

INTERNATIONAL CONTINENCE SOCIETY (ICS) 39TH ANNUAL MEETING

29 September - 3 October 2009, San Francisco, USA

WITH A REVIEW OF ABSTRACTS ON INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME AND RELATED TOPICS PRESENTED AT THIS MEETING

The International Continence Society (ICS) is a unique, multidisciplinary society whose members consist of urologists, (uro)gynaecologists, neurologists, gastroenterologists, geriatricians, paediatricians, biomechanical engineers, physicists, nurses and physiotherapists from all parts of the world. All of these people have a special interest in different aspects of urinary and faecal incontinence and the function and dysfunction of the pelvic floor, including pelvic, bowel, bladder and perineal pain.

The IPBF therefore gratefully accepted the offer of a complimentary booth at the San Francisco meeting. It was a great success, with so much interest by delegates that all that remained to take home on the last day was the tablecloth. All the CDs, brochures, leaflets and flyers had been taken away by interested health professionals seeking solutions for their patients and information for their students or practices. We have noted a surge of interest in IC and pelvic pain by physiotherapists and dawning acceptance by urologists and gynaecologists that physiotherapy can really help patients with pelvic pain and other lower urinary tract symptoms.

Excellent IC/PBS/CPPS Workshop available on webcast

An excellent 4 hour workshop (W53) was organised on the topic: **De-Mystifying Chronic Pelvic Pain (IC/PBS/CPPS)**, chaired by urologists Ragi Doggweiler and Kristene Whitmore and physiotherapist Stephanie Prendergast with Susan Kellogg-Spadt, Elisabeth Rummer and David Wise also as speakers. The aim of this workshop was to provide caregivers taking care of patients with chronic pelvic pain clarity and direction. By a happy coincidence, this was one of a small number of workshops webcast by *tmed*. <http://webcasts.prous.com/ICS2009> (go to Webcasts program, Workshops, Workshop 53). Following an introduction by Dr Doggweiler, Stephanie Prendergast gives a clear description of the anatomy of myofascial pelvic pain, myofascial trigger points and a discussion of the role of the pudendal nerve.

Dr Kristene Whitmore's outstanding presentation included management of chronic pelvic pain, treatment of the different pain generators, a comparison of the impact of diet in men and women, mind-body therapies and medical therapies in detail, botulinum toxin, neuromodulation, trigger point injections, nerve blocks and bladder augmentation. This was a very practical presentation which everyone will find most valuable.

Female sexuality and chronic pain was discussed by Susan Kellogg-Spadt, emphasising that chronic pelvic pain patients may have multiple associated conditions and that a painful bladder or painful pelvis can lead to painful sex.

Scientific programme

The ICS conference scientific programme included one session of poster presentations on pain syndromes and a further poster presentation session on PBS/IC. There were also a number of non-discussion posters and abstracts on IC on view. We have included these studies below, together with a number of interesting studies presented in other sessions. As you will see, there was quite an interest in treatment for Hunner's lesions this year, in the field

of IC. In the conference as a whole, there was an increasing focus on improving the quality of life for all patients. All abstracts can be found in full on the ICS website: www.icsoffice.org.

Abstract #11

Smith A L, Leung J, Harper S K, Zhang R, Raz S, Rodriguez L V

THE EFFECT OF ACUTE AND CHRONIC STRESS AND ANXIETY-LIKE BEHAVIOUR ON BLADDER MOTOR AND SENSORY FUNCTION

This was a study in rats, based on the theory that stress appears to play a role in the exacerbation and possibly even the development of functional urinary tract disorders including painful bladder syndrome (PBS) and overactive bladder (OAB) and that acute stress increases bladder pain and urgency, affecting mood and quality of life, in many of these individuals. The study was carried out with the aim of better understanding the mechanisms. The rats were exposed to chronic psychological stress for 1 hour a day on 10 consecutive days in the form of water avoidance stress (WAS) or sham with the aim of characterizing changes in voiding and anxiety-related behaviour. The results indicated that the rats which had been exposed to stress developed significant increases in anxiety-like behaviour and voiding frequency. The changes in voiding persisted for at least a month after the stress had ceased. The response appears to be related to hypothalamic-pituitary axis activation secondary to stress resulting in a functional impact on the end organ. Along with these findings, similar effects on the gastrointestinal system indicate that this response may be initiated centrally since data from previous studies indicates that water avoidance stress in rats simulates IBS with respect to faecal pellet output and transit through the colon. The changes found may provide insight into the pathophysiology of the complex voiding disorders. However, this study did not look at whether the rats exhibited pain behaviour, only frequency. The research group plans to look at pain in a follow-up study.

Abstract #14

Peters K, Killinger K, Boguslawski B

PUDENDAL NEUROSTIMULATION IS A VIABLE ALTERNATIVE TO SACRAL NERVE STIMULATION FOR VOIDING DYSFUNCTION

Chronic pudendal neurostimulation (PNS) is an alternative form of treatment, particularly in those who fail to respond to sacral stimulation. De Peters presenting the study on behalf of his research team, explained that they began offering pudendal nerve stimulation to patients who had failed sacral stimulation and other difficult patients. The patients presented represent some of the most complex patients in Dr Peters' practice. For the majority of these patients, pudendal neuromodulation represented a last resort for managing symptoms and improving quality of life. The team evaluated patients after pudendal neuromodulation with a tined lead placed at the pudendal nerve to determine complications, changes in symptoms and satisfaction with treatment. This was a retrospective chart review from November 2003 to December 2008. Questionnaires were sent to homes to assess symptom improvement and satisfaction with the treatment.

84 patients had a pudendal lead placed (male and female patients):

- 42 patients had IC/PBS
- 26 patients had urgency/frequency or urge incontinence
- 13 patients had urinary retention
- 2 patients had pelvic pain
- 3 patients had pudendal neuropathy.

44 of the 84 patients had failed previous sacral nerve stimulation. 93% of these responded to pudendal stimulation. At the time of the last follow-up, moderate or marked improvement in symptoms was still seen in many of the patients. Complications were relatively low. This research team believes that pudendal neuromodulation is a reasonable alternative in complex

patients who fail to respond to other therapies. More research is needed to fully assess long-term outcomes and identify predictors of success.

Abstract #32

Panicker J, Khan S, Kessler T, Gonzales G, Haslam C, Elneil S, Fowler C.

THE POSSIBLE ROLE OF OPIATES IN WOMEN WITH URINARY RETENTION-OBSERVATIONS FROM A PROSPECTIVE CLINICAL STUDY

[Comment: This study is also of interest to IC/PBS patients whose pain is treated with opiates and who then suffer from both urinary retention and constipation.]

According to Panicker and colleagues, urinary retention in women is often a puzzle: when structural and neurological causes have been excluded, the cause may still remain unidentified. This study prospectively evaluates this group of patients who have been referred on to a specialist centre. In 2008, 61 women with complete urinary retention were seen at a tertiary referral centre. Urological and neurological investigations had failed to reveal abnormalities. Following further investigations, a probable cause was identified in 25 patients, but in the remainder no cause for retention could be seen except for the fact that 26 of them were regularly using opiates and in 11 no other cause for retention could be found. It is well-known that opiates lead to constipation, but “voiding difficulties” or “retention” are also listed as possible adverse effects. Two of the patients in this study who stopped using the opiates had restoration of bladder sensation and ability to void. The concluding message is that the cause of urinary retention in women may not be identified even after extensive investigations. Young women taking opiates for undiagnosed pain present a challenging clinical problem and the results of this prospective study suggest that opiate medication should be considered as a cause if voiding difficulties start to occur.

Abstract #109

Frias B, Charrua A, Pinto R, Allen S, Dawbarn D, Cruz F, Cruz C D.

INTRATHECAL BLOCKADE OF TRK RECEPTOR AND NEUROTROPHINS SEQUESTRATION REDUCES PAIN AND URINARY FREQUENCY IN AN ANIMAL MODEL OF CHRONIC BLADDER INFLAMMATION

Chronic bladder inflammation is accompanied by increased urinary frequency and pain. High levels of Nerve Growth Factor (NGF) play an important role in this process. NGF may be uptaken by bladder sensory afferents, binding to its specific tyrosine kinase receptor (Trk), TrkA. Another important neurotrophin is Brain-Derived Neurotrophic Factor (BDNF) that binds to its specific receptor TrkB, abundantly expressed in bladder sensory afferents. BDNF expression in the cell bodies of sensory afferents is upregulated during peripheral inflammation in an NGF-dependent manner. BDNF is anteriorly transported to the spinal cord where it is released upon afferent stimulation, often contributing to central sensitization and enhancing visceral pain and micturition reflex. The aim of this work was to study the contribution of NGF and BDNF to pain and enhanced micturition reflex in an animal model of chronic bladder inflammation. This study showed that chronic bladder inflammation results in mechanical allodynia in the lower abdomen, as indicated by reduced mechanical sensitivity. Treatment with k252a, TrkA Ig2 or TrkB Ig2 improved the mechanical threshold of the abdominal region. Bladder reflex activity caused by cystitis was also reduced by the same treatments. These results support a role for NGF and BDNF for pain and increased urinary frequency arising during bladder inflammation. The authors' concluding message is that their results indicate that NGF and BDNF are important mediators for development of pain and urinary frequency in animals with chronic bladder inflammation. It is likely that Trk antagonists or neurotrophin sequestering proteins may be useful treatments in the future.

Abstract #201

Zamecnik L, Zamecnik J, Hacek J, Hanus T.

AXONOPATHIC CHANGES OF VISCERAL NERVE ENDINGS IN URINARY BLADDER IN INTERSTITIAL CYSTITIS – AN ULTRASTRUCTURAL STUDY

This was a pilot study from the Czech Republic aimed at analysing ultrastructural morphologic changes of visceral nerve endings in the wall of urinary bladders of symptomatic patients under long-term treatment for interstitial cystitis/bladder pain syndrome.

Biopsies of the urinary bladder were performed in 16 patients with interstitial cystitis (according to the ESSIC Copenhagen classification of endoscopic findings: grade I (n = 5), grade II (n = 8), grade III (n = 2), grade IV (n = 1)). Specimens fixed in paraformaldehyde and semithin and ultrathin sections for electronmicroscopic examination were analysed for ultrastructural changes in axons and myelin sheaths of nerve fibers in urinary bladder mucosa. Morphometric analyses of fibers were performed and the results were compared to the findings in six samples in the control group. In 12 (75%) of the studied samples of interstitial cystitis, the authors observed the presence of ultrastructural morphologic changes in visceral nerve fibers - particularly signs of axonal neuropathy (accumulation of transport filaments and vesicular organelles) and signs of mild chronic demyelination in myelinated fibers. Based on their findings, Zamecnik L and colleagues consider that chronic neuropathic changes occur in visceral nerve endings of the urinary bladder in interstitial cystitis patients. They might represent one of the etiologic factors inducing the fixation of chronic pain and urologic disorders in these patients.

Abstract #202

Hanna-Mitchell A, Buffington T, Mayer E, Birder L.

INVOLVEMENT OF UROTHELIAL CRF RECEPTORS IN MODULATING BLADDER FUNCTION

The CRF (corticotrophin releasing factor) signalling system is known to modulate pain responses and play a major role in the body's response to stress. Corticotrophin peptides and their associated receptors are now known to be expressed outside of the central nervous system. Recent evidence has shown that corticotrophin releasing peptides can have direct effects within the pelvic organs (viscera) and are likely to influence stress-related visceral hypersensitivity. Corticotrophin peptides are involved in a number of functional pain syndromes and are now known to be expressed by peripheral tissues. In addition, visceral (and somatic) disorders including chronic pelvic pain/interstitial cystitis may also share common features, including reports of stress as a contributing factor in exacerbating the symptoms. In animal studies of IC, the cat model is the best model outside human beings since feline interstitial cystitis (FIC), a chronic idiopathic cystitis in cats, shows similarities to humans diagnosed with IC. In both syndromes, alterations in urothelial (UT) signalling/barrier may contribute to the associated pathophysiology. This study was undertaken to investigate: (1) urothelial cell expression and function of the corticotrophin releasing factor receptors (CRF1 and CRF 2) in rat bladder urothelial cells and feline urothelial cells from normal cats and cats with FIC (2) the trafficking events underlying transmitter (ATP) release by these cells and (3) the role of each of the receptor subtypes in urothelial signalling. According to Hanna-Mitchell and colleagues, their preliminary findings provide functional evidence of expression of both receptor subtypes by bladder urothelial cells (both from cat and rat) in culture. The finding that the specific CRF2 antagonist evokes both trafficking and release responses in the absence of bath agonist points to the release of an endogenous ligand or ligands and suggests an potentially important role in UT cell physiology. The finding of a differential response to CRF between normal and FIC UT cells suggest that CRF receptor activity may be modified in FIC. The authors conclude that in animals, stress-sensitisation is associated with induction of hyperalgesic states similar to many functional pain syndromes. They believe that it is likely that abnormalities in urothelial CRF receptor signalling may play a prominent role in bladder pain.

Abstract #203

Yamada S, Yoshida A, Kageyama A, Mori F, Ito Y.

MUSCARINIC AND PURINERGIC RECEPTORS IN THE RAT BLADDER ARE ALTERED BY CHEMICALLY INDUCED CYSTITIS.

The etiology and pathogenesis of interstitial cystitis remain unclear. Currently, there is increasing evidence to suggest the idea that the abnormality of muscarinic and purinergic signalling transduction in the bladder may be implicated in the development of interstitial cystitis. This rat study was conducted to clarify the mechanisms involved in the pathophysiology of IC by measuring muscarinic and purinergic receptors and urodynamic parameters in the bladder of rats with cystitis induced by HCl, cyclophosphamide (CYP) and protamine (Pro). According to the authors, their data revealed down-regulation of both muscarinic and purinergic receptors with the induction of overactive bladder in the bladder of rats with chemically induced cystitis. Furthermore, the alteration of pharmacologically relevant receptors in Pro-treated rats compared with HCl- and CYP-treated rats seemed to be mild. The authors therefore believe that muscarinic and ATP receptors may be partly involved in the pathophysiology of cystitis. They concluded that muscarinic and ATP receptors may be down-regulated in the bladder of rats with chemical-induced cystitis.

Abstract #204

Cox M, Klutke J, Klutke C.

ASSESSMENT OF PATIENT OUTCOMES FOLLOWING SUBMUCOSAL INJECTION OF TRIAMCINOLONE FOR TREATMENT OF HUNNER'S ULCER SUBTYPE INTERSTITIAL CYSTITIS

Hunner's ulcer (or lesion) is reported to occur in 5-20% of patients diagnosed with IC. The pathogenesis of IC is still not clearly understood, and treatment options for patients with IC have varying degrees of efficacy. The purpose of this paper by Cox and colleagues was to present their experience of a prospective trial with 30 patients with Hunner's ulcer subtype IC, using submucosal injection of triamcinolone, a steroid and anti-inflammatory drug, between November 2006 and April 2008. All the patients underwent flexible cystoscopy and biopsy confirming the presence of Hunner's ulcer(s). Under general anaesthesia, 10 ml of triamcinolone acetonide (40 mg/ml) was injected in 0.5 ml aliquots into the submucosal space of the centre and periphery of ulcer(s) using an endoscopic needle. Patient symptoms and quality of life were assessed using two validated questionnaires, the International Prostate Symptom Score (IPSS) and the Pelvic Pain and Urgency/Frequency (PUF) symptom scale. Each questionnaire was administered prior to therapy and four weeks postoperatively. The postoperative interview included the Patient Global Impression of Change (PGIC). The average preoperative and postoperative IPSS were 21.1 and 11.3, respectively. The average preoperative and postoperative PUF scores were 20.0 and 11.0, respectively. PGIC assessment revealed 21 of 30 patients (70%) very much improved. No perioperative complications were noted. This treatment is a simple outpatient procedure. Triamcinolone injection is well tolerated and could be considered for any patients with histologic evidence of a Hunner's ulcer. Further studies are needed to compare these results with fulguration.

Abstract #205

Price N, Carver J, Jackson S, Mardon H.

INVESTIGATION OF THE FUNCTION OF INTEGRIN-MEDIATED BACTERIAL ADHERENCE PROTEINS AND THEIR RECEPTORS IN WOMEN WITH RECURRENT BACTERIAL CYSTITIS AND INTERSTITIAL CYSTITIS

The causes of interstitial cystitis remain obscure but infection has been suggested as a cause by many authors. The aim of this study was to investigate the expression and distribution of integrins in the bladder epithelium of women with recurrent bacterial cystitis and interstitial cystitis, and to compare these with healthy asymptomatic women. Integrins are receptors that

allow a (bacterial) cell to attach to tissues. The theory behind this study was that if “pathogenic” subtypes of integrins could be identified, it should in principle be possible to suppress these. This suppression could then be used in the prevention and treatment of recurrent bacterial cystitis and interstitial cystitis. Integrins $\alpha 5\beta 1$ and $\alpha v\beta 3$ were identified within the epithelium, lamina propria and submucosa of bladder specimens. The results showed differences in the expression and spatial distribution of integrins differed in the bladder mucosa of interstitial cystitis, recurrent bacterial cystitis and control groups. The authors concluded that this study suggests that the $\alpha 5\beta 1$ integrin is commonly expressed in the epithelial and submucosal layers in women with interstitial cystitis. Suppression of this “pathogenic” subtype of integrin could potentially be used to prevent and/or treat both recurrent bacterial cystitis and interstitial cystitis. A larger study is needed to confirm these findings.

Abstract #206

Ghazwani Y, Elkelini M, Hassouna M.

UNILATERAL SACRAL NEUROMODULATION IN PATIENTS WITH PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS: 5 YEARS FOLLOW UP.

Neurogenic inflammation may be the cause of some cases of PBS/ IC. Sacral nerve root stimulation (SNS) has been proven clinically as a treatment of urinary frequency and urgency, urge incontinence and non-obstructive urinary retention. Several trials have confirmed improvement of IC symptoms and pelvic pain using sacral neuromodulation in the short term. The aim of this study was to evaluate the response after 5 years follow up in patients who received unilateral sacral stimulator as a treatment for refractory PBS/IC and had initial good response. It was concluded unilateral Sacral nerve stimulation was effective in treating the symptoms of PBS/IC in patients who had failed to respond to standard therapies. Patients who had had initial good results from this treatment maintained their improvement at a 5-year follow up. Further prospective, multi-centre studies are needed.

Abstract #207

Clemens J Q, Calhoun E A, Litwin M S, McNaughton-Collins M, Crowley E M, Landis J R.

VALIDATION OF A MODIFIED NATIONAL INSTITUTES OF HEALTH SYMPTOM INDEX TO ASSESS GENITOURINARY PAIN IN MEN AND WOMEN

Until now, no condition-specific instrument has been available to assess the degree of symptoms in both men and women with urologic pain conditions. Such an instrument would be useful to assess the response to treatment in clinical trials involving men and women. The aim of this study was to develop a single instrument that can be used to assess symptom severity in men and women with urologic pain symptoms, to assess response to treatment and as an outcome measure for research studies that include men and women. The team developed the Genitourinary Pain Index (GUPI) as a modified version of the NIH Chronic Prostatitis Symptom Index, producing a questionnaire with a score range of 0-45 for both men and women. The GUPI discriminated between men with chronic prostatitis or interstitial cystitis, men with other symptomatic conditions (dysuria, frequency, chronic cystitis), and men with none of these diagnoses. It also discriminated between women with interstitial cystitis, women with incontinence, and women with none of these diagnoses. GUPI performed similarly in men and women. It was concluded that GUPI is a valid and responsive single instrument that can be used to assess symptom severity and impact in both men and women with genitourinary pain symptoms.

Abstract 208

Gillatt D.

PAINFUL BLADDER AND URINARY TRACT PATHOLOGY ASSOCIATED WITH LONG TERM KETAMINE USE

While use of ketamine as a recreational drug in the UK is increasing, little is known about the effects of its regular use. Case series in Canada and Hong Kong have described severe urinary tract symptoms associated with chronic ketamine use. In this study, patients with a history of chronic ketamine use and urinary tract symptoms were referred to urological services in the South West UK for evaluation. Patients underwent physical examination including cystoscopy and bladder biopsies. An on-line survey was sent to all UK BAUS members and trainees. As a result, 20 patients with a history of regularly using ketamine presented with symptoms comprising haematuria, suprapubic pain, frequency and urgency. Cystoscopy revealed bladder inflammation and biopsy samples revealed haemorrhagic cystitis. Complications included severe pain necessitating cystectomy or catheter insertion for symptomatic relief and progressive damage of the urinary tract leading to stricture of ureters and kidney impairment. In a number of patients, symptoms reduced once use of the ketamine had ceased. However, effects may be irreversible or even progressive. A survey of BAUS members revealed similar cases in all regions of the UK. In this study, chronic high dose ketamine usage resulted in urothelial inflammation, painful bladder and loss of capacity. It was concluded that urinary tract symptoms associated with chronic use of ketamine is an emerging problem in the UK. Further work is needed to evaluate the mechanism of ketamine and to establish the prevalence of such symptoms amongst ketamine users.

Abstract #212

Cheng Y, Allan W, Walsh C, Mansfield K J, Burcher E, Moore K H.

ATP RELEASE DURING CYSTOMETRY IN WOMEN WITH DETRUSOR OVERACTIVITY AND PAINFUL BLADDER SYNDROME: CONTRIBUTION TO “URGENCY”?

ATP [adenosine triphosphate] is an important signalling molecule whose release from the bladder urothelium in response to stretch is thought to stimulate afferent nerves and thereby convey information about bladder fullness (and the sensation of urgency). In this Australian study, the aim was to measure the release of ATP during urodynamic filling of bladders of women with idiopathic detrusor overactivity (DO), painful bladder syndrome (PBS) and stress incontinence (controls), in order to test the hypothesis that ATP release might play a role in bladder function and/or dysfunction. According to the authors, this appears to be the first study showing that ATP release can be analysed in the fluid voided after cystometry testing, thereby opening up new avenues of research. Their findings suggest that the intravesical concentration of ATP might be an important factor in the sensation of maximum bladder capacity. They concluded that the measurement of ATP in cells from cystometry washings is a new approach to understanding the signals that may contribute to the sensation of “urgency” (the sudden compelling desire to void). The relationship between ATP and first desire to void seen only in the DO / PBS patients suggests that ATP release may be more readily triggered in these women.

Abstract #261

Clemens J Q, Stoto M A, Elliott M, Suttorp M, Bogart L, Berry S H.

PREVALENCE OF INTERSTITIAL CYSTITIS/ PAINFUL BLADDER SYNDROME IN THE UNITED STATES

The Rand Interstitial Cystitis Epidemiology (RICE) study was designed to develop a symptom-based case definition of interstitial cystitis/ painful bladder syndrome (IC/PBS) for epidemiological research, to validate the definition in physician-diagnosed cases, to conduct telephone population screening of a sample³ of women in the US and to calculate an estimate of the prevalence of IC/PBS in United States women of IC-type symptoms [not IC diagnosed

by a physician]. The results of this study showed that approximately 3-6% of women aged 18 or over in the United States meet RICE symptoms criteria for IC/PBS. This is consistent with previous estimates. It was concluded that the lack of objective disease markers for IC/PBS is partly to blame for the limited amount of epidemiologic information that exists related to IC/PBS. However, it is important to continue to study the epidemiology of IC/PBS, as this is of interest to policy makers and physicians who treat women with this very challenging condition. The results of this study suggest that the public health burden of IC/PBS may be underestimated. It is clear that no single questionnaire-based definition of IC/PBS is able to simultaneously identify all IC/PBS cases (sensitivity) and also distinguish these cases from similar conditions such as OAB, endometriosis and vulvodynia (specificity). Therefore, the use of two definitions (such as the high sensitivity and high specificity definitions presented here) may be the best approach.

High Sensitivity

Pain: During the past 3 months, have you ever had a feeling of pain, pressure or discomfort in your lower abdomen or pelvic area? (**Yes, No**)

Frequency: During the past 3 months, how many times on average have you had to go to the bathroom to urinate during the day when you are awake? **10+**

Urgency1: During the past 3 months, have you had a strong urge or feeling that you had to urinate (or “pee”) that made it difficult for you to wait to go to the bathroom? (**Yes, No**)

Urgency2: Would you say that this urge to urinate is mainly because of pain, pressure or discomfort, or mainly because you are afraid you will not make it to the toilet in time to avoid wetting? (**Pain, pressure, discomfort;** or Fear of wetting)

Note: A positive response to the pain question plus **either** the frequency question **or** both of the urgency questions is required.

High Specificity

Pain1: During the past 3 months, have you ever had a feeling of pain, pressure or discomfort in your lower abdomen or pelvic area? (**Yes, No**)

Pain2: As your bladder starts to fill does your feeling of pain, pressure, or discomfort usually: (**get worse, get better, or stay the same**)

Frequency: See above

Urgency1: See above

Urgency2: See above

UTI: Did all of your symptoms disappear (each time) after you took antibiotics? (**Yes, No**)

Endometriosis: Did you ever have hormone injections (such as depolupron) to treat endometriosis? (**Yes, No**)

Note: A positive response to both pain questions plus **either** the frequency question **or** both of the urgency questions is required. In addition, negative responses to the UTI and endometriosis questions are required.

Abstract #262

Ogawa T, Seki S, Imamura T, Igawa Y, Nishizawa O, Homma T, Akahane S, Homma Y.

CXCR3 AND RELATED CHEMOKINES AS POSSIBLE BIOMARKERS FOR ULCERATIVE INTERSTITIAL CYSTITIS

IC/PBS is divided into two types by cystoscopic findings, ulcerative and non-ulcerative interstitial cystitis. In this study from Tokyo, the aim of Ogawa and colleagues was to investigate the genes responsible for ulcerative interstitial cystitis(IC), which could provide a clue as to the etiology of IC/PBS or potential biomarkers for the diagnosis of IC/PBS.

Eighteen patients were enrolled in this study (9 patients with ulcerative IC and 9 patients with bladder cancer or benign prostate hyperplasia (BPH) as controls). It was found that genes including CXCR3 and CXCR3-binding chemokines, which act on the immune system, are significantly up-regulated in the bladder tissue obtained from ulcerative interstitial cystitis

patients. It is therefore suggested that these genes may be involved in the etiology of ulcerative interstitial cystitis, and may be a potential biomarker for this disease.

Comment: it was felt by participants that BPH patients were not really suitable as a control group.

Abstract #263

Makino T, Kawashima H, Konishi H, Tanaka T, Nakatani T, Kiyama H.

ELEVATED URINARY LEVELS OF HEPATOCARCINOMA-INTESTINE-PANCREAS/PANCREATITIS-ASSOCIATED PROTEIN (HIP/PAP) IN PATIENTS WITH PAINFUL BLADDER SYNDROMES/INTERSTITIAL CYSTITIS (PBS/IC)

The etiology and pathophysiology of PBS/IC are not well understood. Some growth factors, cytokines and other factors that affect the proliferation of epithelial cells are assumed to be a cause of PBS/IC. Makino and colleagues have previously shown in a rat cystitis model that Pancreatitis-associated protein (PAP III) was expressed in the bladder urothelium. PAP III corresponds to Hepatocarcinoma-intestine-pancreas/ Pancreatitis-associated protein (HIP/PAP) in humans. PAP III expression increased along with an increase in bladder inflammation. The authors believe that PAP III might play an important role as an anti-inflammatory factor in cystitis and hypothesize that human HIP/PAP is expressed in the bladder of patients with PBS/IC and released into the urine in PBS/IC patients. In this study, they measured urinary HIP/PAP levels in PBS/IC patients and analysed associations between urinary HIP/PAP levels and the severity of urinary symptoms. This study was carried out in 27 female patients with PBS/IC diagnosed according to NIDDK criteria and 27 age-matched female controls. Median Urinary HIP/PAP concentration in PBS/IC patients (median: 13.67 pg/ml) was significantly higher than in controls (median: 1.86 pg/ml) (Mann-Whitney's *U* test, $P < 0.0001$). The authors found that the urinary levels of HIP/PAP in PBS/IC patients were significantly higher than in controls. They suggest that expression of HIP/PAP is induced in the urothelium and HIP/PAP is released into the urine of PBS/IC patients. The urinary levels of HIP/PAP correlate with the severity of urinary symptoms, implying that the level of HIP/PAP might be involved in causing PBS/IC. They suggest that HIP/PAP could be a candidate biomarker and that it may be involved in the development of PBS/IC.

Abstract #264

Kotarinos R, Fortman C, Neville C, Badillo S, O'Dougherty B, Fraser L, Lynch A, Odabachian L, Sanfield A, Fitzgerald M P, Clemens J Q, Potts J.

PHYSICAL FINDINGS IN PATIENTS WITH UROLOGIC CHRONIC PELVIC PAIN SYNDROMES (UCPPS)

The UCPPS (Urologic Chronic Pelvic Pain Syndromes) include Interstitial Cystitis / Painful Bladder Syndrome in men and women, and Chronic Prostatitis/Chronic Pelvic Pain Syndrome in men. Several studies have indicated that musculoskeletal abnormalities are frequent in UCPPS patients, including the presence of chronic tension and tenderness of the pelvic floor musculature in many patients. It is unknown whether these musculoskeletal abnormalities found in UCPPS patients are primary or secondary phenomena. The purpose of this analysis was to report on the range of musculoskeletal abnormalities found in a sample of UCPPS patients at 6 centres examined by physical therapists using standardized methods.

46 men and women were examined for myofascial trigger points (hyper-irritable focal points within muscle or connective tissue) and connective tissue restrictions. Muscular (myofascial) trigger points were common, and were most commonly found in the muscle groups detailed in Table 1. It was concluded that somatic abnormalities, myofascial trigger points and connective tissue restrictions were found to be very common in patients with UCPPS. They may be the primary abnormality in at least some patients and secondary in others, but in either situation they should be sought out and actively treated. This study should be seen as a first step.

Table 1: Most commonly identified muscular trigger points in 46 patients with UCPPS.

N (%) with trigger point present in that muscle	
Hip girdle musculature	
Gluteus Medius/Minimus	31 (69%)
Adductor Muscles	33 (72%)
Obturator Externus	24 (52%)
Iliacus	26 (56%)
Psoas Major/Minor	31 (67%)
Abdominal wall musculature	
Rectus abdominis	31 (67%)
Internal Obliques	16 (35%)
Transversus	16 (35%)
External Obliques	15 (33%)
Hip Girdle/Trunk	
Gluteus Maximus	21 (46%)
Piriformis	27 (59%)
Quadratus lumborum	24 (52%)

Abstract #265

Gilleran J, Pozza M, Dimitrakov J, Stella J, Rodriguez-Saona L, Buffington T.

DIFFERENTIAL DIAGNOSIS OF PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS USING INFRARED MICROSPECTROSCOPY

The diagnosis of painful bladder syndrome/interstitial cystitis (IC) currently is hampered by the lack of reliable biological markers. The authors have previously reported the feasibility of using infrared microspectroscopic analysis (IRMS) of dry serum films (DSF) to differentiate patients with IC from healthy subjects and now report the results of comparisons between healthy women, those with IC, and those with other urological disorders. A total of 27 subject serum samples were analysed. Since clinically useful diagnostic tests are not available to urologists, diagnosis is based on identification of clinical symptoms that depend on the experience and skill of the clinician. These preliminary results in this early study research substantiate the potential of the IRMS as a cost-effective, simple and minimally-invasive approach to diagnose IC, and to differentiate patients with IC from those with other urological disorders.

Abstract #266

Malaguti S, Mako A, Natale F, Lamarche J, Cervigni M.

DEFECTIVE SPINAL MODULATION OF NOCICEPTIVE PROCESSING IN PATIENTS WITH PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS (PBS-IC) MAY PLAY AN ESSENTIAL ROLE IN THE PATHOPHYSIOLOGY OF THE DISEASE.

Sensation depends on neurophysiologic mechanisms in several different nerves, receptors, and transmitters. Different stimuli can elicit sensations in the lower urinary tract such as bladder filling, micturition, noxious stimuli, and external stimuli. In chronic inflammatory bladder diseases (e.g. PBS/IC), hypersensitivity to both visceral and somatic stimuli due to hyper-excitability of C-fiber afferent pathways, which are silent in the normal state during bladder filling, has been proposed as mechanism for bladder pain and urgency. Visceral hypersensitivity can be influenced by peripheral and central mechanisms affecting pain perception. Studies using electrical stimulation and the nociceptive flexion RIII lower limb reflex have further confirmed enhanced visceral perception in other chronic pain disease (e.g. Irritable Bowel Syndrome). Abnormal central pain processing may play an important role in the initiation and maintenance PBS/IC suggesting a central sensitization of pain pathways. The aim of this study from Italy was to evaluate the function of pain modulating systems subserving diffuse noxious inhibitory controls in PBS/IC. According to the authors, their results give direct evidence that a hyper-excitability of spinal nociceptive processes is present in

PBS/IC patients and demonstrate a dysfunction in systems subserving diffuse noxious inhibitory controls in PBS/IC patients. Impairment of endogenous supraspinal pain modulation systems may contribute to the development and/or maintenance of central sensitization in PBS/IC.

Abstract #267

Zabbarova I, Birder L, Roppolo J, DeGroat W, Kanai A.

BLADDER-COLON CROSS-SENSITIZATION INDUCED BLADDER OVERACTIVITY

Chronic pelvic pain is a debilitating condition of unclear etiology where clinical studies suggest a high concurrence of gastrointestinal and lower urinary tract dysfunctions. A potential mechanism for this concurrence is afferent cross-sensitization of pelvic organs and the release of inflammatory neurotransmitters through co-innervating neurons. Cross-sensitization between pelvic organs promotes the transmission of noxious stimuli from an irritated organ to an adjacent structure sensitizing the neurons that innervate both affected and unaffected organs. In this study a mouse model was used to study the mechanism and consequence of cross-sensitization of the urinary bladder and colon. The model used – briefly withdrawing the colon from the abdomen and selectively irradiating it without affecting surrounding organs – allowed the authors to induce colonic inflammation without instilling chemical agents that might leak out and enter the circulation, thereby directly affecting the bladder or its sphincters. Using this model, the authors demonstrated the development of bladder overactivity following colonic irritation. Since this overactivity was not present in excised bladder sheets, its origin is neurogenic. The authors believe that their model will help elucidate the mechanism of pelvic organ cross-sensitisation and lead to the identification of therapeutic targets for treating concurrent bladder dysfunction.

A SELECTION OF OTHER ABSTRACTS AND NON-DISCUSSION POSTERS (not in the abstract book but available on the ICS website: www.icsoffice.org):

Abstract #459

Hatchett L, Fitzgerald M P, Potts J, Winder A, Mickelberg K, Barrell T, Kusek J W.

LIFE IMPACT OF UROLOGIC PAIN SYNDROMES

Painful Bladder Syndrome/ Interstitial Cystitis in men and women and Chronic Prostatitis/ Chronic Pelvic Pain Syndrome in men (termed the Urological Chronic Pelvic Pain Syndromes (UCPPS)) are characterized by pelvic pain and urinary symptoms. The purpose of this study was to explore the life impact of UCPPS in terms of symptoms and role limitations, using written responses to open-ended questions presented to participants enrolled in a randomized therapeutic trial for treatment of UCPPS. Results of that study have been previously presented. Before any treatment, patients were invited to complete a 3-page written response to questions asking them to describe their pelvic symptoms and how they affect their lives. These prompts reflect the major quality of life domains used in past studies: „For me, this is a description of what my pelvic symptoms are like on a typical day: “These symptoms affect my home life and my family as follows:”, “These symptoms affect my working life as follows:”, “These symptoms affect my social life as follows:”. Responses were independently reviewed by three researchers. Major themes were summarized following an inductive approach without regard to study treatment assignment. 47 patients completed symptom journals (23 (49%) men, 24 (51%) women). Patient journals revealed three major themes concerning 1) physical health, 2) emotional health and 3) role limitations/social health. Each of the major themes was associated with sub-themes, considered in turn below.

Physical Health: 38(81%) mentioned pain/discomfort as a symptom. Pain was variably described, including severe, unpredictable, with characteristics such as pressure, burning, stabbing, and heaviness, aching, jabbing, sharpness, pulling, cramping, throbbing, and needle-

like sensations. Fifteen (32%) patients gave prominence to the symptom of fatigue, a symptom not been previously considered to be part of the UCCPS syndromes. Patients reported fatigue throughout the day and noted a lack of energy to devote to family, friends, or daily tasks.

Emotional Health: About half of the participants discussed negative mood changes including irritability, frustration, anger, and depression. 23(49%) patients wrote that decreased enjoyment affected their lives, limiting their desire to be involved with friends; others noted the feeling they could not enjoy activities that they had in the past. Two respondents said they felt hopeless. Reports of sexual dysfunction were frequent, including reports of painful ejaculation in men, and reports from women about their inability to have sex because of associated pain and discomfort. The sexual disruption was an important sub-theme for both men and women. Fatigue also had a marked interpersonal effect. Patients reported feeling tired and listless, lacking energy to engage with family or carry out daily tasks. Others wrote about decreased ability to concentrate and preoccupation with symptoms, their condition, or the location of bathrooms. Several patients described being misunderstood by others and reported frustration when their symptoms and emotions were misunderstood by family and friends, e.g. "I feel as though my husband doesn't understand me."

Role Limitations/Social Health: Many patients wrote statements reflecting role limitations due to physical and emotional symptoms. Symptoms disrupted work life both through daily functional limitations and through long term loss of career opportunities. Some patients also worried about their inability to complete work tasks because of their lack of energy, concentration, and fatigue. Others described avoiding new job opportunities and new assignments because of the same fear. Some patients described limitations in their concept of their ideal role in life: symptoms created a difference between their current concept of self and their past concept of self as being more happy and normal. Patients described feelings both of a loss of self and a longing for their old self.

Role limitations have been studied in other chronically ill populations and demonstrate the tremendous burden that chronic illness places on patients' physical and emotional functioning. The present study suggests that both physical health and emotional health concerns are equally important in UCPPS. These patients report a longing to regain their "old" or "happy" personae, and describe leading restricted lives, experiencing social isolation, and the burdening of others. Significantly, the journal entries indicate that fatigue and affective symptoms may be important mediators of role limitations. Fatigue and affective symptoms may represent unappreciated symptoms of UCPPS, or may reflect the presence of other overlapping functional somatic syndromes (FSS).

UCPPS studies may benefit from renewed focus on life impact and from further exploration of symptoms, mediators and role limitations that disrupt patients' daily lives. The authors express the hope that the recognition of the importance of fatigue and other mediators offers clinicians important new therapeutic targets as everyone works together to lessen the burden of chronic illness.

Abstract #460

Guralnick M, Payne R, Kressin M, O'Connor R C.

ENDOSCOPIC ABLATION OF HUNNER'S LESIONS IN INTERSTITIAL CYSTITIS PATIENTS

This study reports on the authors' experience with endoscopic ablation of Hunner's lesions, based on a retrospective chart review performed on 14 patients, all female, with cystoscopically identified bladder lesions, presumed to be Hunner's lesions, between 2003 and 2007. All had presented with the previous diagnosis of IC (made elsewhere) and had failed multiple standard therapies for IC prior to referral. This team performed flexible cystoscopy under local anaesthesia to identify the presence of Hunner's lesions. They considered any erythematous lesion as a potential Hunner's lesion if touching the lesion with the cystoscope reproduced the patient's symptoms (pain, urgency) and touching benign

appearing areas of urothelium did not. At a later date under a general aesthetic the lesions were cystoscopically biopsied and ablated. Ablation was either by fulguration with a Bugbee electrode (12 patients) or formal resection with a loop cautery (2 patients). Hydrodistension was not performed. They concluded that Hunner's lesions can be identified on flexible cystoscopy by their appearance and response to touching with the cystoscope (touching the lesion reproduces symptoms of pain/urgency whereas touching normal-looking urothelium does not). They believe that their results are consistent with those of Peeker et al and Roefim et al that endoscopic ablation of Hunner's lesions results in significant improvement in most patients. The symptoms of pain seems to respond best. Lesions may recur and cause recurrent symptoms but appear to respond to retreatment. Pathologically, Hunner's lesions typically have epithelial denudation and chronic inflammatory infiltrate. Hunner's lesions can be identified at office cystoscopy by their erythematous appearance and reproduction of the patient's symptoms upon touching the lesion with the cystoscope and failure of this effect upon touching normal appearing urothelium. Endoscopic ablation of these lesions results in symptomatic improvement in the majority of patients, who have often failed prior therapies. Symptomatic recurrence can occur but often responds to repeat ablation.

Abstract #461

Nomiya A, Homma Y, Nishimatsu H, Fujimura T, Kumano S, Tsurumaki Y, Takeuchi T.
TRANSURETHRAL RESECTION OF ULCERATIVE TISSUE FOR ULCER TYPE INTERSTITIAL CYSTITIS

The aim of this study from Japan was to examine the therapeutic efficacy of transurethral resection of ulcerative tissue for ulcer type interstitial cystitis (IC). IC patients who underwent hydrodistension with or without transurethral resection of ulcers were retrospectively reviewed. The diagnosis of IC was based upon the Japanese guideline for IC, which comprises 1) lower urinary tract symptoms such as bladder hypersensitivity, urinary frequency, bladder discomfort and bladder pain; 2) bladder pathology such as Hunner's ulcer and mucosal bleeding after over-distension; 3) exclusions of confusable diseases such as infection, malignancy and calculi of the urinary tract. A total of 38 patients (25 with ulcers and 13 without ulcers) were analysed. In this study, transurethral resection of ulcers appeared to be one of the most promising therapeutic options for patients with ulcer type IC. The efficacy mechanism of resection is not fully understood, although resection of ulcers may eliminate the local factors accumulated in the ulcerative tissue. The authors emphasise that clinicians should take great care not to overlook ulcers, because ulcer resection can achieve dramatic symptom improvement, especially pain relief. The limitation of this study was its small sample size, retrospective nature of the analysis, no control arm, and no assessment for histology or biomarkers. Further study is required to confirm the effectiveness of ulcer resection. However, the authors conclude that transurethral resection of ulcerative tissue is one of the most beneficial options for patients with ulcer type IC.

Abstract #462

Van Den Bossche H, Van Der Aa F, De Ridder D.

CORRELATION BETWEEN THE ESSIC CLASSIFICATION FOR PAINFUL BLADDER SYNDROME / INTERSTITIAL CYSTITIS AND CLINICAL TREATMENT OUTCOME: A RETROSPECTIVE STUDY

The purpose of this study from Belgium was to retrospectively correlate the ESSIC 2008 classification with the treatment outcome in patients with PBS/IC. This classification was proposed recently by the European Society for the Study of IC/PBS to improve the quality of the studies on patients with interstitial cystitis/painful bladder. Based on theoretical principles, the classification's clinical benefit remains to be proven. The Belgian study comprised a review of patient files of 45 patients, treated between 2002 and 2008, fulfilling ICS 2002 diagnostic criteria for PBS. All 45 patients underwent diagnostic cystoscopy with hydrodistension. Following hydrodistension, visible hemorrhagic lesions were coagulated

with Holmium laser. Cold cup biopsies were taken in 30 of 45 cases. Cystoscopic and histologic data were used for retrospective classification in accordance with the 2008 ESSIC classification proposal. Of 45 patients, 8 patients had normal cystoscopy and were classified as ESSIC 1. Diagnosis of PBS could be retained in only 1 of these patients, all the others having 'confusable diseases' not allowing for the exclusion diagnosis of PBS. 37 of 45 patients had visible lesions upon hydrodistension and were classified as ESSIC 2 (n=21) or ESSIC 3 (n=16). 6 of 37 patients were lost to follow-up and excluded from further analysis. In 3 of 37 patients, confusable disease was later proven and they were also excluded. 3 of 30 biopsies showed normal findings and were classified as ESSIC A. 3 more biopsies were considered inconclusive and labelled ESSIC B. 24 biopsies were positive and classified as ESSIC C. In the ESSIC B and C groups, 1 and 4 patients had confusable disease respectively. Cystoscopic (ESSIC 2 versus ESSIC 3) or histologic classification of these 28 patients showed no statistically significant correlation with treatment outcome. The most common confusable diseases that were encountered were: urethral diverticulum, neuropathic pain, pudendopathy. No carcinoma in situ was diagnosed. In this study, patients with PBS without cystoscopic changes (ESSIC 1 group) formed a minority of PBS patients (only 1 patient). Negative cystoscopic findings often suggest the presence of confusable diseases in patients with possible PBS (87.5%) and therefore cystoscopy remains essential for a correct diagnosis. Negative histologic findings correlated with the presence of confusable disease in all patients. This means that an ESSIC A group was non-existent in this series of Belgian patients. No significant impact of histologic or cystoscopic classification on outcome could be seen. The authors are of the opinion that the new ESSIC classification is likely to lead to overdiagnosis and further confusion. They conclude that although the diagnosis of PBS is suspected after history and clinical examination, cystoscopy with hydrodistension remains essential to exclude confusable disease. The ESSIC 2008 classification proposal does not correlate with therapy outcome in this study and is not helpful in therapeutic decision-making. The histological classification is not helpful in their view.

Abstract #682

Homma Y, Nomiya A, Nishimatus H, Fujimura T, Tsurumaki Y, Kumano S, Kume H.
ORAL ADMINISTRATION OF STEROID FOR INTERSTITIAL CYSTITIS – A VITAL OPTION?

Interstitial cystitis (IC) is problematic since there is no uniformity of nomenclature, let alone diagnostic procedures and treatment modalities. Oral administration of anti-inflammatory steroids is a treatment option for IC which is often ignored due to concern regarding side effects, especially with long-term therapy. However, recent articles have suggested its possible role in ulcer type IC treatment. Homma and colleagues retrospectively reviewed the clinical charts for oral steroid therapy, and found favourable responses in most of the cases - 10 patients (9 women and 1 man) diagnosed as ulcer type IC and treated with oral steroids. The diagnosis was based on the Japanese guideline for IC, which comprises 1) lower urinary tract symptoms such as bladder hypersensitivity, urinary frequency, bladder discomfort and bladder pain; 2) bladder pathology such as Hunner's ulcer and mucosal bleeding after over-distension; 3) exclusions of confusable diseases such as infection, malignancy and calculi of the urinary tract. The authors of this study are of the opinion that it could be an option for ulcer type IC. The limitation of the study included small sample size, short-term observation period, retrospective nature of analysis (without concurrent control), and no assessment for biomarkers and cystoscopy. Further study is warranted for the possible usefulness of oral steroid therapy for this intractable disease.

Abstract #683

Mouracade P, Ej-jennane A, Lang H, Jacqmin D, Saussine C.

INTERSTITIAL CYSTITIS: CLINICAL PRACTICE, DIAGNOSTIC PROCEDURES AND RESPONSE TO CIMETIDINE TREATMENT.

The purpose of this study from France was to describe the clinical presentation of patients with interstitial cystitis (IC), to determine the findings of the different diagnostic procedures used and the response to cimetidine treatment. A total of 139 female patients diagnosed as having an interstitial cystitis were followed in the authors' institution between 1998 and 2007. The diagnosis was suggested by the clinical history and confirmed on the basis of clinical symptoms, voiding diary findings, Parson's test, O'Leary-Sant questionnaire, urodynamic investigations, cystoscopy and hydrodistension and by the exclusion of other significant pathologies. The first line therapy for all patients was cimetidine 200mg per os BID. The patients were evaluated in a prospective manner. They studied the demographics of the patients, described the common clinical presentation and determined the findings of the different diagnostic procedures and response to treatment by cimetidine. The patients had had symptoms for an average of 7.5 years before diagnosis of IC. It was concluded that while the symptoms of IC are variable, all patients have discomfort related to the bladder which must be the key symptom rather than suprapubic pain. It was also concluded that cimetidine treatment is efficient in a small proportion of patients. All patients needed several line therapies.

Abstract #684

Kudo S, Miyamoto T, Tsuchida T, Zakohji H, Araki I, Takeda M.

THE EFFECT OF CHINESE HERBAL MEDICINE CONTAINING ACONITINE ON THE PAIN RELIEF IN INTERSTITIAL CYSTITIS PATIENTS - A PRELIMINARY STUDY

In the treatment of IC patients, pain control is usually necessary. There have been a variety of therapies, traditional pain medications, including opiates, biofeedback, electronic pain-killing options, bladder distensions. However, these therapies are often unsuccessful in extreme cases. Aconitine is a highly poisonous alkaloid derived from various aconite species. It is a neurotoxin that opens TTX-sensitive Na⁺ channels in the heart and other tissues. Some types of Chinese herbal medicine containing Aconitine are known to have analgesic effect. The purpose of this paper from Japan is to evaluate the pain-killing effect of Chinese herbal medicine containing Aconitine. Two types of Chinese herbal medicine, Keisika-jutsu-buto, and Mao-bushi-saisinto, were evaluated in 10 IC patients resistant to usual medication and it was concluded that they may be effective in relieving pain in IC patients. Further study is needed.

Abstract #685

Lu S, Chang S, Chiu A W.

THE EFFECT OF SODIUM HYALURONATE FOR THE TREATMENT OF INTERSTITIAL CYSTITIS-PRELIMINARY REPORT

The aim of this Chinese study was to evaluate the effect of intravesical instillation of sodium hyaluronate for the management of IC. From April 2008 to February 2009, 22 patients (age from 25 to 74 years old) suffering from IC, received weekly intravesical instillation of sodium hyaluronate for 1 month and then monthly for 5 months. There were no obvious side effects. The effectiveness and safety of sodium hyaluronate as a potential treatment of patients with IC looks promising in this preliminary Chinese study. The response of refractory IC patients to the intravesical administration of sodium hyaluronate was gratifying. It was concluded that intravesical instillation of sodium hyaluronate treatment for IC patients appears safe and is associated with significant improvement in the patient's symptoms.

Abstract #686

Marinkovic S.

AMITRIPTYLINE (A) AND PENTOSAN POLYSULFATE SODIUM (PPS) THERAPY FOR NEW ONSET INTERSTITIAL CYSTITIS / PAINFUL BLADDER SYNDROME (IC / PBS)

This study concerned a retrospective review of patients who between October 2002 and March 2008 were newly diagnosed with IC/PBS through either through hydrodilatation or potassium sensitivity testing. Marinkovic and colleagues conducted pre and post treatment PUF scores and Pelvic Pain (PP) scores were performed. Failure was defined as less than a 50 percent decrease in PUF and PP scores with at least one-year follow-up. It was concluded that combined therapy with amitriptyline and pentosan polysulfate sodium may be an effective method of treating the initial onset of Interstitial Cystitis / Painful Bladder Syndrome with a median duration of therapy approaching 4 years. However, the combined drop-out rate for side effects and non-improvement of symptoms was 41 percent. A prospective, double blind randomized trial for this combined therapy would be useful.

Abstract #687

Shen H, Dai Y, Yuan Z, Wei Q.

CLINICAL STUDY ON EN BLOC CYSTOURETHRECTOMY FOR INTRACTABLE INTERSTITIAL CYSTITIS

A report from China on en bloc cystourethrectomy for intractable interstitial cystitis with a summary of the data of 3 women suffering severe cystalgia and/or urethralgia. Three female patients aged 68, 72, and 58 years old had characteristic symptoms of severe urinary frequency, urgency, suprapubic or perineal pain for 17, 20 and 11 years, respectively. The 3 patients had en bloc cystourethrectomy after excluding psychological factors and getting written informed consent. During the operation the urethra and bladder were completely mobilised through an incision of the anterior vaginal wall and totally resected. Ileocystoplasty was undertaken for urinary diversion. There was no bladder wall thickening; the texture was soft in the resected bladder sample. There was some haemorrhage in the mucosa, and mucosal ulceration was seen in one patient. The bladder biopsies showed inflammatory cell infiltration into the muscular layers. In 2 patients there was mast cell infiltration and chronic inflammation in the urethral mucosa. Under conscious condition the patients reported complete pain relief on the first postoperative day. Shen and colleagues concluded that patients with long duration of disease, small bladder volume after hydrodistension and severe suprapubic or perineal pain have extremely poor quality of life and are refractory to conventional treatments. For such patients, they advocate relieving the pain immediately and completely by carrying out en bloc cystourethrectomy, especially for the old patients. They report that the patients are very satisfied with the curative effect.

Reviewed by Jane Meijlink, October 2009

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