Greetings to all members. I hope that the Christmas period found you well and that this New Year is one of new horizons.

I would like to welcome Lisa Ferri as your new SUNWA Newsletter Coordinator. Congratulations go out to Holly Sounness for being the successful candidate for the 2014 Abbvie Nurses Educational Grant and to Kyla Tilbury for the 2014 SUNWA Scholarship. We will be looking forward to hearing back from them later in the year in how these have helped them in achieving attendance at a Urology-focused educational symposium of their choosing. Negotiations are currently underway in making another grant and scholarship available for use in 2015. With this in mind I would just like to invite all members to consider applying for them when the application process begins later in the year. We will keep you informed.

For those who have been reading your SUNWA emails you will have noticed Karen Allingham has joined Kavita in the SUNWA Education Subcommittee. Karen brings not only her commitment to the role but also her wealth of Urology experience. I would also like to take this opportunity to thank all members who have attended the Educational Events and have provided valued feedback. It is from your feedback that we are able to develop future educational events that are both interesting and fun. Your continued help in promoting these events in your workplaces and networks are evident as we encounter new participants attending these events. The April Educational Evening Event is tackling the subject of managing Uro-gynaecological changes in Menopause surgically, non-surgically, and psycho-sexually. Planning is underway for the Annual Study Day for August (date to be announced). Be sure to keep an eye out for this.

Electronic applications for Membership Renewal for the 2014-2015 period will be available soon on your SUNWA webpage (http://sunwa.anzuns.org). I would like to encourage members to promote SUNWA membership in your areas. If you would like access to SUNWA membership flyers for your area, drop us an email at sunwa1994@gmail.com outlining this request. SUNWA not only provides a great environment for networking, building collegial relationships, and knowledge development, but also can be seen as a way to help nurses in accumulating CPD points/hours. I feel privileged being a part of this professional nurses group.

Gregory Bock
SUNWA President
**November 2013**

**Educational Event Round-up**

The SUNWA November educational evening proved to be a valuable event.

Dr James Anderson Consultant Radiologist (Royal Perth Hospital) presented on new and current Interventional Radiology techniques in urology including: Trans-perineal prostate biopsy; Gold seeds implantation to guide external beam radiotherapy (EBRT); injecting of spacing agents between the prostate and the rectum to reduce injury to rectal tissue during high-dose EBRT; Image fusion technology (correlating MRI images with real time ultrasounds to help ‘target’ suspicious lesions within the prostate for biopsying); and the use of ultrasound contrast agents. Clinical Nurse Jill Lowes (RPH Radiology) presented on the associated nursing care of patients undergoing these procedures. Overall the night was found to be informative and rewarding. A quick recap of the presentation follows:

**TRANS-PERINEAL PROSTATE BIOPSY**

Brief history: Ultrasound transducers for trans-rectal use was invented early 1980s. The trans-perineal technique for prostate biopsies was developed mid 80’s using needle holder attached to the biopsy probe, however it was found to be cumbersome. The trans-rectal biopsy technique developed late 80’s by a radiologist and soon gains wide acceptance due to the technique being easier to use and quicker procedural times. Due to incidences of severe bacteraemia episodes following trans-rectal biopsies, further development of the Trans-perineal approach was undertaken and studies in Perth involving a ‘free-hand’ technique were performed. This technique was found to be well tolerated by patients.

A comparison study was carried out measuring bacteraemia incidence between the Trans-perineal technique (RPH) and the Trans-rectal technique (UK institution). It was interesting to see that the Trans-rectal technique lead to severe bacteraemia in 4 out of 40 cases whereas the Trans-perineal technique was found to cause no serious complications in 100 cases. Dr Anderson outlined many benefits of the Trans-perineal technique including: No need for Day Ward, sedation, antibiotic, and anaesthesia; it is simple, quick, cheap, and the patient may even be discharged home in half an hour. It is also declared as safer to the Trans-rectal technique – this is primarily due to the organisms that inhabit the rectum versus the surface of the perineum.

**ADVANCES IN THE USE OF MRI IN PROSTATE BIOPSY**

Dr Anderson discussed the advances in magnetic resonance imaging (MRI). These advancements included: how the MRI can help detect the Tumour stage as well as discerning the Node staging of prostate cancer; The use of multi-parametric MRI has been found to enable better assessment of prostate cancer ‘aggressiveness’; and how previously in cases where prostatic ultrasounds have been unable to demonstrate suspicious lesions within the prostate to be biopsied, technology has now advanced to allow the targeting of these ‘hard to find’ lesions - Data from MRI can now be loaded into the ultrasound equipment using a technique referred to as Image Fusion. These MRI images are then ‘matched’ with real time ultrasound images and the suspicious lesions identified originally in the MRI can be now be ‘targeted’ for the ultrasound guided prostate biopsy.

**GOLD FIDUCIAL MARKER SEEDS & PROSTATE/RECTUM SPACING AGENTS**

Trans-perineal insertion of gold marker seeds improves the accuracy of External Beam radiation therapy. The marker seeds are detected by the EBRT equipment thereby allowing for the ‘targeting’ of radiation being delivered to the prostate thus limiting radiation exposure to nearby structures. A new agent being introduced is a hydrogel spacing agent (SpaceOAR) that will be injected into the space between the prostate and the rectum. By increasing the space between the prostate and the rectum, injury to the rectum from EBRT is reduced. This is hoped to see reduction in the incidence of radiation proctitis (inflammatory/ulcerative condition of the rectal lining induced from EBRT related injury).
Spotlight on Non-Muscle Invasive Bladder Cancer

Internationally bladder cancer incidence is estimated at over 12 million new cases and accounts for around 145,000 deaths annually. The latest published data from the WA Cancer Registry revealed that our state alone had an incidence of 232 cases and had accounted for 115 deaths in 2011.

Bladder cancer is essentially divided into two groups: Non-muscle invasive and muscle-invasive bladder cancer. This article will take a quick look at non-muscle invasive bladder cancer (NMIBC). Further reading on this subject is encouraged.

Urothelial cancer (UC) otherwise known as transitional cell carcinoma (TCC) is the main cancer-cell type in 90% of cases. Risk factors include: cigarette smoking; gender (men are 3 times more likely to develop than women); occupational exposure to urothelial carcinogens (dye, rubber and petroleum industries); environmental exposures (chronic urinary tract infections/inflammation, Cyclophosphamide (Cytoxan) use, and pelvic radiotherapy); Schistoma parasite; and diets low in fruits, veges, & certain vitamins. Symptoms can include: painless haematuria and irritative urinary symptomology; Patients with advanced cancer may experience bony (r/t bone metastases) and/or flank pain (r/t urinary obstruction).

Around 70%-80% of cases present with NMIBC. NMIBC is where the cancer has not yet penetrated into the bladder wall muscle and therefore involves tumour stages Ta, T1, and CIS (carcinoma in situ). The gold standard management of this is transurethral resection of the malignant tissues off the bladder wall (TURBT). Unfortunately up to 50-70% of the patients who have treatment can experience cancer recurrence and 10%-30% of patients will have progression of the disease to muscle invasion into the bladder muscle wall. CIS alone has a high risk of progression (>50%) and therefore necessitates further treatment.

SO HOW DO WE REDUCE THE POTENTIAL FOR DISEASE RECURRENTCE AND PROGRESSION?

Evidence has shown that administration of intravesical immunotherapeutic and chemotherapeutic agents reduces this potential. The anti-tumour mechanisms of these two types of intravesical agents differ. The chemotherapeutic agent is a cytotoxic antibiotic (e.g. mitomycin, epirubicin, Adriamycin) which inhibits the tumour cell’s ability to synthesise deoxyribonucleic acid (DNA) leading to DNA strand rupture and subsequent cell death through necrosis. This agent may be administered as a single dose post the TURBT procedure or also given in induction and maintenance regimes.

The Immunotherapeutic agent Bacillus Calmette–Guérin (BCG) is an agent that affects the cells of the bladder’s urothelial lining whereby an inflammatory reaction occurs. This reaction causes the release of associated lymphocytes, macrophages, and cytokines which trigger lymphokine- and BCG-activated killer cells which bind to bladder cancer cells and induce a cell-mediated death called apoptosis. BCG is used in induction and maintenance intravesical regimes.

WHAT DO THE GUIDELINES SAY?

International evidenced-based guidelines define specific treatment protocols based on grading and risk of recurrence of the disease. The general consensus of the international guidelines indicate that intravesical induction and maintenance regimens are given to patients that have intermediate to high risk of disease recurrence. Induction intravesical therapy involves once-a-week instillations for a total of six weeks and is recommended following a second TURBT in the absence of disease recurrence. Following induction completion another TURBT is carried out and in the absence of recurrence, maintenance therapy is recommended. Although evidence for maintenance therapy regimens reveal benefit in reducing recurrence and progression, clinical trials have not yet defined one specific protocol.

HOW DO WE MONITOR FOR DISEASE RECURRENTCE AND PROGRESSION?

Regular cystoscopy surveillance is of the utmost importance. This may be in the form of regular flexible cystoscopies or rigid cystoscopies (+/- biopsy) under general anaesthesia. Where there is a high risk of disease recurrence, there is a high frequency of surveillance. Where intravesical therapy has failed, and/or cancer has been found invading into the bladder muscle, radical and complex treatments are necessary to improve patient survival. These include total removal of the urinary bladder (radical cystectomy), high-dose systemic chemotherapy and high-dose radiation therapy.

International guidelines are tools that help guide best-practice and it is through multidisciplinary forums that case discussions can facilitate best-care decisions. So long as intravesical therapy and robust surveillance regimes are adhered to, optimal outcomes can be achieved.

By Gregory Bock

Urology Cancer Nurse Coordinator

References

SUNWA Scholarship 2013
Recipient Simone Wheeler report

ANZUNS 18th annual meeting in conjunction with the USANZ 66th Annual Scientific Meeting was hosted at the Melbourne Convention and Exhibition Centre in 2013. I was privileged to be able to attend this event alongside both national and international professions in the field of urology.

Friday’s program consisted of workshops on the subjects of urodynamics, prosthetics and pharmacology. I attended the pharmacology workshop conducted by three speakers: Dr. Caroline Dowling, Urologist at Royal Melbourne Hospital, Dr. Michael Wishaw, Geriatric Medicine Continence Physicin at Royal Melbourne Hospital, and Davina Lau, pharmacist for Slade Pharmacy. Dr. Dowling discussed the use of combination therapy as the accepted standard of medical treatment for sufferers of Benign Prostatic Hypertrophy (BPH). While Dr. Wishaw talked about overactive bladder and the pharmacological treatments currently in use in Australia which includes:

- antimuscarinics—although interestingly Australia does not have a sustained release version available at this stage, unlike other countries
- α blockers
- β agonists – which have now been FDA approved for treatment of overactive bladder

Davina Lau discussed the protocols for preparation and administration of Bacillus Calmette-Guérin (BCG) and Mitomycin C. BCG was FDA approved in 1990 for intravesical treatment for superficial bladder cancers, two different strains may be used. BCG is active tuberculosis strain and therefore requires strict procedures when being prepared for use. Once reconstituted BCG has a two hour window within which it can be used. Ultraviolet light is required to clean the area where the BCG is reconstituted. Once instilled, the patient is required to lie prone and rotate every fifteen minutes for two hours. Once the bladder has been emptied, the toilet needs to be cleaned with equal amounts of bleach and left for 15 minutes before flushing.

A broad range of topics were discussed over the remainder of the weekend and there were many enjoyable opportunities to network with colleagues and peers. I’d like to thank SUNWA for the support to attend the conference in Melbourne this year and look forward to attending again in Brisbane 2014.

Simone Wheeler
Urology Nurse, Hollywood Private Hospital

BCG costs approximately $153/week (usually for 6 weeks) whereas Mitomycin C costs approximately $275/cycle (usually given every 7 days for 6 cycles, although this can vary). BCG is more toxic than Mitomycin C and therefore can be more effective in treatment of bladder cancer.

The program for Saturday was the presentation of various posters and case studies from Australian and New Zealand nursing colleagues. Alanna Dunn from Hurstville Private Hospital related their experiences with implementing the Da Vinci Robotic prostatectomy system in their operating theatre and the challenges this presented the operating theatre staff. Patricia Bugeja shared her experience with developing a nurse coordinated haematuria clinic in a tertiary hospital. This served to streamline the screening process and potentially decrease patient delay in seeking necessary treatment.

Professor Neil Fleshner from Toronto discussed surgical procedures for bladder reconstruction which involved formation of a neobladder using detubulised bowel segment; ileal conduit – where small intestine is used to divert urine; or continent cutaneous reservoir – where a pouch is formed and the patient voids via a stoma. Post-operative complications for these patients can include an anastomotic leak, ileus, or blockage of tubes due to the bowel producing more mucus when inflamed, therefore requiring more regular IDC or SPC insertion and flushing.

A selection of forthcoming events


Continence Nurse Consultants Course, Hollywood Private Hospital, Nedlands, Western Australia May 5-30th, 2014.

Asia Pacific Prostate Cancer Conference, Melbourne Victoria, August 31st – September 2nd, 2014. www.prostatecancerconference.org.au
