

4th Year Urology – Core Objectives Keith Rourke (Revised June 1, 2007)

I. Genitourinary Trauma:

1. Goal: The student will be able to demonstrate a basic clinical approach to the management & diagnosis of urologic trauma.
2. Needs: Genitourinary organs are commonly involved in multisystem trauma & their diagnosis is not often clinically obvious. Significant morbidity can result from not recognizing these conditions
3. Objectives:
 - a. Describe the presenting symptoms & classification of renal trauma.
 - b. List the indications for imaging of a suspected renal trauma.
 - c. List the presenting symptoms of bladder injury and outline the indications for a cystogram in the trauma setting.
 - d. Outline the approach to diagnosing suspected urethra trauma (i.e. indications for a retrograde urethrogram).
 - e. Try to observe one urologic trauma and participate in its evaluation.
4. Methods to Achieve these Objectives:
 - a. Selected reading: Smith's General Urology, 16th Edition, Chapter 17 (Injuries to the Genitourinary Tract).
 - b. Participation in ward rounds & on call.
 - c. Attend weekly urologic case rounds (Tues 7am AUI Conference Room).
 - d. Attend weekly urology (resident) teaching sessions (Thurs 8-11am AUI Conference Room).

II. Male Sexual Dysfunction:

1. Goal: The student will be able to demonstrate a general clinical approach to the treatment of male sexual dysfunction.
2. Needs Assessment: Male sexual dysfunction is a common & underdiagnosed condition.
3. Objectives:
 - a. Describe the basic anatomy of the penis & physiology of male erection.
 - b. List and classify the common risk factors for erectile dysfunction.
 - c. Outline the treatment options for erectile dysfunction (both surgical & non-surgical).
 - d. Assess one patient with erectile dysfunction.
4. Methods to Achieve these Objectives:
 - a. Required readings at www.urologyalberta.ca/med-undergraduate.asp (Erectile Dysfunction)
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 37 (Male Sexual Dysfunction).
 - c. Attend both general & subspecialty urology clinics.
 - d. Attend the operating room for observation of the surgical management of male sexual dysfunction.

III. Scrotal Lesions:

1. Goal: The student will be able to demonstrate basic clinical knowledge pertaining to benign, infectious & malignant scrotal swellings.
2. Needs Assessment: Scrotal lesions are a common urologic diagnosis found in up to 15% of all men.
3. Objectives:
 - a. Learn and perform a proper physical examination of the scrotum.
 - b. Classify scrotal lesions in a logical manner.
 - c. Discuss the distinguishing features of a malignant versus benign scrotal swelling.
 - d. Outline the clinical evaluation of a patient with suspected testicular cancer (physical examination, lab evaluation and radiographic tests).
 - e. List the differential diagnosis of acute scrotal pain.
4. Methods to achieve these goals:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Testicular torsion)
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 4 (Physical Examination of the Genitourinary Tract) & Chapter 23 (Genital Tumours).
 - c. Attend urology clinics for diagnosis & evaluation of scrotal lesions.
 - d. Attend operating room for the management of benign & malignant scrotal lesions.

IV. Voiding Dysfunction:

1. Goal: The student will be able to demonstrate a broad understanding of common voiding disorders encountered in urology.
2. Needs assessment: Voiding disorders are a common condition seen in all facets of clinical practice.
3. Objectives:
 - a. Outline the functional classification of voiding dysfunction.
 - b. Describe the basic innervation of the bladder, bladder neck & urinary sphincters.
 - c. Outline the basic evaluation of an incontinent patient.
 - d. Outline the treatment (medical & surgical) options of lower urinary tract symptoms (LUTS) in the older male patient.
 - e. Outline the basic treatment options for stress urinary incontinence.
 - f. Perform at least one male catheterization.
4. Methods to achieve these objectives:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Urinary incontinence, Managing patients with LUTS suggestive of benign prostatic hyperplasia, and Male urethral catheterization).
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 28 (Urinary Incontinence).
 - c. Attend one urodynamic clinic.

- d. Attend general urology clinics to diagnose & medically treat incontinence & voiding disorders.

V. Urologic Malignancy:

1. Goal: The student will be able to demonstrate a broad working knowledge of common urologic malignancies involving the prostate, bladder & kidney.
2. Needs Assessment: Urologic malignancies are common & highly treatable conditions requiring knowledge of current diagnostic & therapeutic options.
3. Objectives:
 - a. List the risk factors for bladder and prostate cancer
 - b. Classify and stage bladder, prostate & renal neoplasms.
 - c. Describe the common presenting symptoms of bladder cancer, prostate cancer & renal cancer.
 - d. Outline the basic treatment options for a solid renal lesion.
 - e. List the guideline for PSA screening in detecting, following and treating prostate cancer.
 - f. Discuss the basic treatment options for early & advanced bladder and prostate cancer.
 - g. Perform a digital rectal examination (DRE).
4. Methods to achieve these goals:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (A randomized trial comparing radical prostatectomy and watchful waiting & PSA testing early diagnosis of prostate cancer).
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 20 (Urothelial Carcinoma), Chapter 21 (Renal Parenchymal Neoplasms) & Chapter 22 (Neoplasms of the Prostate Gland).
 - c. Attend clinics for the diagnosis, evaluation and treatment of prostate & renal cancer.
 - d. Attend the operating room for the operative management of prostate, renal & bladder cancer.
 - e. Attend cystoscopy clinics for the diagnosis, evaluation and management of bladder cancer.

VI. Urinary Tract Infection:

1. Goal: The student will be able to demonstrate a broad working knowledge of urinary tract infection.
2. Needs Assessment: Urologic infection is a common medical problem with over 150 million cases per year in North America. Proper diagnosis & treatment of this condition is essential.
3. Objectives:
 - a. Outline the diagnosis and treatment of bacterial cystitis, pyelonephritis, epididymitis, and prostatitis.
 - b. List the most common antimicrobials used to treat urologic infection.
 - c. Learn the importance of early diagnosis & management of acute obstructive pyelonephritis.

- d. List the clinical features of Fournier's gangrene.
- 4. Methods to achieve these goals:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Acute uncomplicated urinary tract infection in women)
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 13 (Bacterial Infections of the Genitourinary Tract).
 - c. Attendance of general urology clinics to diagnose & treat common urologic infections.
 - d. Participation in urologic call to learn to assess acute urologic infection.

VII. Urinary Calculus Disease:

1. Goal: The student will be able to demonstrate a working knowledge of urinary calculus disease.
2. Needs Assessment: Urinary stone disease is the third most common urologic affliction.
3. Objectives:
 - a. Describe the most common risk factors for urinary calculus disease.
 - b. List the symptoms & diagnosis of an acute stone episode (renal colic).
 - c. Outline the management of renal and ureteral calculus disease in relation to the treatment options for renal calculi, ureteral calculi & vesical calculi.
 - d. Understand the role of extra-corporal shock wave lithotripsy (ESWL), ureteroscopy & percutaneous nephrolithotripsy (PNL) in treating urinary calculi.
 - e. List the basic principles of stone prevention.
4. Methods to achieve these goals:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Acute renal colic from ureteral calculus).
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 16 (Urinary Stone Disease).
 - c. Attend subspecialty & general clinics to diagnose & manage urinary stone disease.
 - d. Attend extra-corporal shock wave lithotripsy clinics to learn the non-surgical management of urinary stone disease.
 - e. Attend the operating room to understand the surgical management of stone disease.
 - f. Participate in urologic call to diagnose & manage acute renal colic.

VIII. Pediatric Urology:

1. Goal: The student will be able to demonstrate a working knowledge of common pediatric urologic conditions.
2. Needs Assessment: Urologic conditions are common presenting illnesses throughout childhood.
3. Objectives:
 - a. Outline the diagnosis & management of vesicoureteral reflux.

- b. Outline the management of acute testicular pain & know the importance of promptly diagnosing acute testicular torsion.
 - c. Recognize the common conditions affecting the prepuce including balanitis, phimosis & paraphimosis.
 - d. Outline the basic management of common congenital urologic conditions (ureteropelvic junction obstruction, hypospadias, & hydrocele).
4. Methods to achieve these goals:
- a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Pediatric urologic urgencies and emergencies).
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 12 (Vesicoureteral Reflux) & Chapter 38 (Disorders of the Penis & Male Urethra).
 - c. Attend pediatric urology clinics to assess, diagnose & manage common pediatric conditions.
 - d. Attend pediatric operating room to understand the surgical management of pediatric urologic disease.

IX. Hematuria:

1. Goal: The student will be able to evaluate & manage a patient with hematuria.
2. Needs Assessment: Hematuria is a cardinal symptom of urologic disease and requires evaluation.
3. Objectives:
 - a. Outline the evaluation of microscopic and gross hematuria.
 - b. Outline the management of acute bladder hemorrhage.
 - c. List a differential diagnosis of hematuria.
 - d. List a differential diagnosis of a urinary filling defect.
4. Methods to achieve these goals:
 - a. Required reading at www.urologyalberta.ca/med-undergraduate.asp (Microscopic hematuria).
 - b. Selected reading: Smith's General Urology, 16th Edition, Chapter 3 (Symptoms of Disorders of the Genitourinary Tract).
 - c. Attend urology clinics diagnose & manage a patient with hematuria.
 - d. Participate in call duties to learn the management of acute bladder hemorrhage.
 - e. Attend cystoscopy clinics to diagnose & observe causes of hematuria.