

# EFFECTIVENESS OF SACRAL NEUROMODULATION IN TWO PATIENTS WITH TETHERED CORD SYNDROME OUTPUTS: A CASE REPORT

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## Background

The Tethered Cord Syndrome (TCS) is the clinical manifestation of a neurological disorder caused by the caudal anchor of the marrow that limits movement within the spine. Ischemic injury from stretching may result in neurological, urinary, intestinal disorders. The neurological bladder requires pharmacological therapy, intermittent catheterization and surgical treatments to achieve urinary continence and save renal function. Sacral neuromodulation (NMS) is an innovative treatment option that uses the electrostimulation of the roots of the sacral nerves that are responsible for modulation of the bladder and intestinal emptying function. The neurostimulator sends small electrical impulses (regulation of electrical impulses is possible) to the sacral nerve through the lead, closely located.

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## Purpose

To describe the short-term results of NMS in two adolescents with neurological bladder and neurogenic constipation, refractory to intensive conservative treatment.

## Material and methods

O.G., 11 years old (TCS outcome and anorectal malformation) undergo NMS. During the 30 days trial, improved intestinal function by reducing the number of intestinal washings at 2-3 times per week (versus 7/7). Partial improvement of urinary function with spontaneous urination (5-6times per week). G.S., 14 years old, patient with neurological bladder and neurogenic constipation (TCS outcome), sometimes suffering from urinary incontinence. Undergo NMS. During the 30 days trial, there has been a clinical improvement with urinary incontinence disappearance, perception of the stimulus (2 times per day) and spontaneous urination (1 time per day).

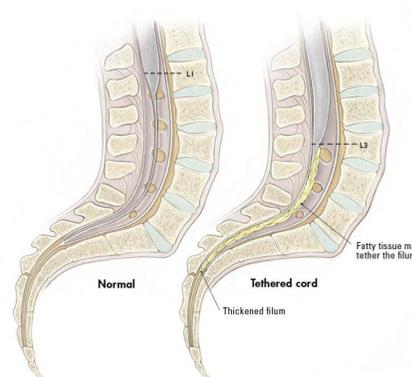
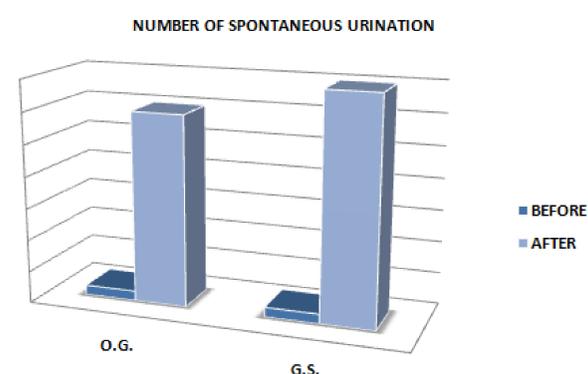


Figure 1. Difference between normal status and during TCS



## Results

In both patients, urodynamic examination showed an improvement in bladder compliance, even without the use of drug therapy. NMS was associated with patients and stakeholders perception of overall success and positive impact on quality of life. From an economic perspective, the cost of interventions (€ 9920/intervention) were compensated by the reimbursement fees of Diagnosis-Related Groups (DRG).

## Conclusion

NMS seems to be a promising and sustainable new treatment option for adolescents with neurological bladder and neurogenic constipation. However, more randomized, long-term follow-up studies are required to definitely confirm this conclusions.

## References

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