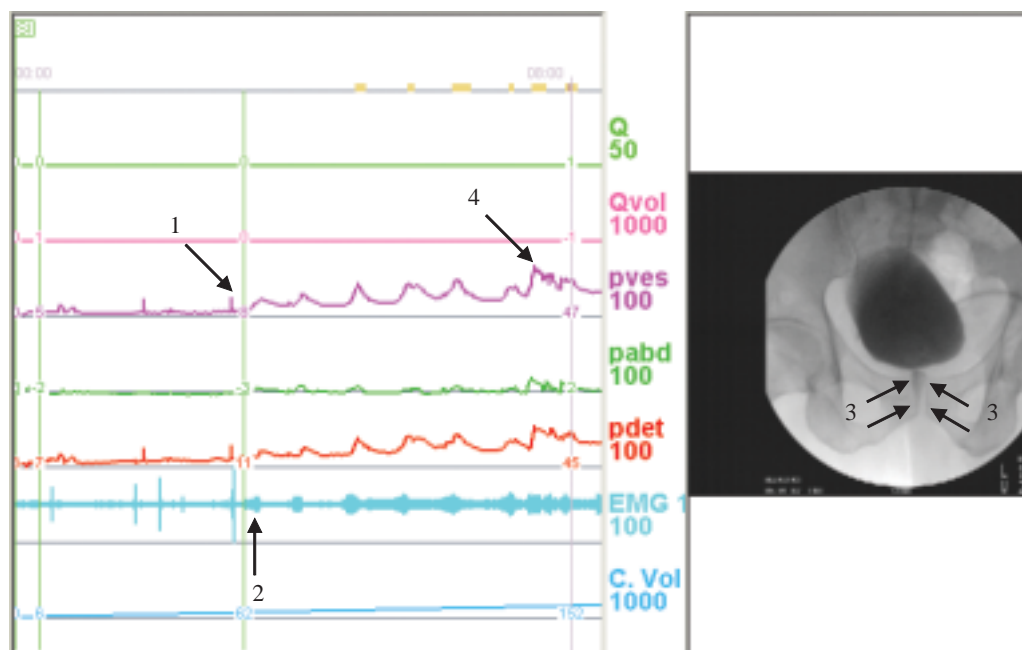


Chronic Spinal Cord Injury with Detrusor Sphincter Dyssynergia (DSD) Type 2

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BRIEF HISTORY

A 57-year-old man with had a T12 spinal cord injury for 20 years. He was on had a trocar cystostomy due to recurrent UTI and difficult urination for more than 10 years.

CLINICAL INVESTIGATION

He has had complete paraplegia below T12. A suprapubic cystostomy was inserted and the urine was turbid.

VIDEOURODYNAMIC FINDINGS

Videourodynamic study revealed detrusor overactivity occurred at a volume of 62 mL (1) with increased sphincter electromyography (EMG) activities (2) and inadequate detrusor contractions. During detrusor contractions, there was opening of the prostatic urethra, but the bladder neck and urethral sphincter were narrow (3), indicating bladder neck dysfunction and external sphincter dyssynergia (DSD). The voiding detrusor pressure (Pdet) was 38 cm water but no flow was

noted (4). The postvoid residual (PVR) was 150 mL. The patient felt a headache and generalized spasticity when the bladder volume increased. No vesicoureteral reflux was noted.

CLINICAL DIAGNOSIS AND MANAGEMENT

The urodynamic study revealed a type 2 detrusor sphincter dyssynergia (DSD) and bladder neck dysfunction. DSD is commonly seen in thoracic spinal cord injury patients but concomitant bladder neck dysfunction or dyssynergia is less common. Because the level of SCI is the spinal cord injury is at T12 in this patient, bladder neck dyssynergia is not likely. The cause for of the bladder neck dysfunction could be due to obstructive hypertrophy of the bladder neck. Treatment should aim at relieving of the bladder neck and urethral sphincter obstruction. Transurethral incision of the bladder neck is a simple and effective procedure for the former, whereas urethral sphincter botulinum toxin A (BTX-A) injection could be another procedure and suitable treatment for DSD. If the patient wishes to regain urinary continence, intravesical injections of BTX-A will be helpful to help increase the bladder capacity and decrease the intravesical pressure.