

# Urinary Incontinence Triggered by Stretching Exercises

## *Gerginlik Antremanı ile Ortaya Çıkan İdrar İnkontinensi*

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### ABSTRACT

A 47-year-old female patient who experienced urinary urgency after having stretching exercises of her legs is presented. Stretching of the legs are thought to be responsible for conus medullaris tethering which in turn causes urinary complaints. What is interesting in this case is that her complaints about urinary urgency stopped as she quit stretching exercise movements of her legs. There are some examples of such cases in the literature. The urinary urgency after stretching exercises warned us to investigate this patient in regard to tethered conus medullaris. Tethering of the conus medullaris can be temporary and can cause reversible functional disorders of the bladder. Incontinence at any age should be evaluated cautiously as it could be a sign of an underlying important developmental failure.

**KEYWORDS:** Stretching, Tethered cord, Urinary incontinence

### ÖZ

Bacaklarına yaptırılan gerilme egzersizleri sonrasında idrarda aciliyet hissi gelişen, 47 yaşında bir bayan hasta sunulmaktadır. Gerginlik hareketlerinin filum terminal gerilmesine neden olarak mesane fonksiyon bozukluğuna neden olduğu düşünülmüştür. İlginç olan ise, gerginlik hareketlerine son vermesinden sonra hastadaki idrar aciliyeti hissi kaybolmuştur. Yaklaşık 4 yıllık izlemde sorun yaşanmamıştır. Literatürde bu tip olgular bildirilmiştir. Gerginlik egzersizinden sonra gelişen idrardaki aciliyet hissi, sadece bu yakınma olmasına rağmen bizi uyarmış ve hastayı gergin konus medullaris açısından araştırmamıza neden olmuştur. Sonuç olarak bu tip yakınmalara duyarlı olmak ve altta yatan nedenin gelişim anomalisi olabileceğini düşünmek yararlı olacaktır.

**ANAHTAR SÖZCÜKLER:** Gerginlik, Gergin omurilik, İdrar inkontinensi

### INTRODUCTION

Tethered cord is caused by a wide variety of pathological conditions. While some of them are obvious, the remainder is obscure and very difficult both regarding the diagnosis and making the treatment decision. Tethered cord is a physiopathological condition of relatively decreased blood supply of the conus medullaris in particular, which in turn causes bladder and sphincter dysfunction. It is known that reversing the bladder malfunction is almost impossible after settlement of the bladder dysfunction. Prophylactic surgery is the choice of treatment. However, we occasionally come across some patients who do not want surgical intervention and these patients are important in regard to the natural history of this disorder. In this paper we present a patient with occasional urine incontinence who did not want untethering surgery of the filum terminale.

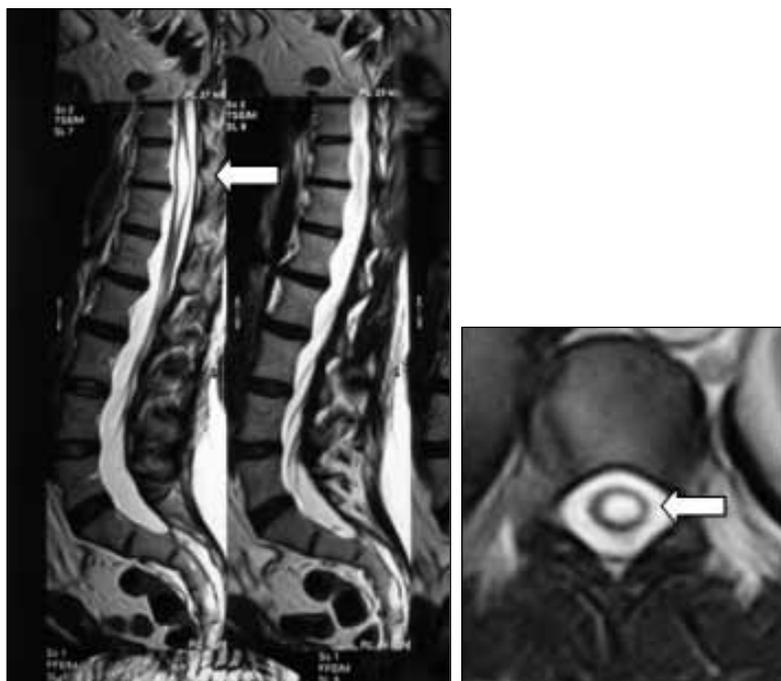
### CASE REPORT

A 47-year-old female patient applied with the chief complaint of temporary incontinence during stretching exercise movements of her legs and body. She also declared that the

incontinence became be an urgency, which lasted 24 hours after the exercise. She performed the stretching exercise twice a week and reported that she was normal at other times.

An increase in bladder pressure in animal models during experimental stretching of the filum terminale and lengthening of the lumbar vertebral canal during forward bending are well-known issues. We thought that stretching exercises could be the cause of filum tethering in this patient, which in turn trigger urinary incontinence (unpublished data of our department's investigation on effects of filum terminale tethering in animals).

The neurological examination was normal. Her lumbar magnetic resonance imaging (MRI) revealed that the conus ended at the lower level of the L2 vertebra corpus, with a thick filum terminale and a syrinx in the conus medullaris (Figure 1, 2). Somatosensorial evoked potential investigation showed a lumbar conduction delay, which was considered a pathological sign that indicated tethering of the conus. Although urodynamic studies are accepted as the principal method of investigation, it could not be performed in this patient as she refused urodynamic study.



**Figure 1:** Low medullary conus and intramedullary syrinx (arrow).



**Figure 2:** Level of conus at L2 and thick filum terminale are seen.

The incontinence discontinued when she stopped stretching exercises and no further treatment such as surgical intervention was needed. She is still continent after five years of follow-up.

### DISCUSSION

This patient is interesting as she had occasional urinary urgency and incontinence related with her body movements. Her chief complaint, that alerted us to investigate her for a tethered cord, was urinary urgency after stretching exercises.

While the patient did not experience any incontinence after she quit the stretching exercises, she did not want to be operated on for the tethered conus medullaris and we did not attempt to perform surgical intervention to cut the filum terminale. An investigation of the natural history of a tethered conus revealed that neurological deterioration invariably occurs during the patient's lifetime (2). Blockade or delay in somatosensory potentials are very important and valuable findings in regard to cord tethering in such patients. We believe that the untethering intervention should be done as soon as possible as a prophylactic procedure before the symptoms appear in case of cord tethering, A ballerina with urinary incontinence during high kick movements on the stage WAS reported by Dr. Pang. Our case is very much similar to Dr. Pang et al's classification of "momentary stretching" (1).

### CONCLUSION

We conclude that tethering of the conus medullaris can be temporary and can cause temporary symptoms concerning continence. Incontinence at any age should be evaluated cautiously as it could be a sign of an underlying important developmental failure.

### REFERENCES

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