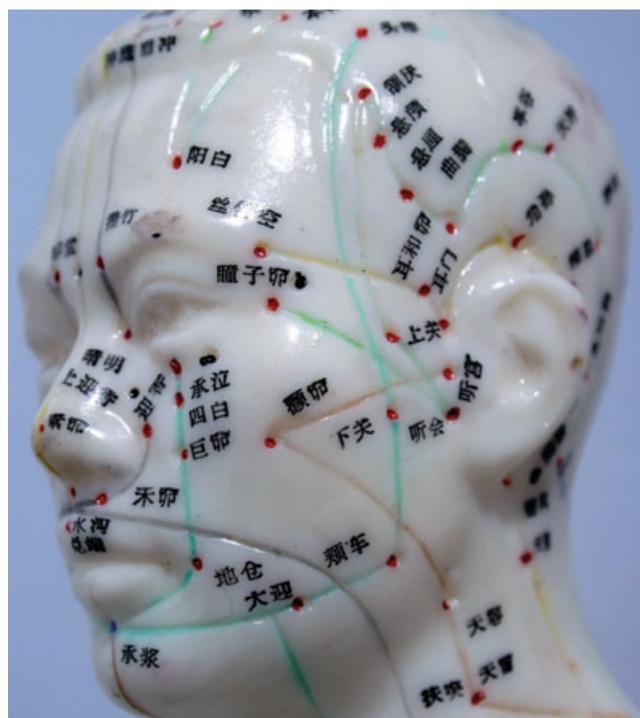


Acupuncture: gaining acceptance in urology. *Proves effective for a number of chronic conditions*

Something that has been around for over 2,500 years must have proven its mettle some time ago. Acupuncture, a component of traditional Chinese medicine, is a mainstay of healthcare in China. Now gaining acceptance in Western society, it is one of the more rigorously studied 'alternative' or 'complementary' therapies. Acupuncture is based on the premise that energy, called Qi (pronounced 'chee'), needs to flow uninterrupted throughout the body to maintain health. Energy imbalances can be corrected by inserting fine needles at various points on the body. Although widely used to treat various conditions from back pain to addictions, it is now being used in the urological community as an effective treatment for erectile problems, LUTS and chronic prostatitis.

PREMATURE EJACULATION (PE)

The first choice of treatment for men with PE is a daily regimen of a selective serotonin-reuptake inhibitor (SSRI). Several of the SSRIs, such as paroxetine, sertraline and fluoxetine, all show various levels of effectiveness, although paroxetine has the greatest efficacy. In



some countries, dapoxetine is available for on-demand treatment of PE.

A recent randomised, placebo-controlled clinical trial in Turkey compared the effectiveness of paroxetine vs acupuncture in 90 patients with PE. Those in the medication group received paroxetine 20 mg/day. Men in the acupuncture group received treatments twice a week for 4 weeks. There was also a sham acupuncture-placebo group. Each group included 30 men. Those

receiving acupuncture had needles inserted in various points located on the hands, feet, legs, head, and pelvic region.

Although it did not have as strong of an effect as paroxetine, acupuncture did exhibit a significant ejaculation-delaying effect. The median PE Diagnostic Tool (PEDT) scores of paroxetine were 17.0 before treatment and 10.5 after treatment. In the case of acupuncture, these scores were 16.0 before treatment and 11.0

after treatment. Importantly, the acupuncture treatment was more effective than the placebo acupuncture, thereby excluding a placebo effect. The success of acupuncture as a treatment for PE may be related to the hypothesis that acupuncture has a central effect on neurotransmitters, such as serotonin or endorphins.

CHRONIC PELVIC PAIN

Several studies have also focused on acupuncture treatments for men with chronic prostatitis (CP) and chronic pelvic pain syndrome (CPPS). Given the history of acupuncture as being effective for other painful, chronic conditions, it seemed logical to try it for these urological problems. Jillian L. Capodice, L.Ac, MS, is Director of Acupuncture and Integrative Service at the Center for Holistic Urology at Columbia University Medical Center in New York, NY, USA. She has published results from her pilot study on the effect of acupuncture on LUTS related to these two conditions. The 10 men in this study were diagnosed with category IIIA or IIIB CP/CPPS occurring for > 6 months. All of the men were refractory to at least one conventional therapy. They also scored >4 on the pain subset of the National Institutes of Health Chronic Prostatitis Symptom Index (NIH-CPSI) questionnaire.

The men were treated with standardised full body and auricular acupuncture, 30-min sessions twice a week for 6 weeks. Needles were inserted into points located on the top of the hand and forearm, the lower leg, and foot. On the ear, the shen men, kidney, liver, lung

SUGGESTED READING

ERECTILE DYSFUNCTION & PREMATURE EJACULATION

Engelhardt PF, Daha LK, Zils T, Simak R, König K, Pflüger H. Acupuncture in the treatment of psychogenic erectile dysfunction: first results of a prospective randomized placebo-controlled study. *Int J Impot Res* 2003; 15: 343–6

Sunay D, Sunay M, Aydogmus Y *et al*. Acupuncture versus paroxetine for the treatment of premature ejaculation: a randomized, placebo-controlled clinical trial. *Eur Urol* 2011; 59: 765–71

Waldinger MD. Contribution of acupuncture to western medical knowledge of premature ejaculation: an intriguing new development. *Eur Urol* 2011; 59: 772–4

LUTS AND PROSTATE CANCER

Capodice JL, Cheetham P, Benson MC, McKiernan JM, Katz AE. Acupuncture for the treatment of hot flashes in men with advanced prostate cancer. *Int J Clin Med* 2011; 2: 51–5

Capodice J, Jin Z, Bemis DL *et al*. A pilot study on acupuncture for lower urinary tract symptoms related to chronic prostatitis/chronic pelvic pain. *Chin Med* 2007; 2: 1–7

Alban J. Acupuncture treatment of frequent urination and nocturia postprostatectomy. *Med Acupunct* 2008; 20: 119–21



‘There are a lot of conditions with strong quality of life factors where acupuncture is effective’

Jillian L. Capodice, LAc, MS

and spleen points were needed. Each point has a traditional function. For example, needling the shen men point in the ear promotes relaxation and relieves pain.

The mean total NIH-CPSI score at baseline was 25.1. After 3 weeks of acupuncture, it decreased significantly to 17.6. The scores continued to decline after 6 weeks of treatment (8.8) and then after 6 weeks of follow-up. The health-related quality of life also improved, as evidenced by questionnaire scores from the Short-Form 36 (SF-36). There were significant changes in six of eight categories from the SF-36, including ‘physical function’, ‘vitality’ and ‘bodily pain’. Capodice believes acupuncture has a multimodal treatment effect that includes not only pain relief but also anti-inflammatory effects and neuromodulation.

In her practice Capodice

specialises in urogenital pain syndromes and refractory conditions. ‘There are a lot of conditions with strong quality of life factors where acupuncture is effective’, she says. ‘Some people are just looking for alternative approaches.’ During her conversations with urologists, Capodice likes to use the analogy of sacral and tibial nerve modulation to explain how acupuncture works. She is a big fan of auricular acupuncture. ‘The ear is a microsystem’, Capodice points out. ‘The entire body is represented in the ear. Sometimes, auricular acupuncture can be stronger than whole body acupuncture.’

Joseph Alban, LAc, MS, also sees a lot of men with CPPS at his private practice, Alban Acupuncture and Herbs, in New York, NY, USA. He spent time at the Hunan University of Traditional Chinese Medicine in China. It was there that he

experienced first-hand how acupuncture was effective for a host of urological conditions including CP, CPPS and BPH.

According to Alban, practitioners can approach these conditions in three ways. ‘First, we can look at it from a muscular and physiological point of view, where we find trigger points’, he says. ‘We can also look for specific imbalances according to traditional Chinese medicine diagnosis. Finally, there are empirical acupuncture points, which have shown over the years to be good for a particular condition!’ Alban combines approaches, often using traditional diagnosis, acupuncture and trigger-point release on the same patient. Chinese herbs are also included if the patient complains of burning urination. He points out that acupuncture is very good and safe for patients with CPPS. However, it is not as effective for patients with acute prostatitis.

An initial treatment course consists of twice-weekly acupuncture treatments for the first 6 weeks. If the patient shows improvement, the

frequency is reduced to one visit a week for a total of 3 months. 'People do not need to come back forever', stresses Alban. 'If we can get the body relaxed and things flowing, then they are finished with treatment.'

OTHER CONDITIONS

Both Capodice and Alban are constantly exploring other applications of acupuncture in urology. Capodice recently published another paper, this time detailing the effects of acupuncture on hot flashes in men with advanced prostate cancer undergoing androgen-deprivation therapy. The men started to improve after 7 weeks of acupuncture treatment



'People do not need to come back forever'

Joseph Alban, L.Ac, MS

with significant improvement reported after 14 weeks of treatment. The frequency of hot flashes was significantly decreased with no adverse events. Interestingly, serum testosterone levels remained unchanged from baseline. As testosterone did not increase, there must be another mechanism of action behind the effectiveness of acupuncture in these patients.

Alban has also used acupuncture to treat frequent urination and nocturia in patients who have undergone radical prostatectomy. In a case report he published, Alban tells of a 62-year-old man who complained of frequent urination, nocturia and urinary leakage a year after having a laparoscopic radical prostatectomy. The patient had a history of overactive bladder for 5 years as a result of type 2 diabetes. He sought out Alban,

who performed acupuncture on him twice a week for a total of 10 treatments. Afterwards, the man reported a great reduction in urinary frequency, during both day and night. Before treatment, he was getting up 5-7 times a night to urinate - acupuncture reduced this frequency to 0-2 times. He was also able to hold his bladder better.

The exact mechanism of action for acupuncture remains unclear. However, there is a great deal of research to try and understand what actually occurs during treatment when a needle is inserted into an acupuncture point. 'A lot of stuff happens around the needle', explains Alban. 'The area gets warm

and the body grabs the needle. That is how we know we have stimulated the point adequately. There is also a little redness, a sign of increased blood flow'. One theory is that there is an alternative communication system within the connective tissue that is distinct from the nervous system. 'Acupuncture releases β -endorphins and other peptides', says Capodice. 'This is most likely the mechanism for any treated condition with a pain component'. She also points to the local mechanism at the needle site, where a cascade of cellular events occurs. Finally, there is also a central effect on the brain where areas are activated or deactivated. Researchers continue to explore the mechanisms of action for acupuncture. But ask any patient who has had acupuncture and they will tell you it just works! Pretty good for something that's 2,500 years young.]

PEOPLE & PLACES



Erin T. Bird, MD, MBA is the new President of the Texas Urological Society after having served 5 years on its Executive Committee. Dr Bird is the Chief, Section of Genitourinary Reconstruction and Voiding Dysfunction at Scott & White Healthcare in Temple, Texas. He is also Associate Professor of Surgery at Texas A&M Health Science Center College of Medicine in Dallas.



Eric Wallen, MD has been promoted to Clinical Professor of Surgery/Urology in the Division of Urologic Surgery at the University of North Carolina in Chapel Hill. Dr Wallen also serves as Director of Laparoscopic Surgery and Residency Programme Director.

The Société Internationale d'Urologie recently presented several awards to urologists from around the world at its 31st Congress in Berlin, Germany.



Fritz Schröder was honoured with the Astellas Award for the highest scientific contribution to urology worldwide. The award came with a \$30 000 USD prize. Prof. Schröder is the International Coordinator of the European Randomized Study of Screening for Prostate Cancer and Chair of the Prostate Cancer Research Foundation in Rotterdam, The Netherlands.



Rudolf Hohenfellner was presented with the Félix Guyon Medal. He is Professor Emeritus at Johannes Gutenberg University in Mainz, Germany.



Ismail Khalaf received the Albert Schweitzer Teaching Award for his training of urologists around the world in basic urology and endoscopic techniques. Prof. Khalaf is Professor of Urology at the Faculty of Medicine of Al-Azhar University in Cairo, Egypt.

DRUG AND TECHNOLOGY NEWS

LATEST DATA PRESENTED ON SLING SYSTEM

At the recent 40th American Association of Gynecologic Laparoscopists (AAGL) Global Congress of Minimally Invasive Gynecology held in Hollywood, Florida last November, new results were presented on the Desara® sling system for the treatment of stress urinary incontinence in women. The findings were from a prospective, observational, multicenter study of 160 women. Each woman had surgery involving a transobturator technique with the sling system. The sling is composed of large-pore knitted monofilament polypropylene, allowing it to maintain shape. It can be used with various surgical techniques.

After surgery, there was a significant improvement in stress urinary incontinence symptoms. Of the 160 patients, 154 (96.3%) were considered cured. The vast majority of women (93.8%) were satisfied with the results.

More information about the Desara sling system can be found at www.calderamedical.com.

ARSENIC COMPOUND SENSITISES RADIORESISTANT PROSTATE TUMOURS

An organic arsenic compound called darinaparsin (Zinapar®, ZIO-101) is showing promise as a sensitizer for solid tumours of the prostate previously resistant to radiation. Two preclinical studies used human prostatic (hormone-independent LAPC-4) tumour models to determine the ability of darinaparsin to sensitise solid tumours (but not normal tissues) and to be an anti-solid tumour cytotoxin. Previous preclinical research has determined the ability of darinaparsin to be both cytotoxic and radiation enhancing under normoxic and hypoxic conditions in prostate cancer.

In the first study, the tumour model was treated with either 100 mg/kg darinaparsin or saline, serving as the control. Also added was local tumour irradiation. The effect of the compound on intestinal and bone marrow cell radiosensitivity was determined using intestinal crypt microcolony assays and blood cell counts. Administering darinaparsin 4 h before delivering radiation resulted in significantly enhanced radiation-induced growth inhibition. There was also a significant

delay in tumour volume doubling time. With radiation alone, the time was 8.4 days. The time was 6.2 days with darinaparsin alone. However, with the combination of radiation and darinaparsin, the tumour volume doubling time was 14.7 days. There was radiosensitisation with both single and fractionated irradiation dosing regimens after treatment with darinaparsin.

The second study also treated prostate tumour models with either 100 mg/kg darinaparsin or saline, as the control. There was significant tumour growth inhibition. The average tumour volume doubling time increased from 3.95 days to 11.8 days with no significant systemic toxicities.

Both studies were presented at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, San Francisco, CA, USA, 12–16 November 2011. AACR is the American Association for Cancer Research. The NCI is the National Cancer Institute. EORTC is the European Organisation for Research and Treatment of Cancer.

NEW PROSTATE CANCER DIAGNOSTIC TEST SHOWS ENCOURAGING RESULTS

A test that shows epigenetic changes in specific prostate cancer-related genes may help urologists determine which patients have a true negative biopsy from patients with occult cancer. The Prostate Confirm MDx™ test, uses DNA methylation markers to predict outcomes without the need for a repeat biopsy.

The prospective trial evaluated 86 men who had an initial histologically negative prostate biopsy but had other characteristics that made them high-risk for prostate cancer. Prostate biopsy tissue was embedded in paraffin and underwent 'blinded' methylation testing. The relative negative predictive value of the DNA methylation assay was 96%. According to the data, 30% of men with suspected prostate cancer could avoid a repeat biopsy. Additional clinical validation studies are underway that will produce an improved version of the assay. It is anticipated that Prostate Confirm MDx will be available for use by urologists later this year.

The findings were published online ahead of print in the BJUJ.

Clinical Trial

RENESSA OBJECTIVE AND SUBJECTIVE EFFICACY (ROSE) STUDY

PROTOCOL ID NCT 01455779

SUMMARY Renessa® is a device used to treat female stress urinary incontinence secondary to hypermobility. Women eligible for the Novasys Transurethral RF System must have failed initial conservative treatment and are not candidates for surgical therapy. The device is placed during a 9-min, non-surgical procedure using local anesthesia in the office. This study will investigate the efficacy of Renessa in these eligible women. The primary effectiveness endpoint will be the proportion of 'dry' patients at the 12-month follow-up. In addition, there will be a primary safety endpoint consisting of the incidence of device-related serious adverse events during the procedure and then 30 days afterwards.

ELIGIBILITY Participants will be women, aged 35–60 years, with stress urinary incontinence for >12 months, bladder outlet hypermobility, a body mass index of <35 kg/m² and an incontinence quality-of-life score of >55. Additional criteria include a leak point pressure of >90 cmH₂O and maximal urethral closure pressure of >50 cmH₂O. Participants must have failed conservative therapy, such as Kegels and biofeedback, and/or not have received conservative treatment for a period of at least 3 months before enrollment. There will be an estimated enrollment of 120 women.

LOCATIONS AND CONTACTS The three recruitment sites in the USA are located in Murrieta, CA; Oak Lawn, IL; and Nashville, TN. California contact: Judy Manikowski, (951) 698-1901, ext. 232, e-mail: judy@trivalleyurology.com. Illinois contact: Michele Mcauliffe, (708) 499-9800, e-mail: mmcauliffe@iultd.org. Tennessee contact: Phillip Bressman, MD, (615) 301-1000, ext. 3135, e-mail: pbb48@yahoo.com/.

In this issue...

Reconstructive and Paediatric Urology

Urological Oncology

ORIGINAL RENAL TUMOUR SIZE PREDICTS METASTASIS P190

Historically, there has always been a relationship between tumour size in RCC and the risk of metastasis, either at presentation or during surveillance. However, a recent study challenged this long-standing association. It reported that tumour size was not a significant predictor of synchronous metastasis in the case of small renal masses. Now, in their case series study, Umbreit et al revisit the potential for metastasis according to original tumour size. **They find that tumour size is significantly associated with metastases in patients with renal masses.** Specifically, patients with tumours of <3 cm have a low risk of synchronous metastatic disease.

In all, 2651 patients were identified who had their unilateral, sporadic renal tumour resected between 1990 and 2006. Various clinical, surgical and pathological features were studied, including histological subtype, size and TNM classification of the tumour. Within the group, 41 patients had a tumour size of ≤ 7 cm. Lesion biopsy results and/or radiographic findings confirmed that all 41 patients had M1 disease.

Of the 2651 patients, 87% had RCC; the rest had benign tumours. At surgery 7.9% of patients with RCC had documented distant metastases. Among 182 patients with distant metastases, 102 had it confirmed at presentation by biopsy and/or resection. Tumour size was significantly greater in patients with M1 RCC than in those with M0 RCC. The median size was 10 cm vs 4.5 cm. **The risk of M1 RCC increased from 1.1% for patients with tumour sizes of 3–3.9 cm to 16.5% for patients with sizes ≥ 7 cm.** Only nine of the 498 patients with a tumour size of <3 cm developed distant metastases after surgery. Each 1-cm increase in tumour size increased the risk of death from RCC by 20%. It also increased death from any cause by 10%.



THERE IS NO SINGLE APPLICABLE EFFERENT SEGMENT IN CONTINENT CUTANEOUS URINARY DIVERSION P288

The two most commonly used procedures for urinary diversion are the ileal conduit and orthotopic neobladder. However, continent cutaneous reservoirs can be a treatment option in a well-defined subset of patients. **Various efferent segments are used in continent catheterizable urinary reservoirs with no consensus on an optimal technique.** Ardel et al have conducted a comprehensive review of the literature to assess the biophysical properties and current status of outlet formation in heterotopic intestinal urinary diversion. Their findings suggest that the quest for optimization will continue, as there is still no single universally applicable efferent segment in continent cutaneous urinary diversion. Their Medline search used various search terms starting with continent urinary diversion. Full-length original articles were identified that addressed the principles and techniques of outlet formation, as well as its outcomes and complications. All studies were published in English between 1966 and 2010. A checklist was developed and used to evaluate and rate each study for levels of evidence.

No randomised studies were found. Most of the studies were retrospective case series. These contained confounding factors and poorly defined non-standardised outcomes. Just a few studies compared different efferent segments. **The most popular techniques are the vermiform appendix, the intussuscepted ileal nipple and the Yang-Monti tube.** These three techniques use major biophysical principles based on the use of flap, nipple and hydraulic valves. Continence rates are generally high with flap and nipple valves. There is continued disappointment in the areas of artificial sphincter systems and tissue engineering. Although there is a continuous flow of publications, there have been only moderate improvements rather than novel advances.

Laparoscopic and Robotic Urology

SPORADIC IPSILATERAL MULTIFOCAL RENAL TUMOURS CAN BE TREATED ROBOTICALLY P274

Patients may have multifocal RCC, defined as two or more tumoral foci in the same kidney that are separated by a string of normal tissue. Partial nephrectomy (PN) has shown oncological outcomes similar to radical nephrectomy in patients with small (T1a) renal tumours. Laydner et al present their experience with robot-assisted PN (RPN) in patients with two or more ipsilateral tumours. Their case series finds that this surgical technique is feasible and safe.

At one institution, eight patients with two or more ipsilateral renal masses underwent nine RPNs over a 3-year period. One patient underwent bilateral RPN. In all, 19 tumours were removed (16 malignant). Nephrometry scores (the Preoperative Aspects and Dimensions Used for an Anatomical classification [PADUA] and R.E.N.A.L.), complications and renal function outcomes were evaluated.

The mean (sd) operative time was 199 (47) min. The median PADUA and R.E.N.A.L. scores were 7 and 6, respectively. The mean (sd) warm ischaemia time was 21 (9.2) min. None of the patients required a transfusion; the mean (sd) estimated blood loss was 250 (154) mL. **Intraoperatively, there were no complications and no patient required a conversion to open surgery.** Six of the 19 tumours did not require hilar clamping. The mean (sd) length of stay was 4.2 (1.0) days.

IMPORTANT PAPERS YOU MAY HAVE MISSED...

- **MRI moderately accurate in assessing T stage of bladder cancer** Rajesh A, Sokhi HK, Fung R, Mulcahy KA, Bankart MJ. Bladder cancer: Evaluation of staging accuracy using dynamic MRI. *Clin Radiol* 2011; **66**: 1140–5
- **Metastatic penile tumours indicate poor prognosis** Chau A, Amin M, Cubilla AL, Young RH. Metastatic tumors to the penis: a report of 17 cases and review of the literature. *Int J Surg Pathol* 2011; **19**: 597–606

- **Algae compound shows promise as treatment for erectile dysfunction** Iacono F, Prezioso D, Ruffo A, Di Lauro G, Romis L, Illiano E. Analyzing the efficacy of a new natural compound made of the alga *Ecklonia bicyclis*, *Tribulus terrestris* and BIOVIS® in order to improve male sexual function. *J Men's Health* 2011; **8**: 282–7
- **Ordering urine culture in women with uncomplicated UTI does not decrease follow-up visits** Johnson JD, O'Mara HM, Durtschi HF, Kopjar B. Do urine cultures for urinary tract infections

decrease follow-up visits? *J Am Board Fam Med* 2011; **24**: 647–55

- **Denosumab improves bone-metastasis-free survival in men with castration-resistant prostate cancer** Smith MR, Saad F, Coleman R et al. Denosumab and bone-metastasis-free survival in men with castration-resistant prostate cancer: results of a phase 3, randomised, placebo-controlled trial. *Lancet* 2011 [Epub ahead of print]. DOI:10.1016/S0140-6736(11)61226-9



JOURNAL WATCH