

## **INTERACTIVE WORKSHOP ON COMPLICATIONS IN UROGYNAECOLOGY- PRACTICAL AND TRAINING PERSPECTIVES**

Chairs: Profs Dwyer and Rosamilia

### **Prof Dwyer:**

*Anatomical considerations and real life complications scenarios case based discussions including Risk management*

Complications occur with all forms of surgery but the incidence and consequences can be decreased by a good knowledge of pelvic anatomy and early and effective treatment. The risk of complications in specific gynaecological operations varies considerably between studies which is a reflection perhaps of the variation in surgical techniques, experience and skill of the surgeon performing the procedure and accuracy in reporting the complication. In this workshop we will discuss various complications of pelvic surgery and discuss real cases with audience participation directing the management.

The avoidance of complications whether caused by injury to a viscus or bleeding from an artery or vein requires a good understanding of pelvic anatomy.

### **Anatomical considerations and site of injury**

The ureter is a contractile fibromuscular tube 22 to 30cms in length, extending extraperitoneally from the pelvis of the kidney to the interior aspect of the bladder. It has an inner mucous membrane of transitional epithelium and submucosa surrounded by a layer of helical interlacing smooth muscle with an outer adventitia of loose areolar tissue containing its vascular and nervous supply. The abdominal ureters run anterior to the psoas muscle crossing near the bifurcation of the common iliac vessel into the external and internal iliac (hypogastric) arteries. Once in the pelvis, the ureter lies medial to the branches of the internal iliac artery, lateral to the pouch of Douglas and anterior to the sacroiliac joints and posterior to the ovaries. The ureter descends anteromedially into the pelvis, the obturator vessels and obturator fossa lying laterally and the uterosacral/lateral

cervical ligamentous complex antero-medially (fig 1). The mean distances of the ureter from the sacral, intermediate and cervical portions of the cardinal ligament has been estimated by Buller et al (1) to be 4.1, 2.3 and 0.9 cms respectively. The ureter continues anteromedially and passes under the uterine artery approximately 2cms above and lateral to the vaginal fornix to reach the base of the bladder anterior to vagina where it traverses the bladder wall for 1.5 to 2 cm before opening into the interior aspect of the bladder at the superior lateral border of the trigone.

Ureteric injury can result from incorrect placement of the forceps, suture ligation, transection with a scalpel, diathermy injury (open or laparoscopic), or kinking or ischemia from devascularisation of the ureter. Gynaecological injury is usually to the pelvic ureter and can occur anywhere in its 12 to 15cms course from the ureteric bladder orifice to the pelvic brim.

However the ureter is at most risk of injury at intramural portion of the ureter as it traverses the bladder wall where it can be ligated by deep lateral plication sutures during anterior colporrhaphy, as the ureter enters the bladder during placement of vaginal suspension sutures for the Burch colposuspension or Marshall Marchetti Kranz procedure, and during clamping of the uterine pedicle in hysterectomy at the base of the broad ligament as the ureter passes under the uterine artery before inserting into the bladder. Other sites are close to the uterosacral ligaments during endometriosis ablation surgery or placement of uterosacral suspension sutures or at the pelvic brim or lateral pelvic sidewall when the ovarian vessels in the infundibulo-pelvic pedicle are clamped during oophorectomy or ovarian cystectomy; or during ligation of the internal iliac artery (hypogastric) for severe pelvic bleeding. The distance from the ureter to the infundibular pedicle is on average 1 cm when the ovary and tube are removed.

The role of cystourethroscopy in prevention of urinary tract injury and intraoperative detection and repair will be discussed.



FIG 1.

#### Cases for discussion

- Mrs R, 71yo Phx of TAH BSO was referred with symptomatic vaginal vault prolapse and complete vaginal eversion. She had uneventful anterior and posterior vaginal repair with USL vault suspension and cystoscopy. Blood loss intra-operatively was 300 mls. Subcutaneous heparin was given post-op. Two days postoperatively she developed increasing abdominal pain and collapsed. She was hypotensive and had a large pelvic mass clinically. She was resuscitated in ICU and transfused with 3 units of whole blood. Her HB was 6.5 and went to 9.5 gm %. A diagnosis of pelvic haematoma was made. The haematoma was treated surgically; she then developed a vesicovaginal fistula.
- 44 yr old women who had previous Sparc MUS, developed complications of tape bladder protrusion and a pelvic haematoma.
- 65 year old with an irreducible procidentia, 7 cm pelvic mass had a bladder injury during surgical repair, and vaginal hysterectomy and bilateral salpingo-oophorectomy.

**Dr Kris Cvach**

*Terminology and classification of complications-interactive*

- Brief outline and discussion of the IUGA Classification of Complications.
- Interactive discussion of a number of real-life cases, focusing on classifying and managing complications of mesh and pain post-vaginal surgery.

**A Prof Anna Rosamilia /Dr Yik Lim**

*Complications in laparoscopic Urogynaecology –how to avoid, identify and manage*

- The management of intra-operative complications associated with laparoscopic or robotic urogynaecological procedures will be discussed with reference to the anatomy.
- Images or videos of injuries including those to vascular structures, bladder and bowel will illustrate general principles of repair.
- In addition, examples of late complications such as intra-vesical suture and mesh erosion, suture migration, discitis and pelvic abscess will be presented.

Dr Lim will cover various good practice recommendations on laparoscopic procedures to minimise chances of unintentional injuries to patients.

All too often, injuries occur when inadequate attention is paid to the preparation of the procedure itself.

Discussions will be held on appropriate instrument/equipment use, patient positioning and surgical techniques. Videos on tips and tricks to laparoscopic techniques will also be displayed.

**Dr Alison DeSouza**

*Mesh and device related complications.*

- An interactive discussion on the short and long term complications of vault suspension surgery.
- What devices are available to use vaginally and abdominally?
- What can go wrong and how can you manage it?
- A case presentation on a serious complication.

**Dr Lore Schierlitz**

*Complication after urinary incontinence surgery*

This will be an interactive discussion of three scenarios including diagnosis and management:

- 1) Voiding difficulty after sling surgery
- 2) Mesh erosion in the bladder
- 3) complication of sacro-neuro-modulation

**Dr Debjyoti Karmakar/ Dr Payam Nipoor**

*Team approach, training and learning curve issues-Fellows' perspective*

- *Learning curve issues with incontinence surgery -case scenarios and available evidence.*
- *Learning curve issues with prolapse surgery -case scenarios and available evidence.*

**Dr Debjyoti Karmakar**

*Post seminar quiz*

