

**Urology and Trauma Workshop**  
Skills Centre, St George Hospital  
29th November 2014

Lecture topics:

**Welcome**

0900-0915 (12 minute presentation, 3 minute discussion)

Registrar presenter:

**Acute urological emergencies**

What organisms are implicated in epididymo-orchitis and prostatitis and how should they be managed?

How should priapism be managed?

How should phimosis and paraphimosis be managed?

What is the role of bilateral orchidopexy in scrotal exploration?

0915-0930 (12 minute presentation, 3 minute discussion)

Registrar presenter: John Chang (St George Hospital)

**Urolithiasis**

How do renal calculi form, and what conditions predispose to them?

What is the role of alkalisation? How does tamsulosin work?

What are the options for managing ureteric stones?

0930-0945 (12 minute presentation, 3 minute discussion)

Registrar presenter:

**Prostate cancer**

What are the arguments for screening for prostate cancer?

What is prostate specific membrane antigen (PSA) and what are the causes of a high PSA?

What tools are available to help predict prognosis and outcomes such as recurrence after surgery or radiation therapy?

What are the principles in performing a radical prostatectomy?

0945-1000 (12 minute presentation, 3 minute discussion)

Registrar presenter:

**Neoplasms of the testis**

How are testicular tumours classified?

What are the management options for testicular seminomas and what is their prognosis?

What are the management options for testicular non-seminomas and what is their prognosis?

1000-1030

VMO presenter: Dr Anthony Hutton

**?? Renal trauma**

**Morning tea break (sponsored by Covidien)**

1100-1130 (25 minute presentation, 5 minute discussion)

VMO presenter: Dr Carlos Pilaso

**?? How I manage a bugged up liver**

1130-1200 (25 minute presentation, 5 minute discussion)

VMO presenter: Dr Ricardo Hamilton

**?? How I manage a stab to the box, and how I perform an ED thoracotomy**

**Lunch**

## Urology and Trauma Workshop - Skills Stations (sponsored by Covidien)

Room 1:

### **Exposure of the retroperitoneum**

**Liver trauma**

**Splenectomy**

#### **Objectives**

By the end of the session, trainees will be able to:

1. Recognise the principles of exploring the retroperitoneum.
2. Recognise the principles of managing liver trauma.
3. Recognise, describe and perform trauma splenectomy.
4. Describe options of vascular control in the context of trauma.

#### **Tasks**

1. Discuss the principles of performing medial visceral rotation and exploring the retroperitoneum.
2. Perform a medial visceral rotation using the simulator available.
3. Discuss the principles of achieving vascular control.
4. Perform the steps involved in controlling the abdominal aorta.
5. Discuss the principles of managing liver trauma.
6. Demonstrate packing techniques, Pringle's manoeuvre, suture repair.
7. Discuss the principles of trauma splenectomy.
8. Perform the steps involved in a trauma splenectomy.

Urology and Trauma Workshop - Skills Stations (sponsored by Covidien)

Room 2:

## **Ureteric anastomosis**

### **Objectives**

By the end of the session, trainees will be able to:

1. Recognise the principles of performing ureteric anastomoses.
2. Appreciate the complications of stenosis, leak, fistula and infection.
3. Perform a ureteric anastomosis.

### **Tasks**

1. Discuss the principles of performing ureteric anastomoses.
2. Discuss the complications that can be associated with ureteric anastomoses.
3. Observe the session facilitator performing a ureteric anastomosis using pig ureters.
4. Demonstrate how to perform a ureteric anastomosis.

Room 3:

**Difficult catheterisation**  
**Simulated cystoscopy and ureteroscopy**  
**Intermediate laparoscopy**

**Objectives**

By the end of the session, trainees will be able to:

1. Recognise the factors which lead to difficult urethral catheterisation.
2. Develop safe techniques for trouble-shooting the difficult urethral catheterisation.
3. Recognise and understand the principles of inserting a suprapubic catheter.
4. Appreciate the complications associated with suprapubic catheterisation.
5. Perform a suprapubic catheterisation.
6. Describe the steps and perform a cystoscopy and ureteroscopy on a model.
7. Describe the steps and perform a laparoscopic nephrectomy on a model.

**Tasks**

1. Discuss the anatomy of the male and female urethra.
2. Discuss causes for difficult catheterisation including urethral strictures and prostatic hypertrophy.
3. Discuss techniques for trouble-shooting the difficult urethral catheterisation.
4. Discuss the complications that can be associated with suprapubic catheterisation.
5. Observe the session facilitator performing a suprapubic catheterisation using a simulated model.
6. Perform a suprapubic catheterisation using the simulated model.
7. Discuss the steps of cystoscopy and ureteroscopy.
8. Perform cystoscopy and ureteroscopy on a simulated model.
9. Discuss the steps of a laparoscopic nephrectomy.
10. Perform a laparoscopic nephrectomy on a simulated model.

## Urology and Trauma Workshop - Skills Stations (sponsored by Covidien)

Room 4:

Covidien has invited a series of trainees to participate in the following session which will be held in the animal laboratory.

### **Advanced laparoscopy**

#### **Objectives**

By the end of the session, trainees will be able to:

1. Describe the steps of a laparoscopic nephrectomy and perform these in a pig model.
1. Describe the steps of a laparoscopic cholecystectomy and perform these in a pig model.
2. Describe the steps of a laparoscopic anterior resection and perform these in a pig model.
3. Describe the steps of a laparoscopic fundoplication and perform these in a pig model.
4. Describe the steps of a laparoscopic splenectomy and perform these in a pig model.
5. Describe the principles of managing liver trauma and perform these in a pig model.
6. Describe the principles of managing aortic trauma and perform these in a pig model.
7. Describe the principles of managing major renal trauma and perform these in a pig model.
8. Describe the principles of managing major venous trauma and perform these in a pig model.
9. Describe the principles of managing major chest trauma and perform these in a pig model.

#### **Tasks**

1. Discuss the steps of a laparoscopic nephrectomy with the session facilitator.
2. Perform a laparoscopic nephrectomy on a pig model.
  
3. Discuss the steps of a laparoscopic cholecystectomy with the session facilitator.
4. Perform a laparoscopic cholecystectomy on a pig model.
  
5. Discuss the steps of a laparoscopic anterior resection with the session facilitator.
6. Perform a laparoscopic anterior resection on a pig model.
  
7. Discuss the steps of a laparoscopic fundoplication with the session facilitator.
8. Perform a laparoscopic fundoplication on a pig model.
  
9. Discuss the steps of a laparoscopic splenectomy with the session facilitator.
10. Perform a laparoscopic splenectomy on a pig model.
  
11. Discuss and perform the steps of the following procedures:
  - Laparotomy for trauma
  - Packing the abdomen for trauma
  - Medial visceral rotation (right and left)
  - Nephrectomy
  - Managing IVC injury
  - Managing liver trauma
  - Managing retroperitoneal injury
  - Thoracotomy
  - Pericardial window

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Room 5:

### **Viva practice**

Examples:

#### **Anatomy**

1. Discuss and demonstrate the blood supply of the foregut.
2. Discuss the branches of the abdominal aorta.
3. Discuss the anatomical relations and branches of the external carotid artery.
4. Discuss the compartments of the lower limb.
5. Discuss the anatomy of the ureter.

#### **Pathophysiology and critical care**

1. A 26 year old man is brought in by ambulance following a stabbing to his neck. How would you prepare for his arrival? At initial assessment, he is tachypnoeic, his HR 120 and SBP 70 mmHg. How would you manage him?
2. A 35 year old man is brought in by ambulance following a motor vehicle accident. He is tachycardic, hypotensive and has a positive FAST. How would you manage him? At laparotomy, a deep laceration of the liver is noted. How do you grade liver lacerations and how would you manage this?
3. A 40 year old woman is found at the entrance of the emergency department with several stab wounds to the chest. They are medial to her left nipple, lateral to the sternal edge. How would you manage her?
4. A 19 year old man is retrieved from the national park where he has been mountain biking. After hitting a rock, he flew off his bike and sustained a handle-bar injury to his abdomen. He is tachycardic, hypotensive and has a positive FAST. At theatre, the spleen is injured. He has a haematoma and trauma to the second part of his duodenum with enteric contamination. How do you manage him?
5. A 68 year old woman falls in the bathroom and hits her chest. She becomes progressively dyspnoeic and presents to the emergency department. Her chest x-ray demonstrates a large pneumothorax. An intercostal catheter is inserted. Draw and discuss the principles of a single-chamber and three-chamber chest drain.
6. A 54 year old man is trapped at a building site under a brick wall that has collapsed on him. The extrication time is 80 minutes. What are your concerns in managing him?
7. A 16 year old man presents with an acute scrotum. How do you assess and manage him?
8. What are the differentials for a testicular mass?

#### **Operative**

1. Splenectomy
2. Trauma laparotomy
3. Fasciotomy
4. Cricothyroidotomy
5. Liver lacerations
6. Scrotal exploration