

# A retrospective review of the long term clinical outcomes of patients with neurogenic lower urinary tract dysfunction following transverse myelitis

[Sarah Louise Knight](#)<sup>1,2</sup>, [Claire Riley](#)<sup>2</sup>, [Yogit Wagh](#)<sup>2</sup>, [Frank Lee](#)<sup>2</sup>, [Julian Shah](#)<sup>2</sup>, [Rizwan Hamid](#)<sup>1,2</sup> Neurourol Urodyn. 2021 Jan;40(1):219-227.

## Abstract

**Aims:** Transverse myelitis (TM) is an inflammation of the spinal cord which causes neurological deficit in motor, sensory, and autonomic pathways. Persistent neurogenic lower urinary tract dysfunction (NLUTD) is common even where motor and sensory impairment is recovered. Long term follow-up is required to ensure optimal bladder management and protection of the upper tracts. We describe the clinical outcomes for a cohort of patients with TM who have received neurourological follow-up in a specialist center.

**Methods:** A retrospective review of TM patient records was performed. Current pharmaceutical and surgical management, upper tract status, and patient reported symptoms are reported. Changes in urodynamic parameters and bladder emptying technique between current and baseline were analyzed.

**Results:** Sixty patients with NLUTD following TM were identified. The mean age at onset of NLUTD was 29 years (0-77 years). The mean follow-up was 13 years. 55% of patients were taking antimuscarinic medication, 53% of patients had intradetrusor botulinum toxin injections and 5% had bladder augmentation surgery. Forty-one patients had a baseline and recent urodynamic study which could be compared. Fifty-three of fifty-eight patients with a recent renal ultrasound had normal renal appearance. Four had mild hydronephrosis and one more extensive hydronephrosis.

**Conclusion:** TM can have a persistent effect on lower urinary tract function. There is potential for upper tract damage if bladder management is not optimized. We have demonstrated that in a specialist neurourology unit within a tertiary center, one can provide acceptable long term outcomes following international guidelines.