Curriculum

In

Functional

Urology

Curriculum in Functional Urology

Background

- Curricula for Female Urology, Reconstructive Urology and Neurourology have already been produced.
- It is generally accepted that there is considerable overlap between these three clinical areas.
- In many centres, those urologists who do not sub-specialise in endourology or oncology, do specialise in a (variable) mixture of these three areas.
- The exact mix varies from centre to centre, and may reflect local circumstances
- There is a logic therefore for identifying centres for training in a mixture of these areas
- For most trainees this might provide 5th or 6th year training (but not both)
- For those few trainees who would seek to offer subspecialty training themselves in either reconstruction, neurourology or female urology, such posts could provide 5th year training prior to 6th year training in the relevant field

Objectives

All training posts in functional urology should provide a baseline training in the structure and function of the lower urinary tract together with an understanding of the causes, pathophysiology, assessment and treatment of lower urinary tract dysfunction. In addition there will be detailed training in [4] out of [7] specific modules as outlined below. The modules are:

1. Traumatic neurourology
2. Non-traumatic neurourology
3. Female urology
4. Urethral surgery
5. Upper tract reconstruction
6. Substitution cystoplasty and continent urinary diversion
7. Complex surgery for sphincteric dysfunction including AUS surgery

Core Curriculum in Functional Urology

Knowledge

- Anatomy, physiology and pharmacology of the lower urinary tract, pelvic floor and ano-rectum
- Neural control of genitourinary function
- Causes and pathophysiology of lower urinary tract dysfunction, including congenital disorders, inflammatory conditions, stress incontinence, traumatic conditions, neurological disorders, and idiopathic disorders such as detrusor instability
- The effects of lower urinary tract dysfunction upon upper urinary tract function
- The effect of aging and pregnancy upon genitourinary function
- Principles of assessment of patients with lower urinary tract dysfunction including:
    - Principles and theory of urodynamics
    - Principles and role of radiology, nuclear medicine and clinical neurophysiological studies in the assessment of patients with lower urinary tract dysfunction
- Principles of treatment for patients with lower urinary tract dysfunction including:
    - Pharmacological basis of medical therapy for lower urinary tract disorders
    - Theoretical basis and practical aspects of the role of conservative therapy, physiotherapy and behavioural therapy in the treatment of lower urinary tract dysfunction
    - Principles of catheters and intermittent self catheterisation

- Principles of the surgical treatment of genuine stress incontinence
- Principles of the use of intestinal segments in the lower urinary tract, including the relevant anatomy and physiology of the GI tract, together with the complications of their use
- Principles of urinary diversion
- Principles of the use of flaps and grafts in the lower urinary tract
- Principles of neurostimulation and neuromodulation in the treatment of disorders of the lower urinary tract

Skills

All posts should provide training and experience in the

- Assessment of patients with functional disorders of the lower urinary tract including:
  - Clinical assessment
  - Endoscopic assessment of the lower urinary tract
  - Urodynamic assessment including video-urodynamics, including ability to both perform and interpret complex studies
  - Radiological assessment
  - Neurophysiological assessment (where relevant)
- Management of the patient with genitourinary tract dysfunction
  - Pharmacological treatment
  - Use of ancillary therapies where appropriate (eg physiotherapy)
  - Ileal conduit diversion
  - Augmentation cystoplasty or alternative
  - Surgery for uncomplicated, previously untreated genuine stress incontinence, eg colposuspension or alternative
  - Indications for referral on to relevant sub-specialist

Attitudes and interpersonal skills

- Ability to assess and treat patients with incontinence
- Role of team-working in functional urology including the roles of gynaecologists, colo-rectal surgeons, plastic surgeons and paramedical professionals including continence advisors, stoma therapists and physiotherapists

Module 1: Non traumatic neurourology

The post would provide the principle focus for the assessment and treatment of the genitourinary disorders associated with non traumatic neurological disease. There should be evidence of liaison with the neurological services (eg referral protocols, specialist clinics etc).

Knowledge

Core knowledge plus:

- Detailed knowledge of the effects of the major non-traumatic neurological disorders on genitourinary function. Rationale and indications for their use and complications associated with them. This would include the following conditions:
    - Multiple sclerosis
    - Idiopathic Parkinson's disease
    - Multiple system atrophy
    - Spina bifida
    - Alzheimer's disease
    - Cerebro-vascular disease

- The range of treatments available for patients with non-traumatic neurological disease. Rationale and indications for their use and complications associated with them. This would include:
    - Medical therapy (oral and intravesical)
    - Intermittent self catheterisation
    - Sheath drainage
    - Permanent catheterisation (urethral and suprapubic)
    - External sphincterotomy and alternatives
    - Bladder neck closure
    - Augmentation cystoplasty
    - Continent and incontinent urinary diversion
    - Neuromodulation
    - AUS insertion

Skills

Core skills plus experience and training in:

- Bladder neck closure

Attitudes

Core plus:

- Psychosocial aspects of neurological disease and it's effect upon bowel, bladder and sexual function
- Effect of progressive neurological disease upon the patient
- Liaison with neurologists and geriatricians

Module 2: Traumatic neurological disease

The post would provide the principle focus for the assessment and treatment of the genitourinary disorders associated with traumatic neurological disease. These posts will usually only be available within a spinal injuries unit.

Knowledge

Core knowledge plus:

- Detailed knowledge of the effects of the major traumatic neurological disorders on genitourinary function and other relevant systems
- The assessment of patients with genitourinary problems associated with traumatic neurological disease
- The range of treatments available for patients with traumatic neurological disease. Rationale and indications for their use and complications associated with them. This would include:
    - Medical therapy (oral and intravesical)
    - Intermittent self catheterisation
    - Sheath drainage
    - Permanent catheterisation (urethral and suprapubic)
    - External sphincterotomy and alternatives
    - Bladder neck closure
    - Augmentation cystoplasty
    - Continent and incontinent urinary diversion
    - Neurostimulation
    - AUS insertion

Skills

Core skills plus experience and training in:

- Bladder neck closure
- Use of the AUS
- Substitution cystoplasty and continent urinary diversion
- Posterior rhizotomy and the use of electrical stimulators

Attitudes and inter-relationships

Core plus:

- Psychosocial aspects of traumatic neurological disease and it's effect upon bowel, bladder and sexual function
- Liaison with neurosurgeons, physiotherapists, occupational therapists etc

Module 3: Female Urology

The post would provide the principle focus for the assessment and treatment of the female urological disorders. There should be evidence of liaison with the gynaecological services (eg referral protocols, joint clinics etc).

Knowledge

Core knowledge plus:

- Detailed knowledge and understanding of the principles of the pathophysiology, clinical features and consequences of prolapse
- Detailed knowledge and understanding of the relationship, pathophysiology and assessment of large bowel dysfunction
- Detailed knowledge and understanding of the causes, pathophysiology and clinical features of sensory disorders including interstitial cystitis
- Detailed knowledge and understanding of the treatment of sensory bladder disorders
- The range of treatments available for women with genuine stress incontinence. Rationale and indications for their use and complications associated with them. This would include:
    - Physiotherapy and behavioural therapy
    - Intraurethral injections
    - Pharmacological therapy
    - Needle suspension procedures
    - Colposuspension and associated procedures
    - Slings (natural and synthetic)
    - AUS insertion
    - Bladder neck closure
    - Urinary diversion

Skills

Core skills plus experience and training in:

- Surgical treatment of primary and recurrent stress incontinence. Experience of a range of operative procedures will be usual, together with evidence of a logical algorithm for their use

Attitudes and interrelationships skills

Core plus:

- Relationships with continence advisors, physiotherapists, gynaecologists and colorectal surgeons

Module 4: Urethral reconstruction

The post would provide the principle focus for the assessment and treatment of urethral disease.

Knowledge

Core knowledge plus:

- Detailed knowledge of the anatomy of the perineum
- Detailed knowledge of the causes, pathophysiology and consequences of urethral stricture disease
- Detailed knowledge of the causes, pathophysiology and treatment of other urethral disorders including hypospadias
- Principles of the use of flaps and grafts in urethral surgery
- The assessment of men with urethral stricture disease
- The range of treatments available for patients with urethral strictures. Rationale and indications for their use and complications associated with them. This would include:
    - Urethral dilatation
    - Urethrotomy and alternatives
    - Anastamotic urethroplasty
    - Substitution urethroplasty

Skills

Core skills plus experience and training in:

- Meatoplasty
- Bulbar anastamotic urethroplasty
- Bulbar patch urethroplasty
- Post-traumatic membranous urethroplasty

Attitudes and inter-relationships

Core plus:

- Liaison with plastic surgeons and maxillo-facial surgeons as appropriate

Module 5: Ureteric reconstruction

The post would provide the principle focus for the assessment and treatment of ureteric injuries. The usual indications for ureteric reconstruction are secondary to malignancy, congenital problems, and iatrogenic injuries. Liaison with radiologists, urological oncologists, pelvic surgeons and endourologists would be usual.

Knowledge

- Assessment of patients with ureteric injuries including radiological assessment
- Role of radiology and endourology in the treatment of ureteric injuries
- Knowledge of the principles of ureteric reconstruction. In particular, the relative indications and potential problems of the various procedures including:
    - Ureteroureterostomy
    - Psoas hitch
    - Boari flap
    - Transuretero-ureterostomy
    - Autotransplantation
    - Ileal interposition

Skills

Core skills plus experience and training in:

- Use of endourological techniques to treat ureteric injuries
- Ureteric reimplantation
- Uretero-ureterostomy
- Ureteric reimplantation
- Psoas hitch or Boari flap
- TUU

Attitudes and inter-relationships

Core attitudes plus:

- Liaison with endourologists and radiologists

Module 6: Substitution cystoplasty and continent urinary diversion

This post would be the principle focus for patients undergoing bladder reconstruction. It is expected that there would be liaison with urological oncologists, colorectal surgeons, gynaecologists and stoma therapists.

Knowledge

Core knowledge plus:

- Detailed knowledge of the major conditions requiring bladder reconstruction, including:
    - Bladder cancer and other pelvic malignancies
    - Inflammatory conditions of the bladder
    - Neurological conditions affecting the bladder
    - Congenital condition affecting the bladder

- Detailed knowledge of the range of techniques available for bladder reconstruction. In particular:
    - The relative merits of different bowel segments
    - The relative merits of varying continence procedures
    - The relevance of ureteric reflux and it's prevention
    - The complications of cystoplasty. Their investigation and management.

Skills

Core skills plus experience and training in:

- Substitution cystoplasty following partial or radical cystectomy
- Continent urinary diversion following partial or radical cystectomy

Attitudes and inter-relationships

Core attitudes plus:

- Liaison with stoma therapists, continence advisors, colo-rectal surgeons, radiologists, urological oncologists and gyanecologists

Module 7: Complex sphincteric weakness

The post would provide the principle focus for the insertion of artificial urinary sphincters.

Knowledge

Core knowledge plus:

- Detailed knowledge of the major indications for AUS insertion
- Detailed knowledge of the function of the AUS
- Detailed knowledge of the complications of the AUS

Skills

Core skills plus experience and training in:

- First time AUS insertion via the bulbar and the retropubic route