

A REVIEW OF THE JOINT ANNUAL SCIENTIFIC MEETING OF THE INTERNATIONAL CONTINENCE SOCIETY (ICS) AND THE INTERNATIONAL UROGYNECOLOGICAL ASSOCIATION (IUGA)

Metro Toronto Convention Center, Toronto, Canada,
23-27 August 2010

Reviewed by Jane Meijlink

The 40th annual meeting of the International Continence Society (ICS) and the 35th of the International Urogynecological Association (IUGA) was held at the Metro Toronto Convention Center in Toronto, Canada. This was the third time that the ICS and IUGA have held a joint annual scientific meeting, a combined event that now takes place every five years. The total attendance in Toronto of 3525 beat all previous records.

This year, relatively fewer abstracts in the field of chronic pelvic pain and interstitial cystitis/painful bladder syndrome (IC/PBS) were selected for presentation as discussion posters, possibly as a result of this being a joint meeting with IUGA with more emphasis on urogynaecology. A number were presented as non-discussion posters, while many more were listed as “read by title”.

Where to find the full abstracts

All abstracts (1253) can be read in full on the ICS website (www.icsoffice.org) under ICS/IUGA abstract search

(https://www.icsoffice.org/aspnet_membership/membership/Abstracts/AbstractsSearch.aspx?EventID=105).

Abstracts 1-298 can be found in *Neurourology & Urodynamics*, volume 29, issue 6, 2010.

Webcasts of key presentations are available online at TTMed Urology:

www.ttmed.com/urology/icsiuga2010.

IPBF BOOTH

The International Painful Bladder Foundation once again organised a very successful booth during the three exhibition days of this multidisciplinary scientific meeting. We would like to thank the ICS for the complimentary booth. There was a huge demand for information on IC/PBS and many people (doctors from different disciplines, nurses and physiotherapists) stopped to discuss their patients and the problems they have with treatment. They are now increasingly aware that every patient is different and needs an individual approach. Concern was expressed that in the present economic climate cutbacks in healthcare are restricting the time spent by doctors per patient in some countries. This is proving very inadequate for IC/PBS patients who need more time. This time aspect was stressed time and time again by the health professionals. Better use of urological nurses and psychosocial counselling facilities can help with both treatment and support. There is also no doubt that patient support groups can help many fellow patients to cope better.

In the past couple of years, we have seen a tremendous surge in interest by physiotherapists from around the world. There was also a notable increase in interest this year from doctors and all health professionals in Latin American countries, including Argentina and Columbia. The patient support groups in countries such as Mexico, Argentina and Brazil have worked hard to raise awareness in this part of the world and this is clearly now beginning to produce results throughout the region.

As usual we included on the booth leaflets from patient support groups around the world who had sent us these, together with a brand-new leaflet from the new Portuguese support group, Associação de Doentes com Disfunção da Bexiga (AQDDB). It is really surprising how many health professionals treating IC patients do not know that there is an IC support group in their own country!

REVIEW OF RESEARCH PRESENTED AT ICS-IUGA 2010

This review of selected research in the field of IC/PBS presented at ICS-IUGA 2010 also includes some abstracts in related fields that may be of interest to the reader. Also included in this review are selected “read by title” abstracts that were not presented in Toronto but can be found on the ICS website (abstract search section).

Terminology: different abstracts use different terminology, for example: interstitial cystitis, painful bladder syndrome, bladder pain syndrome, hypersensitive bladder syndrome, chronic pelvic pain syndrome or combinations of these. When reviewing the abstracts, we generally use the terminology used by the authors. We have sometimes provided an explanation at the end of the abstract review for clarity.

Presented Abstracts

Session 5

Abstract #23

THE PREVALENCE AND RISK FACTORS FOR OAB IN ADOLESCENT GIRLS

Pakiz M, Blazevic S, But I.

While this study in adolescent girls concerns overactive bladder (OAB), it certainly also gives food for thought regarding interstitial cystitis/painful bladder syndrome.

The aim of this study was to evaluate the prevalence and possible risk factors for OAB among adolescent girls. The data was collected by means of questionnaires among girls attending secondary schools. The girls were asked about the presence or absence of urgency and associated symptoms as well about possible risk factors. The 2758 girls included in the study were aged between 15 to 20 years. Occasional urgency was reported in 911 (33.3%) girls; 86 (3.1 %) girls were identified as having urgency all the time. It was found that every third girl has occasional urgency. However 3.1% girls reported as having daily urgency. Girls with daily urgency had more often associated symptoms, i.e. frequency, nocturia, incomplete bladder emptying, dysuria, lower abdominal pain and UUI than those not reporting urgency. UTI in the past, nocturnal enuresis, regular sexual intercourse and positive family history were associated to daily urgency among adolescent girls. Isolated alcohol consumption was not associated with OAB and this is most likely the reason why the combination of smoking and alcohol drinking associated with OAB is probably on account of the smoking. The only independent predictors for OAB were previous UTI and report of regular alcohol drinking and cigarette smoking in the past three months. However, regular sexual intercourse may attribute to the development of OAB by predisposing to UTI. Adolescent girls should be advised to take all preventive measures for UTI and the physician should carefully diagnose and treat bladder infections.

Session 119

#119

DISTRIBUTION OF THE ENDOCANNABINOID SYSTEM IN THE RAT AND HUMAN BLADDER

Bakali E, Elliott R, Willets J, Konje J, Tincello D.

Cannabis has been shown to have an effect on urge incontinence probably mediated through endocannabinoid system-dependent mechanisms. Although cannabinoid expression has been identified in the human and rat bladder, the results are inconsistent and the main components of the endocannabinoid system have yet to be reported. This study provides qualitative immunohistochemical and quantitative molecular data for the expression of the endocannabinoid

system (receptors and modulating enzymes). The authors believe that their data confirm the presence of the endocannabinoid system in the human bladder. The recent completion of a Cannabinoids in Multiple Sclerosis study showed a significant reduction in urinary incontinence episodes in the cannabis group when compared to placebo. In this study, for the first time, all the main components of the endocannabinoid system (receptors and enzymes) have been localised in the rat and human bladder. Cannabinoid and TRPV1 receptors and the modulating enzymes were expressed. CB2 expression in the Wistar rat bladder was different to that previously described in other rat species.

Session 18

#165

CAFFEINE INTAKE AND RISK OF STRESS, URGENCY, AND MIXED URINARY INCONTINENCE

Jura Y, Townsend M, Grodstein F.

Caffeine is consumed on a regular basis by more than 85% of adults in the USA. It is believed that caffeine may promote urinary incontinence through its diuretic effect or by stimulating involuntary muscle contractions. The aim of this prospective study was to investigate the relationship between caffeine intake and incident urinary incontinence (including stress, urgency and mixed) in 65,176 women 37 to 79 years old enrolled in the Nurses' Health Study and Nurses' Health Study II, USA, using dietary data reported on validated food frequency questionnaires administered every 4 years between 1980 and 2000 in the Nurses' Health Study and between 1989 and 2001 in the Nurses' Health Study II. The food frequency questionnaires distinguish between caffeinated and caffeine-free coffee and soda. Modest increased risks of urgency and mixed urinary incontinence were observed in women with higher daily caffeine intakes. This risk increased with the amount of caffeine consumed. These findings are consistent with caffeine's known ability to stimulate smooth muscle contractions by mobilizing intracellular calcium stores. The findings suggest that higher daily caffeine intake is associated with modest increased risks for urgency and mixed urinary incontinence in women. 25% of incident frequency urgency urinary incontinence may be attributable to caffeine consumption among women with high caffeine intake. If this association is confirmed in future studies, self-monitoring and counselling to reduce caffeine intake may be cost-effective methods to prevent some of the burden of urinary incontinence in women.

Session 20

#195

OUTCOME OF SACRAL NEUROMODULATION IN PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS ASSOCIATED WITH IRRITABLE BOWEL SYNDROME

Ghazwani Y, Elkelini M, Hassouna M.

While PBS/IC is a chronic bladder condition characterized by urinary frequency, urgency, nocturia, and suprapubic pain related to bladder filling, irritable bowel syndrome (IBS) is a functional gastrointestinal disorder characterized by abdominal pain and altered bowel habits in the absence of specific and unique organic pathology. Association between PBS/IC and IBS is around 25-50% of cases. Since there has been no study on the impact of IBS on the outcome of PBS/IC treatment, this study was conducted to explore this effect. 79 female patients diagnosed with PBS/IC and non-responsive to oral and intravesical therapy were referred to this Canadian centre for sacral neuromodulation treatment. 25 patients (32%), were confirmed to have IBS associated with their PBS/IC disease and they are on treatment and follow-up for that in a GI clinic. 45 patients (57%) had 50% or more improvement in their voiding symptoms and pain score during their PNE stage, 43 patients underwent permanent implantation, 2 patients declined it. 34 patients (43%) did not improve during PNE and were not candidates for permanent implantation. This study suggests that simultaneous presence of PBS/IC and IBS forms a complex syndrome that affects pelvic organs, manifests itself predominantly as pain, and is associated with urinary symptoms or changes in bowel habits. According to the authors, failure of SNM after long term follow-up is a clue for the possibility of progressive pathology, especially if pain is still the main symptom, though its location may have

changed. Based on their analysis, it was not clear to the authors if bilateral permanent sacral neuromodulation could offer more control of pain in this subset of patients. They concluded that severity of pre-implantation pain and its association with IBS are factors affecting the long-term success of sacral neuromodulation in PBS/IC.

Session 25

#231

INCREASED APOPTOSIS AND DECREASED JUNCTION PROTEIN EXPRESSION OF UROTHELIUM DUE TO SUBUROTHELIAL INFLAMMATION IN PATIENTS WITH INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Hsieh J H, Chen C Y, Kuo H C.

Recent findings have proposed several pathophysiological mechanisms for IC/PBS including epithelial dysfunction, activation of mast cells, neurogenic inflammation, autoimmunity and occult infection. However, the triggering factor is still unclear. One of the most common findings in IC/PBS patients is denudation or thinning of the bladder epithelium, suggesting an altered regulation of urothelial homeostasis. This study investigated the relationship between suburothelial inflammation and urothelial dysfunction in IC/PBS. The results of this study revealed that chronic inflammation in the suburothelium is consistently associated with increased urothelial apoptosis, decreased urothelial cell proliferation and significantly reduced E-cadherin in the IC/PBS patients. The severity of urothelial dysfunction as shown by reduced E-cadherin expression is significantly correlated with the clinical pain score in patients with IC/PBS. This result suggests a link between suburothelial inflammation, increased urothelial cell apoptosis, decrease junction protein expression and clinical symptoms in IC/PBS bladder. This study suggested that urothelial homeostasis in IC/PBS bladders was impaired and the junctions between urothelial cells in IC/PBS bladder were abnormal. This was associated with the patient's self-reported pain scales. These results also indicated that the apoptosis and growth arrest of the urothelium may be due to the up-regulation of the inflammatory signal. According to the authors, these results may explain the pathologic mechanism of IC/PBS and be helpful for clinical diagnosis and treatment in the future. It was concluded that the growth rate and junctions between urothelial cells in IC/PBS bladder tissue of are abnormal and that highly activated mast cells exist in urothelium and suburothelium in IC/PBS. These results suggest abnormal urothelial function in IC/PBS is associated with chronic inflammation of the bladder and causes clinical symptoms as well as bladder pathologies.

Note: these were not patients with Hunner's lesion.

#236

EFFECT OF HERPES SIMPLEX VIRUS (HSV) VECTOR-MEDIATED INTERLEUKIN-4 (IL-4) GENE THERAPY ON BLADDER OVERACTIVITY AND NOCICEPTION

Oguchi T, Yokoyama H, Nishizawa O, Goins W F, Goss J R, Glorioso J C, Yoshimura N.

Although the etiology of BPS/IC is not fully understood, bladder inflammation associated with production of inflammatory cytokines or chemokines has been proposed as potential pathophysiology of the disease. In this study, Oguchi and colleagues examined the effects of localized and targeted gene therapy using replication-deficient HSV vectors expressing murine IL-4 (S4IL4), on bladder overactivity and pain behaviour induced by intravesical application of resiniferatoxin (RTx) in rats. Their results indicate the IL4 therapy, which can target bladder afferent pathways and avoid systemic side effects, could be a potential treatment for urinary frequency and bladder pain in patients with BPS/IC.

#237

INTRAVESICAL BOTULINUM TOXIN A INJECTIONS IN THE TREATMENT OF PAINFUL BLADDER SYNDROME / INTERSTITIAL CYSTITIS: A SYSTEMATIC REVIEW

Tirumuru S, Al Kurdi D, Latthe P.

The aim of this systematic review was to assess the effectiveness and adverse effects of intravesical BTX-A in PBS/IC since there has been conflicting evidence regarding this treatment's effectiveness. Randomised controlled trials and prospective studies of relevance were identified, assessed for inclusion, then analyzed by two independent reviewers. Ten eligible trials with a total of 260 participants were included. The studies included patients between the ages of 18 to 83 years. The included studies were uniformly small with sample sizes ranging from 10 to 67. Five studies used NIDDK criteria for diagnosing IC, one study used clinical symptoms and presence of sterile urine to diagnose IC, whereas another study used clinical symptoms and cystoscopy to diagnose IC. It was found that Botox injection into the bladder seems to be beneficial for improvement in symptoms in the short term but can be associated with voiding difficulties. The data are heterogenous in terms of definition of the condition, method of injection, definition of cure/improvement and hence this treatment should ideally be used in this condition in research setting. The limited evidence suggests that there is trend towards short term benefit with intravesical BTX-A injections in refractory IC. However the observational nature of most studies in the review precludes strong conclusions, Consequently the authors advise that this should not be offered as a treatment of IC in routine clinical practice without research context until further evidence is available from methodologically sound and sufficiently powered RCTs with adequate follow up.

#239

PAINFUL BLADDER SYNDROME: DO THE DIFFERENT HISTOPATHOLOGICAL FEATURES CORRELATE?

Van Dyck J, Geurts N, Wyndaele J J.

This study evaluates correlation between the histological findings in bladder biopsies in patients with PBS, handled following ESSIC recommendations. It also evaluates the importance of the histological findings in PBS compared to the cystoscopic findings. All patients in this study consulted the authors' third line referral centre in Antwerp with symptoms of painful bladder syndrome present for at least six months. Other confusable diseases were ruled out by a thorough history, clinical examination, urinalysis and imaging. 15 men and 93 women were included (average age 53, range 28-82 years). Cystoscopy with hydrodistension was carried out in all patients. During this procedure, at least three deep biopsies were taken, including detrusor muscle, from those areas with the most apparent bladder wall lesions. The biopsies were examined by the same pathologist. The results show significant correlations between some histological features: urothelial damage, inflammatory infiltrate and detrusor mastocytosis. No correlations were found between cystoscopic and histological findings. These results can be related to those previously suggested by other authors. According to the authors, possible drawbacks in this study are that bladder wall fibrosis is not assessed in a standard way in their biopsies, while the histopathological grading of inflammatory infiltrate in the biopsies is arbitrary, consequently not reflecting an absolute count of the different inflammatory cell types. They believe that results show that painful bladder syndrome comprises a group of clinical entities showing different cystoscopic and histological features. They are of the opinion that both cystoscopy and bladder histology are essential keystones in the diagnostic work-up of painful bladder syndrome. They conclude that the exact etiology of the painful bladder syndrome remains elusive. While correlations were found between the presence of urothelial damage and the presence of inflammatory infiltrate, as well as between the presence of urothelial damage and detrusor mastocytosis, there were no other apparent correlations between the different cystoscopic and histological features as such. According to the authors, these findings emphasise that both cystoscopic and bladder biopsies are mandatory tools in the diagnostic workup for painful bladder syndrome.

NON-DISCUSSION POSTERS

#359

MAST CELLS INFILTRATION IS INCREASED IN THE BLADDER TISSUE OF PATIENTS WITH OVERACTIVE BLADDER SYMPTOMS AND INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Liu H T, Shie J H, Chancellor M, Lin H, Wang Y S, Shiao M S, Kuo H C.

Recent investigations have linked overactive bladder syndrome (OAB) with chronic inflammation. Urinary nerve growth factor and cytokines and serum C-reactive protein have been demonstrated to increase in patients with OAB and IC/PBS. Previous studies have revealed that mast cells are multifunctional effectors of the immune system, and have been reported to play an important role in the pathophysiology of IC/PBS. Because there are similarities in the inflammatory protein expression between OAB and IC/PBS, Liu and colleagues hypothesized that inflammatory reactions might also exist in the bladder tissue of OAB. This study with 23 patients with OAB, 13 patients with IC/PBS, and 12 patients with stress urinary incontinence but without urgency frequency symptoms as controls, was designed to measure the infiltration of mast cells in the bladder tissue of patients with OAB and IC/PBS. In this study, patients with OAB and IC/PBS were all show to have a significantly higher number of mast cells in the bladder wall compared with controls. Since patients with OAB and IC/PBS all had elevated mast cell activities compared with that of the controls in this study, it is possible that a common pathway of chronic inflammation exists in the pathogenesis between these two diseases. The authors are of the opinion that the results of this study suggest that both IC/PBS and OAB are associated with chronic inflammation and that the role of bladder tissue mast cells in the pathogenesis and pathophysiology of OAB and IC/PBS should be further investigated.

#561

GENE EXPRESSION ANALYSIS OF URINE SEDIMENT: A NON-INVASIVE METHOD TO SAMPLE THE UROTHELIUM IN PAINFUL BLADDER/BLADDER PAIN SYNDROME?

Korreck G, Blalock E, Stromberg A, Erickson D.

Considerable research has focused on bladder biopsies from patients with painful bladder/bladder pain syndrome (PBS). Bladder biopsies directly show the pathology and could provide useful biomarkers, but the disadvantages are invasiveness, risk, expense and the need for anaesthesia. Since urine sediment contains shed urothelial cells, it may provide a non-invasive way to sample the urothelium. The main barrier to date has been the small number of cells present in the sediment. Recent technologic advances allow microarray, with very small amounts of ribonucleic acid (RNA). In this study the authors extracted RNA from urine sediments and performed comprehensive exon arrays. The aim of this study was to identify genes that would be good candidates for development as noninvasive biomarkers. The authors hypothesized that (1) expression of pro-inflammatory genes would be higher in PBS-HL (painful bladder syndrome with Hunner's Lesion) compared to controls and to PBS-nonHL (painful bladder syndrome without Hunner's Lesion), and that (2) expression of urothelial differentiation genes (e.g. uroplakins, tight junction proteins) would be higher in controls, compared to PBS-nonHL. They concluded that gene expression analysis of urine sediment is feasible. They found that results were similar for PBS-nonHL versus. controls. However, this method is unlikely to provide a noninvasive biomarker for PBS-nonHL. In contrast, PBS-HL patients had increased expression of pro-inflammatory genes, compared to controls and to PBS-nonHL. If confirmed with larger numbers of patients and controls, gene expression analyses may be developed to provide noninvasive biomarkers for PBS-HL.

Clarification note on terminology used here:

PBS-HL = painful bladder syndrome with Hunner's lesion (ulcer)

PBS-nonHL = painful bladder syndrome without Hunner's lesion (ulcer)

#563

SUSTAINED RELIEF OF INTERSTITIAL CYSTITIS SYMPTOMS BY COMBINED INTRAVESICAL INSTILLATION OF HEPARIN AND LIDOCAINE BICARBONATE

Nomiya A, Nisimatsu H, Suzuki M, Fujimura T, Fukuhara H, Enomoto Y, Ishikawa A, Kume H, Homma Y.

Recently, several reports have focused on the effects of combined instillation of heparin and alkalized lidocaine on IC symptoms. However, these studies tested a single instillation or at the most 7 times instillation with short term follow up of up to 3 weeks. This study from Tokyo examined the efficacy of multiple intravesical instillations of heparin and alkalized lidocaine with observation

extended to 6 months after the last therapy. Patients diagnosed with IC at the authors' institution were enrolled in the study. The diagnosis was based on the guideline for IC and hypersensitive bladder syndrome [3], 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 patients were also compatible with NIDDK consensus inclusion and exclusion criteria for clinical trials. Symptom severity was assessed by O'Leary/Sant's Interstitial Cystitis symptom index/problem index (OSSI/OSPI). Those with OSSI/OSPI higher than 6 points despite various therapies received intravesical instillation of 20,000U heparin, 5 ml of 4% lidocaine, and 25 ml of 7% sodium bicarbonate every 1 or 2 weeks for 12 consecutive times. The solution was prepared every time immediately before instillation in a sterilized condition. The patients were instructed to retain the solution for at least 30 minutes. From June 2005 to January 2010, 28 patients (25 women and 3 men) with the average age of 64.4 years (range 35 to 79) were treated with the instillation therapy. All patients had received hydrodistension at least once prior to instillation. They had taken tricyclic antidepressant, NSAIDs or anti-allergic agents. All the patients completed the treatment protocol (Table 1) and 11 patients finished 6 month follow up. During the therapy all the measures showed continuous improvement, and all the patients reported improvement compared with the pre-therapy condition at the last instillation. No significant adverse events requiring hospitalization or additional therapy were encountered. Four patients developed gross hematuria, which subsided spontaneously. Twelve times combined instillation of heparin and alkalized lidocaine gradually reduced IC-related symptoms. Unlike former studies with short-term instillation, the authors demonstrated sustained effect by repeated instillations up to 6 months in half the patients, although the effect progressively deteriorated with time. It was concluded that multiple sessions of combined heparin and alkalized lidocaine instillation lead to IC symptom relief in most cases and sustained relief in about half the patients. Further clinical trials are required to ensure the efficacy and safety of the therapy.

#564

DOES URINARY NGF LEVEL PREDICT SYMPTOMATIC SEVERITY IN PATIENTS WITH INTERSTITIAL CYSTITIS?

Tsurumaki Y, Nomiya A, Nishimatsu H, Enomoto Y, Fujimura T, Fukuhara H, Suzuki M, Kume H, Homma Y.

Nerve growth factor (NGF) is currently believed to play a critical role in the development and maintenance of the peripheral nervous system. It has attracted attention as a biomarker of overactive bladder (OAB); urinary NGF level is known to increase in OAB and be suppressed after efficacious treatment for OAB. This study from Tokyo investigated urinary NGF levels in interstitial cystitis (IC) to explore the possibility of NGF as an objective marker of IC. NGF levels in urine specimens derived from 35 patients with IC (3 men and 32 women, median age of 67 years) were measured. The diagnosis of IC was made based on the guideline for IC and hypersensitive bladder syndrome, 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 patients were also compatible with National Institute of Diabetes and Digestive Kidney Diseases (NIDDK) consensus inclusion and exclusion criteria for clinical trials. Hunner's ulcers and glomerulations on hydrodistension were found in 23 (65.7%) and 33 (94.3%), respectively. The authors found that urinary NGF level was associated with symptom severity of nocturia, urgency incontinence and bladder pain as well as quality of life impairment in this study population. They concluded that urine NGF level could be used as a biomarker of diagnosis and outcome evaluation in IC.

Clarification note on terminology used here:

Hypersensitive bladder syndrome (HBS) is the umbrella term used by Japan and the East Asian countries instead of PBS or BPS. See Japanese and East Asian guidelines.

#565

LONG-TERM TOLERABILITY AND EFFICACY OF PENTOSAN POLYSULPHATE SODIUM IN THE TREATMENT OF PATIENTS WITH BLADDER PAIN SYNDROME (BPS).

Al-Zahrani A, Gajewski J.

The primary objective of this single institution, retrospective study from Halifax, Canada (1994-2008) was to evaluate the patient's compliance and long-term efficacy and tolerability of Pentosan Polysulphate Sodium (PPS) in the treatment of patients with Bladder Pain Syndrome (BPS). The secondary objective was to find the predictors of the long-term outcome. 271 patients were eligible for the study (90% female). 147 patients (54.2%) showed more than 50% improvement in their bother symptoms on the GRA. There was mild improvement in an additional 55 patients (20.2%). Ninety three patients (34.3%) decided to stop taking the medication for various reasons. The most common reason to stop the medication was poor response in 45 patients (16.6%). Others included side effects in 30 patients (11.1%), resolution of the BPS symptoms in 11 patients (4.1%) and financial reasons in 6 patients (2.2%). The side effects included gastrointestinal disorders in 23 patients (8.5%), headache in 6 patients (2.2%), hair loss in 3 patients (1.1%), hypersensitivity in 3 patients (1.1%), and increase in liver enzyme in 2 patients (0.7%). The authors concluded that PPS is an effective oral therapy to control the symptoms of the BPS with good long-term efficacy and tolerability. More than 65% of patients continued to take the medication. Both detrusor overactivity and positive cough leak may predict a poor outcome.

#566

EFFECTS OF SACRAL ACUPUNCTURE IN A RAT CYSTITIS MODEL INDUCED BY INTRAVESICAL HYDROCHLORIC ACID

Hino K, Honjo H, Nakao M, Kitakoji H.

Acupuncture is considered to be a neuromodulatory therapy. The authors have already reported the effects of sacral acupuncture on overactive bladder, painful bladder syndrome and chronic pelvic pain syndrome. However, the effects of sacral acupuncture for painful bladder syndrome due to bladder inflammation are still unclear. The aim of this rat study was to investigate the possible mechanisms by which sacral acupuncture improves the symptoms of painful bladder syndrome using rats with bladder inflammation induced by hydrochloric acid (HCl). The authors found that sacral acupuncture prolonged the inter-contraction interval in the inflammation model rats induced by HCl and concluded that there is a possible mechanism on bladder inhibition acting on nociceptive afferents due to bladder inflammation.

#567

INTERSTITIAL CYSTITIS PATIENTS' USE AND RATING OF COMPLEMENTARY AND ALTERNATIVE MEDICINE THERAPIES

Hoffmann A, Allen P, Gordon B, Mehall N, Salin L, Whitmore K.

The aim of this interesting study carried out by the Interstitial Cystitis Association (ICA) and the Pelvic and Sexual Health Institute in the USA, was to determine the use and perceived efficacy of complementary and alternative (CAM) therapies among IC patients. In April 2009, the ICA carried out a survey of patients concerning their use of CAM therapies for IC. Information collected included whether or not respondents had received a diagnosis of IC, its duration, whether they had tried any CAM therapies and if so how many, and who had recommended these therapies. There was a huge response (2,101) from the ICA email list, clearly indicating a high level of interest in CAM. Responses from the 1,982 patients who confirmed receiving a diagnosis, were used for this analysis. Respondents rated the effectiveness of 49 therapies known to be used by patients in eight categories: diet, acupuncture, movement therapies, mind-body techniques, physical manipulation, herbal supplements and topicals, nutritional supplements, and lifestyle changes. Ratings for control of IC symptoms on a five-point scale were: completely controlled, pretty well controlled, somewhat controlled, not at all, or made symptoms worse. An analysis was undertaken of the responses of those reporting an IC diagnosis.

The therapies rated as most helpful by patients were dietary management and complementary techniques that are well accepted non-drug adjuncts to pain management. The authors believe that this large data pool can help clinicians counsel IC patients about CAM and direct future research initiatives, such as the selection of a specific treatment for randomized placebo-controlled trials, or studies on the impact of specific CAM on IC patients' quality of life.

Clarification note on terminology used here:

CAM = Complementary and Alternative

#568

HONEY INHIBITS MAST CELL DEGRANULATION: IMPLICATION FOR MANAGEMENT OF CYSTITIS

Lwaleed B, Kambara T, Elmutairi A, Murray T, Voegeli D, Fader M, Cooper A, Birch B.

This fascinating study from the United Kingdom compares inhibition of mast cell degranulation between panels of honey preparations and conventional topical treatments used against painful bladder syndrome/ interstitial cystitis (PBS/IC). The interesting hypothesis behind these experiments is that the anti-inflammatory action of honey is different from that of the conventional agents, offering the possibility of alternative or combination treatments for PBS/IC. The results found demonstrate that honey can have a strong inhibitory effect on degranulation of the LAD-2 cell line, as evidenced by histamine release. Eucalyptus-based honey appeared particularly effective in this model. None of the panel of conventional intravesical agents was as effective and most were completely inactive in this model. Given that PBS/IC is an essentially inflammatory process and that mastocytosis in the bladder wall has been used to diagnose the condition, it is reasonable to suppose that honey preparations might be a useful additional tool in the clinical management of PBS/IC. In-vitro studies from this group exposing rodent urothelium to honey dilutions have provided evidence that honey might be well tolerated as an intravesical agent and even provide some protection against chemical (acid) damage. The authors concluded that honey has strong potential as an intravesical agent for the treatment of PBS/IC. Its activity against mast cell degranulation is not represented in current treatments and promises an additive effect in combination therapy. In-vivo studies of intravesical tolerability in intact rodents and humans (i.e. phase-I trial), including bladders with compromised urothelial linings, are warranted.

#569

MIR-199A-5P MAY BE CAUSING A DECREASE OF UROTHELIAL INTEGRITY IN CHRONIC BLADDER PAIN SYNDROME AND UROTHELIAL CELL CULTURE

Monastyrskaya K, Sanchez Freire V, Kessler T M, Burkhard F C.

Urothelial leakage is believed to be one of the factors involved in bladder pain syndrome (BPS). In previous studies, while performing a microRNA screening, the authors from Switzerland identified 28 microRNAs significantly up-regulated in BPS patients. Six of the up-regulated microRNAs are predicted to have the tight junctions (TJ) proteins as target genes. The aim of this study was to determine their role in epithelial integrity and tightness. The authors concluded from their results that MiRNAs appear to play a role in the development of BPS in humans.

#570

DOES THE SUPPLEMENTATION WITH HYDROGEN-RICH WATER IMPROVE THE PROBLEMS OF PAIN IN PATIENTS WITH INTERSTITIAL CYSTITIS?

Matsumoto S, Ueda T, Kakizaki H.

In this prospective, randomized, double-blind, placebo-controlled study from Japan, the authors hypothesized that oxidative stress could be one of the causes of interstitial cystitis (IC), because the disturbance of bladder blood flow has been suggested in IC. However there was no clinical data to prove the efficacy of hydrogen rich water in IC. The aim of this study was therefore to investigate the efficacy of hydrogen rich water for the treatment of IC patients. A total of 30 participants (29 female, 1 male) took part in the study and were randomized by 2:1 ratio to receive hydrogen-rich water 3 packs (1 pack 200 ml) per day (20 patients) versus placebo water 3 packs (1 pack 200 ml) per day (10

patients) for 2 months. Three female patients in the hydrogen-rich water group withdrew from the study. Compared with placebo water, hydrogen-rich water did not show a significant difference in the results of ICSI, ICPI, and VAS. However, in 3 cases, hydrogen-rich water was very effective in improving VAS. While there did not appear to be a significant effect of hydrogen-rich water on IC symptoms, the number of patients in this study was small. Further clinical studies with more patients are warranted before any definitive conclusion can be reached about the efficacy of hydrogen-rich water in the treatment of IC. Since it was very effective in some patients, hydrogen-rich water supplementation might be an optional treatment for IC.

#571

MULTI SYSTEM COMPLAINTS IN MEN WITH INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Stewart A, Klein F, White W, Doggweiler R.

Interstitial Cystitis/Painful Bladder Syndrome (IC/PBS) is less commonly diagnosed in men than in women. Men with pelvic pain and lower urinary tract symptoms who are ultimately found to have IC/PBS frequently demonstrate a common constellation of non-genitourinary symptoms. The purpose of this retrospective analysis study from a single institution was to review the signs, symptoms, and associated disorders of men with chronic pelvic pain and voiding dysfunction in an effort to better characterize this group of patients. From January 2005 to July 2009, 147 men underwent cystoscopy with hydrodistension under general anaesthesia for clinical symptoms of IC/PBS. A total of 82 men demonstrated NIDDK criteria for IC/PBS. In addition to their chronic pelvic pain, 81% of these men had common associated disorders including chronic gastrointestinal complaints (41%), anxiety/depression (37%), chronic back pain (34%), chronic joint pain/neuropathy (23%), and/or migraines (9%). In addition, 33% were being treated with narcotics and/or benzodiazepines. This study shows that men with objective evidence of IC/PBS frequently exhibit a constellation of symptoms typified by non-genitourinary complaints that adversely affect their quality of life. These often parallel those of female patients with IC/PBS. The authors concluded that these clinical findings indicate the need for a multi-disciplinary approach for men with IC/PBS.

READ BY TITLE

#916

PREVALENCE OF URINARY SYMPTOMS IN WOMEN WITH CHRONIC PELVIC PAIN

Bispo A P, Ploger C, Loureiro A, Schor E, Sato H, Sartori M G F, Girão M J B C, Schor E.

This retrospective study of 600 medical records (9 excluded) from Brazil assessed the prevalence of urinary symptoms in women with chronic pelvic pain. The variables analyzed were: age and possible urinary tract symptoms such as urinary incontinence, urgency incontinence, urgency and nocturia. The average age of the 591 medical records was 39 years. 49% did not have urinary symptoms, 12.67% had stress urinary incontinence, 11.17% had urgency incontinence, urgency 9.83% and 9.83% had nocturia. Voiding symptoms such as urgency, incontinence, incomplete voiding occur frequently in chronic pelvic pain without obvious cause. These symptoms, suggest the existence of a painful bladder condition in chronic pelvic pain. A (functional) disturbance at the level of the central nervous system, with interaction between sensory messages, arriving from different structures within the pelvis, may be the cause of this condition. It was concluded that stress urinary incontinence was the most common complaint found in patients with chronic pelvic pain.

#918

QUESTIONNAIRE FOR INSOMNIA MAY PREVENT INAPPROPRIATE TREATMENT FOR NOCTURIA.

Nagaoka A, Kawazoe H, Naito S, Kato T, Tomita Y.

There is currently growing interest in nocturia and its causes. In this study from Japan, Nagaoka and colleagues explain that while insomnia may result in nocturia, nocturia may cause insomnia. Since insomnia causes nocturia, and vice versa, the patients with insomnia and/or nocturia may be inappropriately treated. The purpose of this study with 2388 patients was to clarify the prevalence of

insomnia and nocturia, and their correlation in urological clinics regardless of the purpose of the visit, and to design appropriate treatment strategy. A survey was carried out in the form of three types of questionnaire: questionnaire for Athens Insomnia Scale (AIS), IPSS and ICIQ-SF for patients. It was concluded that the patients complaining of nocturia might have insomnia as a primary problem, which may be revealed by careful interviewing and/or a questionnaire. Treatment of insomnia for the subgroup of patients with nocturia due to insomnia may prevent the unnecessary prescription of antimuscarinic drugs.

#961

A PILOT STUDY OF URINARY SYMPTOMS IN EX-KETAMINE USERS

Cheung R Y K, Chan S S, Lee J H S, Pang A W L.

Bearing in mind that the long term effect in ex-ketamine users is unclear, this study from Hong Kong aims to look at the effect of ketamine on the urinary symptoms of ex-users. The associated urinary symptoms in active ketamine use have been demonstrated in previous case reports. This study demonstrated the persistent urinary symptoms even in ex-users who had stopped using ketamine for up to 12 months. There was high prevalence of urinary symptoms, including urinary frequency, nocturia, urgency, urge incontinence and stress incontinence. Further studies are needed to establish the relationship between the duration and dosage of ketamine use and the persistent symptoms.

#981

IS END STAGE BLADDER THE END STAGE OF INTERSTITIAL CYSTITIS?

Blaivas J, Weiss J, Rutman M.

Persistent small capacity, markedly inflamed, friable, painful bladders that fail to respond to treatment have been termed end stage bladder (ESB). The aim of this interesting study was to 1) determine whether patients with EBS evolved from those with PBS/IC, 2) determine the underlying causes and 3) assess treatment outcomes. This study was a retrospective observational study of consecutive patients with a diagnosis of ESB at a single urologic practice involving a search of an electronic medical record data base for patients with a diagnosis ESB from 1993 to 2009. Inclusion criteria for ESB included all of the following: 1) symptoms of painful bladder syndrome refractory to treatment for at least 6 months, 2) marked bladder inflammation on at least two consecutive cystoscopies at >3 month intervals, 3) bladder biopsy negative for malignancy. Patients were excluded if they had prior pelvic radiation. 28 patients were included (17 females, 8 males). The time from initial presentation to the development of marked bladder inflammation ranged from 3 – 12 months in 19 patients (76%), was gradually progressive over years in 2 (8%) and unknown in 4 (16%). The results of the study indicated that the majority of patients with ESB (76%) do not progress from PBS/IC, but have a fairly acute onset over the course of 3 months to one year. Although most appear to be idiopathic, bladder cancer and colovesical fistula may present as ESB. Empiric treatments are rarely effective. Radical surgical treatment offers the best chance for success. It was therefore concluded that end stage bladder is not the end stage of painful bladder syndrome/interstitial cystitis but results from the end stage of a variety of underlying conditions most of which can be identified as related to “granulomatous cystitis”. Most such patients will not respond to conservative therapy, but will most likely need to undergo cystectomy and urinary diversion.

Clarification note on terminology used here:

ESB = End Stage Bladder

#982

NON-NEURONAL ADENOSINE TRIPHOSPHATE (ATP) RELEASE AND IMMUNOHISTOCHEMICAL EXAMINATION OF BLADDER IN HYDROCHLORIC ACID (HCL)-INDUCED CYSTITIS RATS

Masunaga K, Yoshida M, Nagata T, Tsukui W, Homma Y, Kasuya Y.

According to the authors, it has recently been suggested that adenosine triphosphate (ATP) released from the bladder mucosa may be related to the pathophysiology of IC. Furthermore, it has been reported that the histological characteristics of the bladder induced by hydrochloric acid (HCl)

instillation is similar to that of clinical IC. The purpose of this study was to investigate bladder function, non-neuronal ATP release from bladder mucosa, and immunohistological changes in the bladder in cystitis induced in rats by HCl. The results suggested that the increases of non-neuronal ATP release, up-regulation of P2X3, and TRPV4 receptors may contribute to the urinary frequency and non-voiding contractions in HCl-induced cystitis in rats. Histological findings also showed that HCl instillation led to similar conditions to IC. In the authors' opinion, these findings may be useful to clarify the pathophysiology of IC.

#983

EARLY CYSTOSCOPY IN MEN FOR THE EVALUATION OF INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Stewart A, Doggweiler R, White W, Klein F.

IC/PBS has a significant impact on the quality of life in both women and men, but it is currently suggested that it may be under-diagnosed in men. Men with recurrent or chronic refractory pelvic pain and lower urinary tract symptoms are often diagnosed as having chronic prostatitis or chronic pelvic pain and treated as such. This study presents the authors' experience with male IC/PBS in an observational group of patients. The purpose of the study was to review the time to diagnosis, presenting signs and symptoms, and prior diagnoses in this patient group. From January 2005 to July 2009 147 men underwent cystoscopic hydrodistension under general anaesthesia. A total of 82 (56%) men were diagnosed with IC/PBS on the basis of NIDDK criteria. The average time to diagnosis was 2.5 years (varying from 3 months to 14 years).

The patients' symptoms were:

*urinary frequency 84% (69),
dysuria, 74% (61),
suprapubic/bladder pain 63% (52),
urgency 61% (50),
testicular/penile pain, 51% (42),
bothersome nocturia 49% (40),
pelvic floor pain 41% (50),
ejaculatory pain 18% (15).*

The patients' earlier diagnoses included:

*prostatitis 48% (39),
chronic pelvic pain syndrome 26% (21),
benign prostatic hyperplasia 24% (20),
urinary tract infections 41% (34),
epididymoorchitis 12% (10),
overactive bladder 6% (5).*

27 (69%) of the men with a prior diagnosis of prostatitis had negative semen cultures.

These revelations support the concept that many men ultimately diagnosed with IC/PBS may present with symptoms long before they are diagnosed as such. This useful study not only provides an estimate of the incidence of IC/PBS in the male population, but also characterizes the common presenting symptoms of men with IC/PBS. The authors therefore conclude that IC/PBS is underdiagnosed in men. They suggest that men with a history of recurrent nonbacterial prostatitis and men with prostatic pain or chronic pelvic pain, specifically suprapubic pain, penile, and/or testicular pain, should be considered for early cystoscopy with hydrodistension for evaluation of IC/PBS so that the patient can receive suitable treatment.

#984

BLADDER OUTLET OBSTRUCTION IN PATIENTS WITH INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Wehbe S, Hoffmann A, Fariello J, Bhattacharya A, Dhingra C, McKinney T, Whitmore K.

The purpose of this study was to evaluate the relationship between the severity of IC/PBS and objective data from urodynamic testing (UDT) and cystoscopy. This was a retrospective chart review of IC symptoms, UDT results, and bladder biopsy findings conducted with 41 patients with IC/PBS who underwent cystoscopy and bladder overdistension. It was found that patients with high scores on ICPI and ICSI questionnaires have a clinically significant correlation with findings of bladder outlet obstruction (BOO) on urodynamics in patients with IC/PBS. It was concluded that urodynamic findings in patients with IC/PBS correlate with symptom severity. Patients with severe IC/PBS appear to have significant functional BOO. Clinical findings on urodynamics might provide additional information to confirm the diagnosis of IC/PBS.

#985

PHENOTYPING OF PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS BY PAIN SEVERITY,
Mayer R, Rothschild J.

Bearing in mind that PBS/IC patients present with a variety of symptoms, this study sought to determine whether characterizing patients on the basis of pain severity might allow a new framework to generate and test hypotheses regarding aetiology and therapy. The authors initially concentrated on 186 patients with a clinical diagnosis of PBS/IC and severe pain. They found that pain severity did not appear to correlate by age of patient, duration of symptoms, rapidity of onset, dietary food sensitivities, or history of irritable bowel syndrome (IBS), anxiety, migraine, or exacerbation of symptoms during the menstrual cycle. However, patients with severe pain did appear to differ in having an increased frequency of history of chronic constipation, endometriosis, dysmenorrhoea, asthma, perceived social stress and history of abuse. Patients who felt that their IC symptoms started without any specific cause tended to have lower pain scores and milder severity than those who attributed the start of their symptoms to acute bacterial cystitis or pelvic surgery/trauma. Patients with severe pain were less likely to report having benefit from prior hydrodistension, reported a greater impact of their IC on their ability to work and more problems with voiding (as opposed to storage) than those with milder pain scores. The authors note that the increased history of noxious stimuli (UTI, pelvic surgery, dysmenorrhoea, endometriosis) in patients with severe pain is consistent with concepts of crosstalk and central sensitization. They are of the opinion that it is possible that the severity of the initial insult carries forward in the degree of chronic pain severity by contributing to local/regional stimulation of pain pathways and may be exacerbated by coping problems related to stress/abuse which might alter the central processing of pain. Larger prospective longitudinal studies with multivariate analysis are needed in the future. They conclude that further study of pain severity may be worthwhile in the phenotyping of PBS/IC patients.

#986

THE EFFECT OF THE COMBINATION THERAPY FOR PATIENTS WITH ULCERATIVE INTERSTITIAL CYSTITIS
Kim Y, Lee K, Kim J.

Since no prospective study concerning the combination therapy (transurethral resection or fulguration of lesions and hydrodistension) in interstitial cystitis has been reported so far, the purpose of this study was to evaluate the effect of transurethral resection and fulguration of lesions and hydrodistension in the Hunner's lesion type interstitial cystitis in 46 consecutive women with Hunner's lesion type interstitial cystitis visiting the urology department between January 2007 and December 2009. They found that the combination therapy (transurethral resection or fulguration of lesions with hydrodistension) reduced the pain significantly, but did not alter the frequency of urination or bladder capacity in Hunner's lesion type IC patients. They conclude that large-scale, long-term prospective studies are needed to determine the efficacy.

#987

A NEW EXPERIMENTAL MODEL FOR INDUCING INTERSTITIAL CYSTITIS BY OXIDATIVE STRESS USING
BLADDER INSTILLATION OF A NITRIC OXIDE DONOR GEL

Palma T, Ricetto C L Z, Souto S, Souto S, Maciel L.

The purpose of this study was to develop a new experimental model of inducing interstitial cystitis (IC) through vesical instillation of a polymeric solution containing the NO donor S-nitroglutathione (GSNO) and to compare it to the experimental interstitial cystitis induced by vesical instillation of protamine and potassium chloride, using 40 female Wistar rats. It was found that the inflammatory response to bladder instillation of an aqueous solution of S-nitroglutathione was very similar to that induced by bladder instillation of protamine and KCl. It was therefore concluded by the authors that instillation of an aqueous solution of S-nitroglutathione can be considered a new model for experimental induction of interstitial cystitis.

#989

PREVALENCE OF OVERACTIVE BLADDER IN A COHORT OF SPANISH PATIENTS SUFFERING FROM FIBROMYALGIA

Del Amo E, Blanch-Rubió J, Muñoz-Espinal E, Marginet J, Herrero M J, Magaña A, Carreras R, Carbonell-Abelló J.

The prevalence of overactive bladder in fibromyalgia patients in Spain is unknown. This prospective study concerned 64 consecutive women patients attending a Specialized Fibromyalgia Care Unit of at a Spanish University Hospital. All patients were asked to complete the Spanish Version of the Bladder Control Self-Assessment Questionnaire (B-SAQ): "Cuestionario de Autoevaluación del Control de la Vejiga (CACV)". Epidemiological, anthropometric, clinical and pharmacological data were recorded through a clinical interview, physical examination and a review of medical charts. However, it should be noted that the very fact that this study was carried out on patients referred to a Specialized Fibromyalgia Unit implies that the clinical condition of the patients was worse than that of "normal" fibromyalgia patients. The prevalence of the OAB was 50.7%, more than double the general prevalence among the Spanish population and similar to figures found in other studies carried out in other countries in fibromyalgia patients. The authors report that they did not find any association between the presence or absence of OAB and scores from a questionnaire on the impact of the fibromyalgia such as the fibromyalgia impact questionnaire. These data suggest that the presence of OAB is independent of the severity of the FM. The authors are of the opinion that further studies are necessary to assess the precise possible association between OAB and fibromyalgia

#990

RELATIONSHIP BETWEEN CHRONIC PROSTATITIS AND INTERSTITIAL CYSTITIS

Takei M, Shiga K, Yamaguchi A.

Takei and colleagues note that the condition defined as category III chronic prostatitis is very often similar to interstitial cystitis, lower urinary tract obstruction and weak detrusor commonly seen in LUTS. The purpose of this study was to evaluate the lower urinary tract function of category III chronic prostatitis through urodynamic study, in an endeavour to find relationships between them. The medical records of 60 men with category III chronic prostatitis who had undergone urodynamic study during the period of November 2000 to December 2002 in Harasanshin General Hospital were reviewed. The authors believe that the results suggest that urodynamic study may be very useful in evaluating lower urinary tract function of category III chronic prostatitis and may lead to reclassification of some of them to another disease entity, such as interstitial cystitis or voiding dysfunction due to weak detrusor. They note that the pressure-flow study was very useful in distinguishing possible interstitial cystitis and LUTS from category III prostatitis. They particularly note that almost all the cases with decreased bladder capacity without uninhibited contraction were interstitial cystitis.

#991

MEDICAL THERAPY IS PERCEIVED AS MOST HELPFUL BY PATIENTS WITH INTERSTITIAL CYSTITIS

Stanford E, McMurphy C.

The purpose of this study was to evaluate the perceived response to treatment in patients diagnosed with interstitial cystitis (IC) on the basis of a retrospective database review and telephone survey conducted at a reference urogynaecologic centre. The records of 212 confirmed IC patients were identified of which 122 patients completed a telephone survey (58%) to confirm results. Treatments of interest were diet, pentosan polysulfate (PPS), intravesical heparin, or other (neuromodulation). Cystoscopy with hydrodistension and dimethyl sulfoxide (DMSO) was not offered to this patient cohort. Patients with IC with or without concomitant disorders perceived medical therapy with PPS alone, PPS with diet modifications, and PPS with intravesical heparin as being most helpful in relieving their chronic pelvic pain and IC symptoms. Surgical therapies were judged by those patients who received both medical and surgical therapy as being less helpful.

#993

DIFFERENCES BETWEEN PATIENTS WITH INTERSTITIAL CYSTITIS ALONE COMPARED TO THOSE WITH CONCOMITANT DISORDERS

Stanford E, McMurphy C.

The purpose of this study was to evaluate the characteristics of patients with interstitial cystitis (IC) alone compared to patients with IC and concomitant disorders based on a retrospective database review and telephone survey conducted at a urogynecologic centre. The records of 212 confirmed IC patients were identified of which 122 patients completed a telephone survey (58%) to confirm results. This study looked at a large number of women diagnosed with IC who were screened for a finite group of common concomitant pelvic pain disorders. Characteristics vary as to age of onset of symptoms and screening questionnaire scores depending upon the number of screened and diagnosed pain generators in patients with IC. It appeared that patients diagnosed with IC and concomitant disorders develop symptoms and present at a younger age and have significantly higher PUF scores compared to patients with a diagnosis of IC alone.

#994

A NOVEL HIGHLY EFFECTIVE AND SAFE MEDICAL THERAPY FOR PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS

Cohen G, Check J, Cohen R.

Earlier publications have shown that small dosages of dextroamphetamine sulfate has efficiently controlled urticaria, joint pain, fibromyalgia, chronic fatigue syndrome, inability to lose weight despite dieting, severe headaches, mastalgia, gastrointestinal motility disorders, inflammatory bowel disease, chronic pelvic pain, dysmenorrhoea, vulvovaginitis and vasomotor symptoms. There has also been a case report publication demonstrating prompt marked improvement of bladder pain following dextroamphetamine sulfate therapy in two women with long-standing suffering who failed to respond to traditional therapy. The purpose of this study was to evaluate sympathomimetic amine therapy for painful bladder syndrome/ interstitial cystitis in a series of six additional cases of chronic painful bladder syndrome that failed to respond to standard therapy. The study was an observational case series without placebo controls. This study included women only since this disorder of the sympathetic nervous system is known to predominately occur in females. All subjects had to have had painful bladder syndrome for more than a year and to have failed to show adequate response to standard therapies. Prior to this therapy, 4 of the 6 women had such severe symptoms they could not function in everyday life. In addition to painful urination, 5 of the 6 women had nocturia (at least 5 times a night), frequency and urgency. Starting with 15mg of dextroamphetamine sulfate extended release capsules, all 6 women showed significant relief of their painful urination, urgency, frequency and nocturia. All patients increased the dosage to either 25mg or 30mg per day, usually after the first month (with 1 exception). Within 2-6 months their urinary symptoms were either completely gone or so mild as to be very tolerable. In 4 of the 6, nocturia decreased to once per night and two women had 2 urinations during the night. All symptoms remained almost completely relieved or gone both at 6 months and 1 year evaluations. The authors note that this was not a controlled study, so it could be argued that the sympathomimetic therapy could perhaps have worked as a placebo. However, all

patients did not show any placebo response to pentosan polysulfate sodium, or pelvic floor physical therapy. So it seems highly unlikely that the symptomatic remission was from either placebo effect or spontaneous remission. The authors believe that a diminished sympathetic tone possibly related to antibodies against ganglionic acetylcholine receptors leads to diminished function of this mucosal epithelium especially in its role of preventing absorption of toxins from the lumen to the epithelium. The toxins stimulate inflammatory response. In addition, the sympathetic nervous system innervates lymphoid tissue and possibly facilitates an inflammatory response. These pain syndromes are not limited to the bladder and do not always include the bladder, depending on which sympathetic nerves are involved. Nevertheless, almost all the different pain syndromes respond quickly and effectively to sympathomimetic amine therapy. The authors hope that this case series will generate more widespread interest in evaluating dextroamphetamine sulfate therapy. Controlled trials are welcome. Perhaps other novel therapies may be generated based on the responses seen to sympathomimetic amines for bladder pain. They feel that it would be interesting to determine if sympathomimetic amines can improve bladder pain in male patients as well.

#995

GLYCOSAMINOGLYCANS IN BLADDER BIOPSIES AND IN URINE AS POSSIBLE MARKERS FOR INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME

Lucon M, Dreyfuss J L, Ana IM S, Leite K R, Helena B N, Srougi M, Bruschini H.

Since the urothelial glycosaminoglycan (GAG) layer is referred as a bladder protective factor, the purpose of this study was to evaluate its metabolism in an attempt to identify changes possibly related to patients with IC/PBS. The urine and tissue biopsies of 4 patients with IC/PBS according to NIDDK criteria were compared to 4 controls. Patients with IC/PBS were only using pain medication and not using any other therapy for the last six months. Women with stress urinary incontinence served as a control group. Urine and random bladder biopsies were collected during cystoscopy as part of surgery for incontinence and during cystoscopy/hydrodistension for IC/PBS patients. The expression of sulfated GAGs was investigated in tissue samples. Hyaluronic acid and sulfated glycosaminoglycan levels were evaluated in the urine of patients and controls. The results indicate a tendency to increased levels of chondroitin and heparin sulfates in bladder samples from IC/PBS patients. Similarly, a clear tendency to increased urinary levels of chondroitin sulfate was observed in IC/PBS patients. Chondroitin sulfate is involved in cellular proliferation and the increased urinary and bladder levels may represent tentative urothelial regeneration. Dermatan sulfate did not appear to be involved in bladder protection in cases of PBS/IC. The authors concluded that larger studies with more patients are needed to verify these preliminary findings and that chondroitin sulfate may potentially be a promising marker to better identify this syndrome.

#996

ORAL ADMINISTRATION OF STEROID FOR ULCER TYPE INTERSTITIAL CYSTITIS

Homma Y, Nomiya A, Nishimatsu H, Fujimura T, Enomoto H, Suzuki M, Fukuhara H, Kume H.

According to the authors, oral administration of anti-inflammatory steroids is not a recommended treatment option for IC because of concern for adverse side-effects. However, it is suggested that it may be effective for treating ulcer type IC. In this study, 23 patients (22 women and 1 man) who were diagnosed as ulcer type IC and treated by oral steroid were retrospectively analysed. Diagnosis was based on the Japanese guideline for IC and hypersensitive bladder syndrome, which comprises 1) lower urinary tract symptoms such as bladder hypersensitivity, urinary frequency, bladder discomfort and bladder pain; 2) Hunner's ulcer confirmed by cystoscopy ; 3) exclusion of confusable diseases such as infection, malignancy and calculi of the urinary tract. The patients were also compatible with NIDDK inclusion and exclusion criteria for clinical trials. These patients had been treated with transurethral resection or fulguration of the lesions 1 to 7 times (average: 2.6 times), but the symptoms recurred. Oral betamethazone dosage 0.75mg to 0.5mg was given daily for 1 to 2 months, then tapered to 0.5mg or 0.25mg according to symptom relief, and continued for an average period of 11.3 months [range: 1 to 48]. Twelve patients (52%) reported improvement. The remaining 11

patients were unchanged. Adverse events included weight gain more than 2 kg in 7 subjects. The authors believe that their results suggest that this could be an option for treating ulcer type IC of relatively short age. The limitation of the study included the small sample size, short-term observation period, retrospective nature of analysis (without concurrent control), and no assessment by biomarkers and cystoscopy. According to the authors, further study is warranted for the possible usefulness of oral steroid therapy for this intractable disease.

#997

TREATMENT OF URETHRAL PAIN SYNDROME WITH EXTRA POTENT CORTICOSTEROID AND LIDOCAINE.
Lindström B, Hellberg D, Lindström D, Lindström A.

Urethral pain syndrome (UPS) is difficult to treat and despite a wide variety of treatment in use, no consensus on optimal treatment has been reached. Histological studies have shown that the urethral mucosa displays inflammatory changes in patients with UPS. Treatment with instillation of extra potent steroid (clobetasol) into the urethra followed by lidocaine was tried at a gynaecological clinic with good results. The clobetasol is thought to strongly reduce the urethral inflammation and the patient's symptoms. The primary effect of the lidocaine is to diminish brief clobetasol-induced urethral pain, but it may also contribute to inhibiting pain. This study is a retrospective study of treatment given between 1999 and 2006 at the Ventrums Gynaecological Private Clinic in Bjursås, Sweden. Thirty consecutive women with UPS were treated with instillation of 2 ml clobetasol cream (Dermovate®) and 2 ml lidocaine (Xylocain®) gel in the urethra. The treatment was carried out 1 to 2 times the first week and then once a week until the symptoms were cured or relieved. The number of treatments and their effect on symptoms (cured, better, worse or unchanged) up to the time of the patient's final treatment was scored. After the final treatment there was a follow-up time of 6 months. Instillation of extra potent corticosteroid into the urethra once a week until recovery occurred showed good results in this study. Lidocaine was also used to relieve the transient pain caused by the corticosteroid. While the authors believe that the results are the effect of the corticosteroid on inflamed urethral tissue, a treatment effect of lidocaine on the UPS cannot be ruled out. Further evaluation of this mode of treatment is needed in prospective, randomized and double-blind studies.

#999

THE CLINICAL EFFECTIVENESS OF INTRAVESICAL CYSTISTAT® (HYALURONIC ACID) IN PATIENTS WITH REFRACTORY PAINFUL BLADDER SYNDROME OR RECURRENT URINARY TRACT INFECTIONS
Vasdev 1, Ferguson J, Harding C, Dorkin T, Hasan T.

The purpose of this study was to evaluate the clinical use of intravesical Cystistat® (Hyaluronic acid) in patients with painful bladder syndrome (PBS) and patients with recurrent urinary tract infections (UTI). 13 patients with recurrent UTIs (group 1) and 8 patients with PBS (group 2) received intravesical Cystistat®. Within group 1, 7 (53%) patients responded well to treatment. Patients in group 2 had a significant improvement in bladder pain, urgency, nocturia and quality of life. Within group 2, 6 patients (75%) responded to treatment. It was concluded that intravesical Cystistat® can be used with minimal side effects and good compliance in both groups of patients with PBS and recurrent UTIs. The authors report that their data suggests that patients with PBS have a better response to intravesical Cystistat® compared to patients with recurrent UTIs. Longer follow-up and larger patient numbers in both groups will be required to confirm the long-term efficacy of these two clinically challenging entities. Intravesical Cystistat® should be considered before embarking on a major surgical intervention.

#1160

IMPACT ON SEXUAL ACTIVITY AND RELATIONSHIPS IN WOMEN WITH VULVODYNIA.
Ricci P, Solà V, Pardo J.

In this study, the authorise hypothesis that the sexual activity of women with chronic vulvar pain may be affected and that this condition may affect the relationship with their partners. They hypothesise that women with vulvodynia have lower levels of sexual desire, arousal and frequency of intercourse. This study aims to determine the impact of vulvodynia on sexual activity and on the relationship with their partners. Qualitative and quantitative interviews were held with 50 women diagnosed with vulvodynia in a stable relationship (defined as more than 1 year). The findings in this study indicate that vulvodynia affects the relationship of those who previously enjoyed a stable relationship. Chronic vulvar pain causes decreased frequency or avoidance of the vaginal intercourse in women with vulvodynia. The partners of women with vulvodynia do not always support and understand them. Women with vulvodynia feel that their sexuality is affected. At the time of the interview, 27 women avoided vaginal intercourse due to vulvodynia. The authors concluded that women with vulvodynia have lower levels of sexual desire, arousal and frequency of intercourse. The chronic vulvar pain has a high impact on sexuality and may be a cause of the relationship breaking up. It is therefore important to consider psychological support for both and not only drug therapy for pain control and physiotherapy for vaginismus as treatment. The authors believe that the support and understanding of vulvodynia by the male partner can mean better results from therapy.

#1163

VULVODYNIA AND CO-MORBIDITY ASSOCIATED: A CASE-CONTROL STUDY.

Ricci P, Solà V, Pardo J.

Vulvodynia is a chronic painful disorder affecting the female population, with an estimated prevalence of 9 to 13%. Clinicians are often uncertain of the diagnosis. Many women suffer as a result of years of misdiagnosis and a complete cure is uncommon. The authors hypothesise that women with vulvodynia have more chronic diseases compared with the general population. This prospective case-control study of 50 consecutive patients aimed to determine the association of vulvodynia with other chronic diagnoses compared with women in the general population. The group of women with vulvodynia had greater association with chronic diseases compared to the control group which supports the findings by other authors. Different studies have shown that the most common chronic diseases associated with vulvodynia include:

chronic fatigue syndrome (13%),

fibromyalgia (20%),

migraine-headache (31%),

irritable bowel syndrome (35%),

chronic pain (41%)

low back pain (56%).

In this series, irritable bowel syndrome and chronic migraine/headache were more frequently associated with vulvodynia. It was concluded that while vulvodynia alone may have an important negative impact on quality of life, vulvodynia associated with other chronic conditions may have a very major impact. Treatment may require a multidisciplinary approach.

#1165

VOIDING DISORDERS IN WOMEN WITH CHRONIC VULVAR PAIN.

Ricci P, Pardo J, Solà V.

In this study, the authors hypothesise that women with chronic vulvar pain may also have urinary urgency/frequency disorders. The aim of this study was to discover the presence of voiding disorders in 50 women admitted with vulvodynia at a centre for urogynaecology at Las Condes Clinic, Santiago, Chile, between January 2009 and January 2010. Urodynamics testing and cystoscopy were performed in women with symptoms compatible with voiding dysfunctions. In this study, the authors found that 14% of women with vulvodynia can also have overactive bladder symptoms, that pain localized in the clitoris is most frequently associated with urge urinary symptoms in women with vulvodynia, that stress urinary incontinence and mixed urinary incontinence are voiding disorders which are not often increased in women with vulvodynia.

Video #845

Lake B M1, Thom M R1, Royce R K1, Klutke C G1

STEROID INJECTION FOR HUNNER'S ULCER INTERSTITIAL CYSTITIS

Promising results have been reported with the endoscopic submucosal injection of triamcinolone into Hunner's lesions, with statistically significant improvement on validated questionnaires. This video gives an overview of Hunner's lesion interstitial cystitis, including diagnostic evaluation and management. According to the authors, the purpose of this video is to inform other physicians of their successes so that they too can offer treatment to this problematic subclass of patients. In patients with Hunner's ulcer subtype interstitial cystitis, submucosal injection of triamcinolone offers significant improvement in patient symptoms and quality of life on validated questionnaires. Steroid injections are well tolerated and can be performed in the outpatient setting.

References:

Abstracts 1-298 can be found in Neurourology & Urodynamics, volume 29, issue 6, 2010.

All abstracts (1253) can be read in full on the ICS website (www.icsoffice.org) under ICS/IUGA abstract search:

https://www.icsoffice.org/aspnet_membership/membership/Abstracts/AbstractsSearch.aspx?EventID=105

ICS Annual Scientific Meeting 2011

The next ICS annual scientific meeting will be held in Glasgow, Scotland, 29 August-2 September 2011.

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