

## Case Report

# Clinical Review on the Obstinate Childhood Nocturnal Enuresis Treated with Manual Cure

Chun-Il Jang, Un-Ju Chon, Chol-Song Ri\*

Pyongyang Medical College, KIM IL SUNG University, Democratic People's Republic of Korea

\***Corresponding author:** Chol-Song Ri, Pyongyang Medical College, KIM IL SUNG University, Democratic People's Republic of Korea, E-mail: [pmed2@ryongnamsan.edu.kp](mailto:pmed2@ryongnamsan.edu.kp)

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### Abstract

Childhood nocturnal enuresis is concerned to be related mainly to the dysfunction of the autonomic nervous system with parasympathetic nerve accentuation, feeble-mindedness, the organic disorder of the central nervous system, the organic abnormality of the urethra, diabetes, diabetes insipidus, parasites, tonsillar hypertrophy, dysmature, dyscontrol of urination and the decrease of ADH secretion. We gave a new outlook that childhood nocturnal enuresis may as well be developed when some functions concerned with voluntary constriction of the external urethral sphincter, constriction and relaxation of cystic smooth muscles are out of control of pelvic and public nerve from S<sub>2-4</sub> nerves along sacral segment by subluxation of sacroiliac joint resulting in the depression or dysfunction of sacral segment. In below-mentioned cases who suffered from the obstinate childhood nocturnal enuresis that did not respond at all

to modern and Koryo medicines, acupuncture, moxibustion, etc., we introduced the remedy of sacroiliac joint subluxation correction and they were all recovered. This is a new suggestion that childhood nocturnal enuresis might be caused by subluxation of sacroiliac joint and it can be cured with correction remedy.

**Keywords:** Nocturnal Enuresis; Subluxation of sacroiliac joint; Manual Cure.

### 1. Introduction

#### 1.1 About childhood nocturnal enuresis

The standard definition is the unrecognized urination while sleeping. WHO announced that it can be identified by the occurrence of at least once a month

continued over three months among the children of over 5 years of age, and the 2<sup>nd</sup> International Urologic Institute identified it as over three times a week [1]. Physiologically, voluntary urination is allowed when the bladder is filled with urine to the definite limit and the capability to depress urination is required at the age of 2-3, the majority of children can control urination from the age of 4. Therefore, the unconscious urination over 4-5 years of age must be concerted as nocturnal enuresis. The mean age of the childhood nocturnal enuresis (CNE) is  $7.6 \pm 2.3$  years old and 30 percent of the outpatients who admitted to pediatric department were suffering from the disease, which accounted for 7.9 percent of urinary diseases, and ranked the fourth among childhood disease [2]. In case of both of the child's parents had the disease, the prevalence is 77%. In case of either of them had the disease, 43% and in the case of neither of them had the disease 15% are the estimated Figures [3]. Nocturnal Enuresis might be voluntarily cured 95% approaching 10 years of age, and 98-99% in adolescence. Allergic agents and the decrease of ADH (Anti diuretic Hormone) secretion may result in childhood nocturnal enuresis (CNE). According to the data, voluntary urination is controlled by cerebrum's depression of micturition center and therefore if this function does not work properly, you wet the bed. 65% of Nocturnal Enuresis patients have acystineuria and are associated with cystitis, spina bifida occulta, parasite disease, hypertrophic tonsillitis, diabetes mellitus, diabetes insipidus, and epilepsy. Nocturnal Enuresis is classified into the functional and organic (symptomatic) Nocturnal Enuresis, the functional Nocturnal Enuresis accounts for a high frequency of 90-95%, therefore, it must be the point of the treatment. Common regimen therapeutics, mental therapeutics, "conditioning therapy", arousal therapeutics are introduced to treat Nocturnal Enuresis giving priority to the organic Nocturnal Enuresis.

Even though the recovery rate is 70% who undergo the conditioning therapy, about 30% suffer from a recurrence, and the duration of treatment is about 4-5 months, and by the use of ephedrine hydrochloride in the introduction of arousal therapeutics, urination has improved in 2/3 of the patients, but not so far recovered. In addition, we considered the reason why the patients aren't able to control urination is the small volume of their bladders, so we trained them to increase the urine maintenance to eliminate Nocturnal Enuresis. 66% of the patients were successful, but the period is too long, and the lead stimulating therapy that makes the child to eliminate NE actively and consciously is not the casual treatment yet. Imipramine hydrochloride and imitriptiline hydrochloride that are mostly used in Childhood Nocturnal Enuresis are not to be used for under 6~7 years old and the effectiveness of the treatment is 40%, desamino-D-arginine vasopressin (DDAVP) that is similar to the antidiuretic hormone, arginine vasopressin is sprayed and inhaled in the nose to get unique antidiuretic effects, the delay of half-life, the time of action. It is effective among all patients, including imipramine resistant but recurrence is high and symptomatic hyponatremia might be available. Indomethacin therapy that raises the tension of the detrusor urinae muscle and inhibits the synthesis of prostaglandin, 0.5% procaine infusion therapy into the hiatus sacralis, perivesicalnovocaine infusion therapy, bumetanide intramuscular injection, and low frequency electrotherapy are introduced, however, modern medical treatments for Nocturnal Enuresis are less effective than acupuncture and have a series of defects; they require a great deal of efforts, take a long time to recover and spare a number of drugs [4]. In Koryo medicine, acupuncture is widely used to treat Nocturnal Enuresis; various acupuncture in BL32, BL34, Nocturnal Enuresis point, KI3, CV4, SP6 etc, and ear acupuncture (kidney, bladder, the three vital spots, spleen, stomach) tape-compressed therapy, sensory zone to leg exercises of the

head keeping therapy, 0.5% procaine endodermoreaction around CV2, CV3, CV4 catgut implantation therapy, friction stimulating therapy, magnetic therapy, and low-power helium-neon laser therapy etc. are being introduced [5]. As you can learn so far, it is not the causal treatment, but signs and symptomatic mainly for the organic Nocturnal Enuresis patients, therefore, for the obstinate childhood nocturnal enuresis patients who do not respond to different treatments at all, it is difficult to expect good effect of the treatment.

### **1.2 Subluxation of sacroiliac joint**

Subluxation of sacroiliac joint is the disease of various symptoms resulted by the injury of the joint between the sacrum and hipbone from external force or by the minute shifting of the sacroiliac joint beyond the physiological extent. As slightly-quivering synovial joint the sacroiliac joint has got rough and uneven surface and a layer of the articular cartilage. Lower layer is consisted of fibrous cartilage and higher layer is of transparent cartilage. The sacral surface is usually thick, but after birth many part of it changes into fibrous cartilage. The joint cavity is 2mm narrow and seldom moves. It has got two kinds; One third of the front and below parts is synovial membrane joint and has got a thin layer of cartilage, whose surface is like waves. Two third of the back and upper parts is syndesmosis of V-type with narrow joint cavity [1]. Around the joint it has an articular capsule and rather strong ligaments in the front and back, which firmly stabilizes it. This joint can be slightly moved up and down or back and forth when moving back and forth, it can also rotate. In front of the sacroiliac joint sciatic nerve and posterior cluneal nerve tract pass to attach to lateral Piriform muscle, and the nerves of parasympathetic fiber from S<sub>2-4</sub> nerves control the descending colon, S-letter ascending colon, rectum and urogenital organs. The pelvic and pudendal nerves from S<sub>2-4</sub> are distributed in bladder along the

sacral cord segmentation, which control the contract and atony of smooth muscles of bladders and also in voluntary contract of sphincter of external urethra. Youngsters have strong and relatively stabilized muscles and ligament but the elderly and children have high prevalence of the sprain of or subluxation of sacroiliac joint by external forces and bad positioning because they have got slackened and less stabilized sacroiliac articular capsule and ligament [6].

In case of the subluxation of sacroiliac joint has got pains in the middle point of the connecting line between the poles of the upper back and forth iliac bones and the thigh trochanter major lagging edge. Some patients have got pains in the groin and ankles, convulsion of muscles around the affected sacroiliac joint and the troubles in leg movement. When bending bodies, turning over and lying on one's back they feel more severe pains [7-9]. Sacroiliac joint is under the iliac bones, thus it is very difficult to exam it. In case of the subluxation of sacroiliac joint manual cure is the main treatment. In case of the subluxation of the front sacroiliac joint we apply abduction of the femoral joint. At the same time we press the sacrum with hands to make the iliac bones rise upwards. In case of the back, sacroiliac joint we adduct the femoral joint and press the sacrum. Afterwards we make patients stay in bed for over 7 days to protect the habitual subluxation [10]. When a child gets the disease, lay the child on the bed, pull for a few minutes holding the both ankles and swing them for 5-8 times. Again, pull upwards three times and swing them. After treatment the both sides of hip bones are same in height and the patient do not feel the pain it is successful in the treatment. Not succeeding, apply the treatment 1-2 days later. 5-10 days is the treatment period. Acupuncture can also be applied independently or together with manual cure. As you can see clinical symptoms of the subluxation of sacroiliac joint are the index to diagnosing the children's nocturnal enuresis

caused by this subluxation and are the conditions to ensure the treatment method.

## **2. Case Report**

### **2.1 Case 1**

12-year-old girl. Main complaint is incontinence of urine and enuresis. Since 3 years ago Ri felt pain in waist and feet and particularly when she climbed slopes or went down stairs she felt much more pain in left buttock and unconsciously pissed off. When she was nervous or hasty above mentioned pain was worse than usual. Besides, she wetted her bed once or twice at night. When she was 9 years old, she slipped down to the left and stroke her left side of hip while skipping rope. Afterward, she felt ache in that side and her parents applied a compress. Since then she wetted her bed at night, her mother said to us. Also after standing or walking long hours, she felt pain in back and right knee, so she often sit down and rested but they thought it was the different symptom from the Nocturnal Enuresis so they didn't pay attention to it. And they also found another fact that during the nursery time, she fell down from the bed too. At the district hospital and Academy of Koryo Medicine she was diagnosed as incontinence of urine and enuresis and treated using several methods including acupuncture, moxibustion and so on. However, there was no improvement in her treatment. No abnormality was found in her life and family and the medical history. In the medical examination we found projection of her left EX-B6 and shortening of her left leg. The "4-letter" test and coxa bending examination proved positive. Her left foot was bent inward, angles of her heel were different and coagulation was noticed in her buttock. Diagnosis is enuresis caused by subluxation of left sacroiliac joint.

**2.1.1 Treatment:** First, lay down the patient on the belly and apply rolling, rubbing, massaging on the waist and sacroiliac joint for less than 5 minutes. In case of

subluxation of a front sacroiliac joint, press down the scrum while lifting up the femur of the affected leg. If the repositioning is successful, it emits cracking sound. Next, lay down the patient on the back, abduction & abduction the affected femur. We applied correction remedy of subluxation of left sacroiliac joint. We applied 5 times and observed for 3 months but no relapse was noticed.

### **2.2 Case 2**

13-year-old boy. Since he was very young he wetted his bed twice every night. Before he was 4 years old his parent never paid attention to it as they thought his urination control had never come to maturity yet. Since he was 5 years old they consulted various doctors at different hospitals and as a result he was diagnosed as nocturnal enuresis. Even when he drinking too much water before going bed or exercising too much, and also he keeps his body cold the above symptoms were more often caused and he felt very sensitive. He has the disorder of autonomic nerve and through the consultation we also found that during the 2<sup>nd</sup> year elementary school he was skating on the ice and fell off by the backside so he hit the hip on the ice, after 2 months later he newly found that he has Nocturnal Enuresis. Since then he was treated using various methods but no improvement was found. No abnormality was found in his life and family and medical history. This patient complained that he felt pain in his knees and trouble while walking. In the medical examination functional length difference of his legs and height of EX-B6 was noticed. The "4-letter" test and bending exam of knee joint and coxa proved positive. Diagnosis is nocturnal enuresis caused by subluxation of sacroiliac joint.

**2.1.2 Treatment:** After being treated twice above-mentioned correction remedy enuresis was not recurred but as he wetted his bed every 5 nights we treated 3

more times. Since then we observed for 5 months and no relapse was noticeable.

### **3. Discussion**

Nocturnal enuresis means unconscious urination while sleeping. The 30 percent of outpatients who admit to pediatric department suffer from Nocturnal Enuresis, which account for 7.9 percent of urology patients, and rank the fourth in childhood diseases. The mean age of the disease is  $7.6 \pm 2.3$  years old [2]. In case of neither of the child's parents had the disease the prevalence is 15 percent [4]. It is said that approaching 10 years old 95 percent of patients are naturally cured; 98-99 percent in adolescence. However, above mentioned examples are between 11-15 years old and no reaction was found by any kinds of treatment. In some data they say that drinking much water before sleep, serious physical exhaustion, not keeping oneself warm affect the outbreak of nocturnal enuresis. And it is also said that stress, panic, grief, exhaustion, excitement and so on affect the conditioned reflex for urinary control, which leads to nocturnal enuresis. Though it is known that children nocturnal enuresis is caused by allergic agents and the decrease of ADH (Anti-diuretic Hormone) secretion, our examples had no allergy and no reaction to DDAVP. Functional enuresis is directly caused by dysfunction of autonomic nervous system and 65 percent of patients have acystineuria [7]. Mental weakness, organic sickness of the central nervous system, diabetes, diabetes insipidus, organic disorder of the urethra, maturation trouble and urination control functional disorder are the reasons of symptomatic enuresis but our examples had no above mentioned diseases. Common regimen therapeutics, mental therapeutics, "conditioning therapy", arousal therapeutics are introduced to treat Nocturnal Enuresis but fail to bring about beneficial effect. Based on the data that pelvic and pudendalnerves participate in contract and atony of smooth muscles of bladders and

also in voluntary contract of sphincter of external urethra we raised a new question that subluxation of sacroiliac joint would be the very reason of the children nocturnal enuresis. In example 1 the patient complained of pain in the waist and foot and sickness of left buttock when climbing slopes or coming down stairs but doctors easily diagnosed as nocturnal enuresis from such symptoms as unconscious incontinence of urination when mentally stressed or hastening and bed-wetting once or twice every night. As a result, they failed to correctly analyze the reason and therefore paid attention to treat above-mentioned symptoms. Through our re-examination, we concluded that this was the nocturnal enuresis caused by subluxation of sacroiliac joint and applied correction remedy 5 times. In the fourth example the patient complained of pains in the knee joint and trouble when walking, but doctors paid attention only to the fact that every night he wetted his bed. Therefore, they could not find out such symptoms of subluxation of sacroiliac joint as functional length difference of legs and height of EX-B6 and positive results of "4-letter" test and bending test of knee joint and coxa. After applying the correct remedy three times those pains were cured and since the next night the patient never wetted his bed again. The Above examples are worthwhile data showing that subluxation of sacroiliac joint also leads to the obstinate nocturnal enuresis and the correct remedy is a good answer to this treatment. In other words subluxation of sacroiliac joint is the main diagnosis and nocturnal enuresis is complication. We make sure that our correction remedy is the best treatment for the obstinate nocturnal enuresis. Obstinate Nocturnal Enuresis caused by the subluxation of a sacroiliac joint which linked with the functional disorder of nerve plexus  $S_{2-4}$ . Therefore, during the obstinate nocturnal enuresis we found that one of the best treatment in this case is the correcting the subluxation of sacroiliac joint.

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