Intrinsic Sphincter Deficiency after Radical Prostatectomy

Hann-Chorng Kuo, M.D.

Department of Urology, Buddhist Tzu Chi General Hospital and Tzu Chi University, Hualien, Taiwan; E-mail: hck@tzuchi.com.tw

BRIEF HISTORY

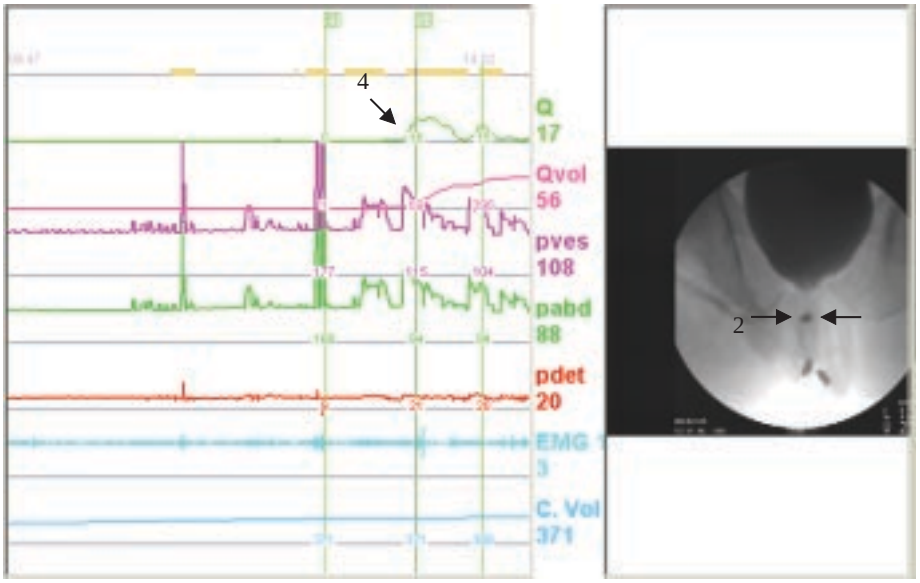
This 65 year old man had a radical prostatectomy 3 years ago. After surgery, urinary incontinence was noted and the symptom persisted despite medication and physiotherapy. He experienced no constipation or urinary tract infection. He came to us for a suburethral sling procedure.

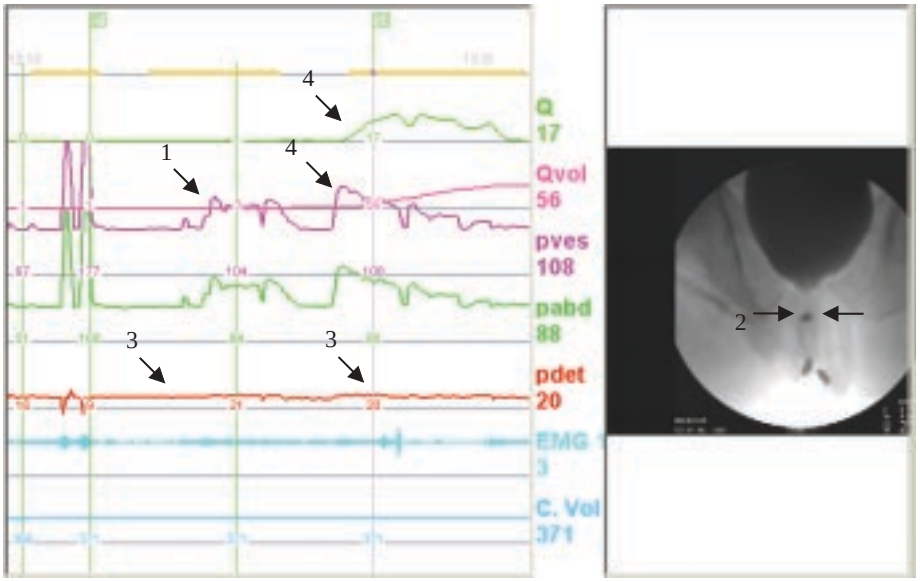
CLINICAL INVESTIGATION

There were no specific abnormal findings. Persistent urine leakage was noted.

URODYNAMIC STUDY

The investigation was first done in the supine position, and then in the erect position. Videourodynamic study was performed using a 6 Fr double-lumen catheter, an 8 Fr intrarectal catheter and surface electromyography (EMG) patches with an infusion rate of 30 mL/min. First sensation of filling was noted at 213 mL, and full sensation at 375 mL. When the bladder was full, he was asked to cough and the perform Valsalva maneuver. Urine leakage was noted during the Valsalva maneuver at a pressure of 35 cm water (1). During the Valsalva maneuver the urethral sphincter was open (2) and there was no detrusor contraction concomitantly (3). When he was asked to void, no detrusor contraction was elicited. The patient used abdominal pressure to void with good maximum flow rate and little postvoid residual (4).





DIAGNOSIS AND MANAGEMENT

Intrinsic sphincter deficiency (ISD) was a complication after radical prostatectomy in this patient and caused urine incontinence. In some patients, detrusor underactivity can occur due to pelvic plexus injury. The patient must use abdominal pressure to void. When we note detrusor underactivity in a patient with ISD, a suburethral sling procedure should be performed cautiously to prevent postoperative urinary retention or difficult urination.