



## Specialists are under Threat of Taking Tunnel View: A Case Report

Shahrbanoo Kazemi<sup>1</sup>, Maryam Rafiei<sup>2</sup>, Seyed Pejman Madani<sup>3</sup>, Seyede Zahra Emami-Razavi<sup>1</sup>

1- Physical Medicine and Rehabilitation Specialist, Department of Physical Medicine and Rehabilitation, Brain and Spinal Cord Research Center, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran

2- Resident, Department of Physical Medicine and Rehabilitation, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

3- Physical Medicine and Rehabilitation Specialist, Department of Physical Medicine and Rehabilitation, School of Medicine, Burn Research Center, Iran University of Medical Sciences, Tehran, Iran

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Corresponding author:  
Seyed Pejman Madani

Email:  
[zemamirazavi@gmail.com](mailto:zemamirazavi@gmail.com)

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### ABSTRACT

This report describes a case of spinal canal stenosis at L4-L5 level and urinary incontinence (UI). An elderly woman was referred to a pain clinic with persistent pain in low back and both lower limbs specially left leg. She complained of UI since 2 months before in a progressive manner as well. Because of progressive nature of her symptoms, physicians decided to refer her for surgery promptly; however, her cardiologic consult was not satisfactory, and surgery risk was reported significant. Physicians began symptomatic therapy and unexpectedly most of her symptoms were improved even her UI.

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### Introduction

Spinal canal stenosis is a prevalent cause of back and specially leg pain that is generally related to aging. The natural history of lumbar spinal canal stenosis is fairly favorable overall; so, conservative approach is popular and surgery is performed occasionally. Intractable pain resistant to non-operative management and profound or progressive neurologic deficit are indications

of surgery.

### Case Report

A 84-year-old woman because of persistent pain in low back and both lower limbs specially left leg was referred to the pain clinic. She complained of urinary incontinence (UI) since 2 months before in a progressive manner as well. The nature of her agony was tingling and it significantly; had a

negative effect on her sleep, mood, and quality of life.

### **Clinical findings**

In manual muscle testing the force of hips flexion and left big toe, extension was 4/5 and 3/5 respectively. Hypoesthesia in both sides L5 territory was detected. All deep tendon reflexes of lower limbs were unobtainable, and upper limbs were 1+. Plantar reflex was down.

### **Diagnostic assessment**

Lumbosacral magnetic resonance imaging revealed advanced degenerative joint disease and compression of the canal with cerebrospinal fluid block specially at L4-L5 level (Figures 1 and 2). Electro diagnostic study was in favor of L5-S1 radiculopathy with axonal damage and without active process.



Figure 1. Lumbosacral MRI of patient

During patient evaluation physicians realized that she had become urinary incontinent since 2 months before in a progressive manner. Hence, they decided to refer her for surgery. In her cardiologic consult surgery risk was reported significant and due to it, surgeons did not operate the patient. The last procedure she had

undergone was epidural steroid injection 3 weeks before and unexpectedly her pain had increased since then.

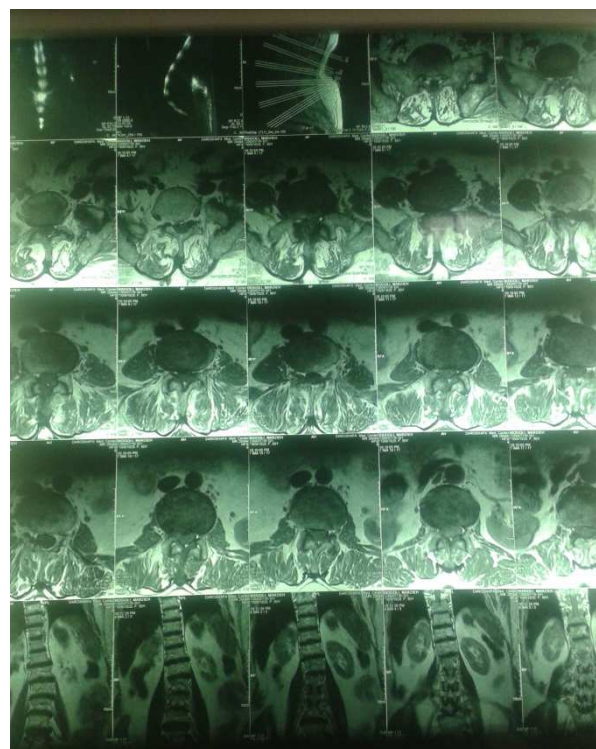


Figure 2. Lumbosacral MRI of patient

At last, it was decided to send her to the physical medicine and rehabilitation clinic for symptomatic therapy and pain relief methods. We have done progressive strengthening exercise therapy of the back, lumbar and abdominal muscles concomitant with acupuncture of the spleen 6 (SP-6) point for urinary complication. We also prescribed anti-inflammatory drugs (diclofenac tablet 50 mg daily) for 2 weeks and anti-neuropathic (gabapentin caplet 300 mg at night).

After a while, because of relative improvement of her urinary symptoms and being in doubt about neurologic cause of incontinence, lab data were repeated and urinary tract infection was detected. Urine analysis revealed many white blood cell (WBC), bacteria and WBCs clump. Urine culture was positive for *Escherichia coli*.

### **Intervention**

By rehabilitation her back and leg pain was

improved after 2 weeks. Administration of a 7 days antibiotic course (ciprofloxacin 500 mg BD) caused the patient becoming totally continent unexpectedly.

### **Outcomes**

The patient was under maintenance exercise regime (Williams's Flexion exercises), and she was taking gabapentin as well. Her symptoms were tolerable within the course. The point was UI of the patient that annoyed her in daily living, was completely resolved.

### **Discussion**

Spine surgery is linked with a variety of intraoperative complications such as wrong level surgery, nerve root lesion, vascular injury, and dural tearing (1, 2). Intracranial hemorrhage (3) and post-operative anemia (4) are two other complications that are mentioned in literature. Patients with lumbar spinal canal compression not only experience leg neuropathy but also urinary tract symptoms. In one study that was performed on 245 patients who were admitted for decompression of lumbar spinal canal compression, 27% of patients had lower urinary tract symptoms as well (5).

Several studies have shown an association between back pain and urinary bladder incontinence (6-9). The differentials are composed of renal causes such as pyelonephritis/renal calculi/infected stone and cystitis, epidural mass effect such as tumors (metastases, lymphomas, spinal tumors)/hematoma/epidural abscess and disk herniation, spondylolisthesis (degenerative/traumatic/tumor related), reactive arthritis, disk space infection, osteomyelitis, Pot's disease, and vertebral fractures.

Spinal disorders or injuries that cause nerve compression or damage may cause neurogenic bladder disorder (NBD); also termed bladder dysfunction. NBD symptoms may include:

Limited or no voluntary control, involuntary urination, feel sudden urge(s) to urinate, frequent bathroom visits, bladder

does not completely empty, bladder overfills and pressure causes accidental leakage of urine, bladder is unable to hold urine.

Thus, UI due to spinal cord compression could have many different features and there is no special type of incontinence that we could rely on to differentiate between several etiologies. In study by Podnar et al., they mentioned that in the patient with Cauda equine syndrome, symptoms of disturbed bladder emptying, UI and symptoms of overactive bladder were three most common urinary symptoms interfered with daily life (10).

Nowadays, alternative medicine and specially acupuncture are worldwide acceptable and scientific. There are many literature based evidence on different disorders for positive effects of acupuncture. Acupuncture in specific points such as SP-6 has therapeutic effect on neurogenic and overactive bladder in different human and animal studies (11-14).

Balasubramanian et al. concluded that there was no symptom or sign which had an absolute predictive value in establishing the diagnosis of Cauda equina syndrome, but saddle sensory deficit had a higher predictive value than other clinical features in diagnosing a Cauda equina syndrome (15).

The oldest-old are predisposed to infectious disease due to an increase in the rate of comorbidities (16).

The incidence of urinary tract infection increases with age. Paying attention to common health problems continuously prevents misdiagnosis. In study by Seung-Eunlee et al., they pointed that asymptomatic urinary tract infection in elderly women might be considered as a risk factor for post-operative spine infection (17).

In older persons, UI can cause significant morbidity (such as falls and fractures) and functional impairment. In addition, many older and especially frailer persons require caregivers, and UI can lead to caregiver stress and institutionalization of the frail elder (17).

In this case, the patient was lucky to be old and ill and so not undergoing an operation.

Clinicians should be aware and not get tunnel vision because of their specialism.

### Conflict of Interests

Authors have no conflict of interests.

### Acknowledgments

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