CURRICULUM

IN

ADVANCED TRAINING

FOR

FEMALE UROLOGY

Background

After satisfactory completion of the core urological training, trainees would undergo speciality training in more complex aspects of urology: in this case female urology.

Training in Female Urology

The following advanced knowledge and skills should be acquired:

1) An advanced knowledge of the anatomy and embryology of the lower urinary tract, genital tract, lower bowel and pelvis including pelvic floor;
2) Detailed knowledge of the physiology of lower urinary tract and lower bowel function;
3) Knowledge of the patho-physiology of lower urinary tract, genital and lower bowel dysfunction;
4) Understanding of the principles of assessing lower urinary tract and bowel function, including urodynamics, neuro-physiological testing and bowel function studies;
5) Be able to perform basic and complex urodynamic studies ensuring quality control in recording and to have excellent interpretative skills of urodynamic traces;
6) Be able to manage lower urinary tract dysfunction and to be able to contribute to the management of genital and bowel problems;

Basic Science

1. *Anatomy and Embrology of:*

- Bladder and urethra
- Supporting structures - pelvic floor, ligaments, endopelvic fascia and bony pelvis
- Genital tract
- Lower bowel
  - the vascular supply and nerve supply including the relevant neuro-anatomy.

2. *Physiology of:*

- Bladder filling and voiding, to include pelvic floor function as well as relevant neurophysiology
- hydrodynamics of bladder and urethral function
- anorectal storage and emptying function.

3. *Pathology of:*

- Lower urinary tract to include
  - congenital disorders
  - inflammatory conditions of the bladder and urethra including infections
  - trauma including iatrogenic
  - effects of pregnancy, childbirth and ageing
  - effects of neurological disease/damage
  - functional disorders such as detrusor overactivity and sphincter overactivity.
- pelvic organ prolapse
- anorectal dysfunction

Patient Assessment

1) History taking in female urology including the use of the frequency volume chart (urinary diary), use of symptom questionnaires and quality of life assessment. History taking should cover

urinary gynaecology and bowel symptoms together with a sexual history and psychological assessment. The relevant past history and current drug history is included.

2) Physical examination to include detailed neurological examination, assessment of pelvic organ prolapse and assessment of hormonal status;
3) Urinalysis and urine examination;
4) Indications for and methods of imaging of
   - pelvic floor function/prolapse
   - urethral function and anatomy
   - upper urinary tract using Xrays, ultrasound, CT, MRI, isotopes and endoscopy.
5) Functional studies
   a) urodynamics
      - philosophy of urodynamics
      - scientific principles
        - flow measurement
        - pressure measurement
        - hydrodynamic principles
      - indications for urodynamic investigation in female patients
      - quality control
      - technique
        - urine flow studies
        - voiding cystometry
        - video urodynamics
        - ambulatory urodynamics
        - urethral function studies
        - detection and measurement of urine loss
      - Interpretation
        - nomenclature
        - analysis of data including voiding pressure flow

   b. Anorectal studies : the trainee should understand the principles, indications for, and techniques used to investigate functional disorders of the lower bowel.

   c. Neurophysiological testing : the trainee should understand the principles, indications for, and the techniques used to investigate females with pelvic disorders.

Patient Management

Management can be divided into :

- conservative (non drug, non surgical)
- drug therapy
- other treatments

In lower urinary tract dysfunction management is directed at:

- detrusor overactivity during storage
- urethral incompetence during storage
- detrusor underactivity during voiding
- urethral overactivity/obstruction during voiding

In addition sensory disorders during the micturition cycle and inflammatory conditions of the LUT may require management.

The trainee should show experience and training in :

1 Conservative treatment of storage phase problems

- general advice of fluid intake/diet, weight loss, smoking - lifestyle interventions.
- pelvic floor exercises including teaching aids
- bladder training
- biofeedback

- continence products eg pads/pants/appliances/devices

2 Conservative treatment of voiding phase problems
- biofeedback
- double voiding

3 Drug therapy of storage phase problems
- overactive bladder/detrusor overactivity
- sphincter incompetence
- inflammatory conditions
  - infection
  - interstitial cystitis

4 Drug therapy of voiding phase problems
- detrusor underactivity (theoretical at present)
- urethral overactivity/obstruction

5 Surgical treatments of storage phase problems
- detrusor overactivity
  - neuromodulation
  - detrusor myectomy
  - bladder augmentation/substitution
- sphincter incompetence
  - needle suspension
  - bladder neck suspension (Burch)
  - sling procedures
  - injectables
  - artificial sphincters
  - bladder neck closure/Mitrofanoff
- inflammatory conditions
  - urethral dilatation/Otis urethrotomy
  - prolonged bladder distention

6 Surgical treatments of voiding phase problems
- urethral overactivity/obstruction
  - urethral dilatation
  - Mitrofanoff techniques

7 Other treatments
- hormone manipulation in menopausal and post menopausal years
- catheters for storage and or voiding problems
  - urethral
  - suprapubic
  - intermittent catheterisation
- electrical treatment for storage and or voiding problems
  - faradism
  - intravesical
- surgical treatment of urinary fistula
  - suprapubic approach using omentum
  - vaginal approach using martius graft

<u>Lower Bowel Dysfunction</u>

The trainee should have experience of conservative medical and surgical techniques used in the management of common conditions such as faecal incontinence.

<u>Genital Tract Dysfunction</u>

The trainee should have experience of conservative, medical and surgical techniques used in the management of common gynaecological conditions such as pelvic organ prolapse.

<u>Urological conditions during pregnancy</u>

The trainee should have experience of the management of conditions such as:

- Stone disease
- Tumours
- Upper tract obstruction
- Infection
- Haematuria

Management within a multidisciplinary team

The trainee will have the opportunity to work in association with

- Continence nurse advisors
  - primary care interface
  - continence clinics
  - continence care for the disabled and elderly
- enuretic clinic
  - conservative techniques
- uro-gynaecologist
  - outpatient work including menopause clinics
  - surgical sessions
- coloproctologist
  - outpatient work
  - investigative work (anorectal studies)
  - surgical sessions
- geriatrician
  - residential/nursing home management

	Completed by Trainee						Completed by Trainer							
	On appointment			At Completion			Competence level at 6 months				Competence level at 12 months			
	Seen	Assisted	Solo	Seen	Assisted	Solo	1	2	3	4	1	2	3	4
Female Urology														
Colposuspension														
Vaginal bladder neck suspension														
Sling procedure														
AUS														
Augmentation cystoplasty														
Continent urinary diversion														

Date: Signed Trainee: Signed Trainer:

LEVELS OF COMPETENCE

Level 1 Needs training to perform the task
Level 2 Needs supervision in performing the task
Level 3 Competent to perform the task unsupervised
Level 4 Competent to train others to perform the task