

## Functional urology

We are pleased to introduce this special edition of *Translational Andrology and Urology (TAU)*, with a focus on contemporary topics in Functional Urology. Local (Australia and New Zealand) and international experts have contributed to this issue and we have included original studies as well as comprehensive review papers.

Since the US FDA's public notification of complications surrounding the use of transvaginal mesh for prolapse repair, there has been more awareness of the use of mesh in mid urethral sling surgery (MUS) for stress urinary incontinence. Chang and Lee present a balanced report on the highs and lows associated with MUS in the current mesh litigation era.

This is followed by 3 articles focusing on treatment of urethral strictures. The relatively uncommon but increasingly curable female urethral stricture is amenable to several definitive approaches as detailed by Hoag and Chee. Herein a novel technique is also described. The Martius flap, conveniently located for urethral and vaginal wall reconstruction has come of age. Wilson et al have provided outstanding photography, together with their tips and tricks to enable readers to understand the surgery. Silagy *et al.* report on their experience with the temporary use of the Allium™ stent in the treatment of the male urethral stricture. This stent has a coating that is designed to prevent epithelialisation and mucosal hyperplasia post urethrotomy, but problems associated with stents in general still need to be considered.

We are aware of the effects of prostate cancer treatment which can sometimes be devastating for the patient. Nicholson et al have reviewed the various treatment options for bladder neck stenosis and urethral stricture disease, that can occasionally be recalcitrant. The impact of concurrent bladder dysfunction [overactive and underactive bladder (UAB), reduced bladder compliance] in the management of post radical prostatectomy (RP) stress urinary incontinence is described in great detail by Hennessey *et al.* A paradigm is provided to improve our diagnostic accuracy with a view to improved outcomes following post prostatectomy incontinence treatments. Chung gives an excellent update on surgical devices to treat male stress urinary incontinence, outlining the various artificial urinary sphincters and male slings available in the market. Sathianathan *et al.*'s original article looks at the benefit of pelvic floor physiotherapy in continence recovery post robotic RP, by objectively tracking 24-hour pad weights over an extended period.

Two papers report on the functional outcomes following intervention to relieve prostatic obstruction. Most minimally invasive approaches to prostatic obstruction have fallen by the wayside but Urolift® (prostatic urethral lift) may be an exception. The case is made that this technique has been associated with zero incidence of transfusion, stress incontinence and retrograde ejaculation, without jeopardising future RP, an 80% catheter-free rate post operatively and a superior response to medications. As the data matures, it will become clear whether Urolift® is offering a niche therapy and whether it is truly definitive. Photoselective vaporisation of the prostate (PVP) has become an established treatment option. Pascoe *et al.* describe its evolution and how to optimise patient outcomes, looking at pre-op factors (medications, prostate size), operative technique, equipment, and how to minimise complications.

Three articles provide extremely helpful data regarding recurrent urinary infection (rUTI) from different angles. Bergamin and Kiosoglous have reviewed treatment strategies for rUTI. Their first paper on non-surgical management of rUTI, examines the non-antimicrobial and antimicrobial treatment approaches. Various treatments like oestrogen therapy, cranberry, probiotics, vaccines, D-mannose as well as intravesical instillation of hyaluronic acid and chondroitin sulfate are discussed. In a second paper, the same authors describe the role of surgery in the management of rUTI, covering upper and lower urinary tract causes of infection. Dray and Clemens present an overview of intravesical therapy for rUTI in the context of bladder emptying disorders. Their protocol for intravesical gentamicin is provided as is the science behind this approach which has been used at their centre for decades. We have made considerable progress with rUTI. However, urosepsis is still a significant cause of mortality and hospital admission. Promulgation of the data compiled here is a useful step.

Intravesical therapies are also useful for interstitial cystitis patients. The current options for intravesical therapy and what lies on the horizon, are detailed systematically by Ha and Xu. The BCG study proved high quality RCT methodology is possible in this patient group. The background studies to the latest therapy with iAluril® are given, complemented by liposomal therapy data which is in evolution.

Aw and colleagues have provided useful insights into the common problem of pelvic floor overactivity. In a study of 201 consecutive patients undergoing fluoroscopic urodynamics for various refractory lower urinary tract problems, those with

pelvic floor tenderness were shown to have higher maximum urethral closure pressure (MUCP). MUCP is recommended as a useful tool to help diagnose this complex disorder and help direct patients to its treatment.

Dr English informs us of the current role of permanent catheters, suprapubic versus urethral. Aspects of managing the catheter and possible complications are discussed, in particular, catheter associated UTI (CAUTI), catheter blockages and bladder spasms.

The UAB is common but difficult to diagnose, due to having overlapping symptoms with other bladder conditions and different urodynamic diagnostic formulas. Gani and colleagues propose a diagnostic algorithm and review the efficacy of surgical options for UAB particularly TURP and sacral neuromodulation.

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