

## **Diagnosis and management of voiding dysfunction associated with transverse myelitis**



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## **Overview**

- Concepts of voiding dysfunction
- Goals of evaluation and therapy
- Evaluation
- Urodynamics
- Conclusions

## **Paradigms of voiding dysfunction**

- Wein (1981);  
distillation of concepts  
to storage/emptying  
function of lower  
urinary tract.
- Clinically applicable
- Urodynamic  
correlation possible
- Expandable

## **Paradigms of voiding dysfunction**

- International Continence Society (Abrams, 1990)
- Useful in guiding treatment; fusion of  
functional/urodynamic data
- Attempt at standardization

## **Goals of evaluation and therapy**

- Protection of upper tracts
  - Avoidance of infection, low pressure system
- Restoration of continence
  - determination of anatomic vs neural etiology
- Independence in management

## **Evaluation**

- History
  - Establish voiding patterns
  - Continence status
  - Bowel function
- Physical exam
- Urinalysis
- Voiding diary

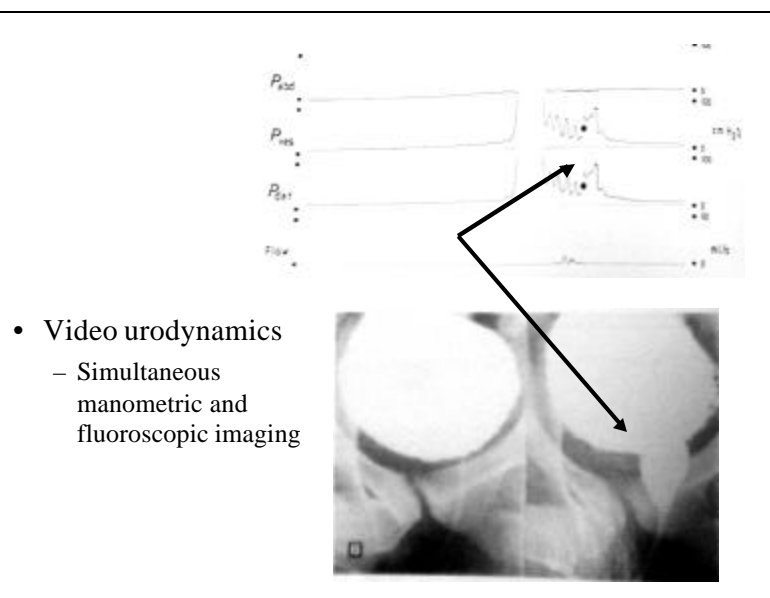
## Screening tools

- Urogenital distress inventory (UDI-6)
- Incontinence impact questionnaire (IIQ-7)

The image shows two questionnaires. The top one is the Urogenital Distress Inventory (UDI-6), which asks 'Do you experience any of the following over the last 12 months?' and lists 6 items related to urinary symptoms. The bottom one is the Incontinence Impact Questionnaire (IIQ-7), which asks 'Has urine leakage affected your:' and lists 7 items related to quality of life.

## Urodynamics

- 2 phase study
  - Filling (CMG)
  - Emptying (pressure/flow)
- Can include EMG, urethral profilometry



- Video urodynamics
  - Simultaneous manometric and fluoroscopic imaging

## Therapy

- Problems with storage
  - Anticholinergics; tolterodine, oxybutinin, hyoscyamine, amitriptyline
  - Biofeedback, behavioral therapy
  - Neuromodulation
  - Diversion; foley, SP tube, ileovesicostomy
  - Bladder neck reconstruction, sling procedures, AUS
  - Augmentation cystoplasty

## Therapy

- Problems with emptying
  - ~~Valsalva or crede voiding~~
  - Clean intermittent catheterization
  - Neuromodulation

## Conclusions

- Voiding dysfunction is diagnosable
- Treatment options exist on a spectrum of invasiveness
- The following goals can be achieved in the majority of cases
  - Upper tract protection
  - Continence
  - independence