Journal of Chiropractic Medicine (2014) 13, 81–89

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JOURNAL of CHIROPRACTIC MEDICINE

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Case Reports

# Chiropractic Management of Pubic Symphysis Shear Dysfunction in a Patient With Overactive Bladder

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Received 5 January 2014; received in revised form 7 May 2014; accepted 7 May 2014

**Key indexing terms:**
Symphysis pubis dysfunction;
Pubic symphysis;
Pubic symphysis diastasis;
Urinary bladder, overactive;
Manipulation, chiropractic;
Manipulation, osteopathic

**Abstract**

**Objective:** The purpose of this case report is to describe chiropractic management of a patient with overactive bladder (OAB) and to describe an hypothetical anatomical basis for a somato-vesical reflex and possible clinical link between pelvic and symphysis pubis dysfunction to OAB.

**Clinical features:** A 24-year-old nulliparous female with idiopathic OAB, with a primary complaint of nocturia presented for chiropractic care. Her sleep was limited to 2 consecutive hours due to bladder urgency. Pubic symphysis shear dysfunction was observed on physical examination.

**Intervention and outcomes:** The primary treatment modality used was chiropractic side-posture drop-table manipulation designed to reduce pubic shear dysfunction. After 8 treatments in 1 month, the pubic shear gradually reduced while nocturia diminished and consecutive sleep hours increased from 2 to 7. At 1-year follow-up, the nocturia remained resolved.

**Conclusion:** The patient reported in this case responded favorably to chiropractic care, which resulted in reduced nocturia and increased sleep continuity.



## Introduction

Approximately 33 million Americans, at least 16.5% of adults, have overactive bladder (OAB), [1] a condition characterized by urinary frequency, urgency, and/or urge incontinence, in the absence of urinary tract infection or other obvious causes. [2] The prevalence of nocturia in younger individuals (age 20–40) is 11% to 35% in men and 20.4% to 43.9% in women. [3] Current medical treatment for OAB includes pelvic muscle strengthening, behavioral therapies, acupuncture, pharmacologic therapies, surgical procedures), and sacral nerve stimulation. [4–6] The most promising of

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http://dx.doi.org/10.1016/j.jcm.2014.06.003
1556-3707/

the surgical approaches for patients who have failed the more conservative therapies is sacral neuromodulation.[7] The S3 nerve root, pudendal nerve, and/or tibial nerve is stimulated with an implantable device that generates electrical impulses that effectively ameliorates chronic urinary retention, as well as symptoms of overactive bladder. However, a 2012 guidelines document from the American Urological Association concludes, "OAB is a chronic syndrome without an ideal treatment and no treatment will cure the condition in most patients."[4] Survey data presented by the National Board of Chiropractic Examiners in 2010[8] indicates that the frequency with which chiropractors manage complaints of "incontinence" (the only listed condition directly related to OAB) is "rare," meaning 1 to 10 cases per year. According to the survey, 62% of the respondents diagnosed subluxation (ie, joint dysfunction) as an etiological factor.

OAB is defined as "urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence, in the absence of urinary tract infection or other obvious pathology."[2] It is associated with frequent urination, loss of sleep attributable to nocturia, and episodes of unintentional voiding (urge incontinence). Although OAB is distinguished from stress urinary incontinence, these conditions can occur together, leading to the diagnosis of mixed incontinence.[9] Anatomic weakness leading to OAB may result from nerve or pelvic floor muscle damage during childbirth, chronic coughing or sneezing, high intake of caffeine or alcohol, or high impact activities. When OAB results from detrusor hyperactivity, there may be involuntary detrusor contractions during the filling phase, either idiopathic or due to improper signaling between the bladder and CNS. Loss of detrusor inhibition may occur in Parkinsonism, spinal cord injury, diabetic neuropathy, multiple sclerosis, dementia, or stroke.[9]

In nocturia, sleep is interrupted 1 or more times due to the need to micturate. Pathologic conditions resulting in nocturia include stroke, myeloneuropathy (often secondary to vertebral disk disease or spondylosis), cardiovascular disease, diabetes mellitus and insipidus, peripheral edema, and lower urinary tract obstruction. Anxiety or primary sleep disorders that result in wakening may also lead the patient to void, as a matter of habit. Prostatic disease and neurogenic bladder may also lead to wakening from sleep and voiding. Taking diuretic medications, consuming beverages including caffeine or alcohol, and excessive fluid intake prior to retiring may also lead to nocturia.[10] The underlying pathophysiologic conditions that account for nocturia can be described in 4 broad categories: (1) nocturnal polyuria (nocturnal urine overproduction); (2) low nocturnal bladder capacity; (3) mixed (a combination of 1 and 2); and (4) polyuria (abnormally high daily urine output).[10]

The term nocturnal polyuria refers to the production of an abnormally large volume of urine during sleep and is the primary cause of nocturia. Urine output normally decreases during the night due to increased secretion of antidiuretic hormone, resulting in decreased resorption of water from the renal tubules and a relatively concentrated urine. In cases of nocturnal polyuria, night time urine output is greater than 20% of the daily total in young adults and 33% in older adults.[11] Nocturnal polyuria usually occurs in the elderly[12,13] but can also appear in younger individuals. According to Weiss,[14] in younger patients with OAB, it is decreased nocturnal bladder capacity rather than nocturnal polyuria that results in nocturia.

At present, there are few case reports describing the relationship between pelvic dysfunction and OAB and no known cases reporting the management of OAB using pubic symphysis manipulation. The purpose of this case report is to describe the chiropractic management of a patient with OAB and to describe the hypothesis and an anatomical basis for a somato-vesical reflex, suggesting a clinical link between pelvic and symphysis pubis dysfunction to OAB.

## Case Report

A 24-year-old nulliparous, female full-time chiropractic student and part-time aerobics instructor under medical care for OAB consulted with 1 of the authors, an instructor at the chiropractic college. She complained of difficulty sleeping at night for more than 2 hours at a time, due to inability to sleep longer than 2 hours without voiding her bladder. Her urinary urgency had developed gradually over a 3-year period and was worsening. She described her overall health as "excellent" and was not taking any prescription medications and had no urological complaints (dysuria, hematuria, urethral or vaginal discharges, or hesitancy). The patient denied urinary incontinence (involuntary bladder voiding with laughing, sneezing, or coughing). The patient's chiropractic college clinic had obtained routine radiographs 2 years earlier that had been read as normal. The patient had initially consulted with a medical physician, who obtained laboratory results that ruled out infection or any other medical condition that may have resulted in OAB.