding logs were also reviewed biweekly. It was found that the voiding interval increased by 30 minutes if compliance on the voiding log was >80%.

With this information, we embarked on a second study of biofeedback and pelvic floor reeducation in CP/CPPS patients. A total of 44 of 75 patients who enrolled in the National Institutes of Health (NIH) prostatitis study at our institution were recommended for biofeedback/pelvic floor reeducation. Of these, 20 patients requested a letter from their insurance company to pay for this treatment, and 11 patients eventually enrolled in the program. Reasons given for not enrolling the program were: (1) no insurance, (2) cost after insurance, (3) time commitment, (4) fear of videourodynamics study, and (5) skepticism about the value of the treatment. In all, 8 of 11 patients had improvement in their chronic prostatitis pain index (CPSI) score, and 6 of 11 patients had improvement in their pain scores (see Table I). Overall, 8 of 11 patients had improvement in either pain scores or CPSI scores. Altogether, 3 of the 11 patients were classified as CPPS category IIIA, with 1 patient showing improvement; and 8 patients were categorized as CPPS category IIIB, with 7 patients showing improvement.

Whereas these data are preliminary, they indicate that there is a role for biofeedback and pelvic floor reeducation in CP/CPPS patients. With no cure for CP/CPPS available, biofeedback and pelvic floor reeducation merit further evaluation in the treatment of this condition. Further studies will have to take into account the expensive and invasive nature of this evaluation and training. Urologists need to work with insurance companies and third-party payers to ensure their participation. We need to reexamine the role of videourodynamics in this evaluation and to find ways to make this treatment less costly and less time consuming for our patients.

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