

A REVIEW OF THE ESSIC ANNUAL MEETING 2012, 10-12 MAY 2012, PORTO, PORTUGAL

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This year, the ESSIC Annual Meeting was held 10-12 May at the HF Ipanema Park Hotel in the beautiful old city of Porto in Portugal and many congratulations are due to Dr Paulo Dinis Oliveira for the excellent organisation of this international meeting. Delegates (who included several patient advocates representing the IPBF, the Italian AICI and the Portuguese ADDB) came not only from European countries, but also from further afield including the USA, India and Japan. The meeting followed the standard ESSIC format of two days of conference followed by an educational course day devoted to diagnosis and treatment. Plenty of

time was allowed for discussion and many different viewpoints were raised. The focus of this year's meeting was "pain" which was particularly appropriate since Portugal was in fact the first country to hold a National Pain Day in 1999.

The first speaker, Professor Jose M. Castro Lopes from Porto, reported that the prevalence of chronic pain in Portugal has been shown to be 30.2% and the prevalence of moderate or severe chronic pain in Portugal 14.6%. Direct costs of chronic pain in Portugal have been estimated at 1600 million Euro. Direct costs concern consultations, drugs, ancillary costs, sick leave, job losses and early retirement. This does not include non-pharmacological, travel expenses, caregiver-related expenses, presenteeism (by analogy with "absenteeism", this means being present at work but not able to carry out the work productively), etc. Indirect costs may amount to a further 1400 million Euro in Portugal. However, he emphasised that all of these figures are likely to be underestimations. Furthermore, studies have also indicated that pain drugs are by no means always effective, that well over half the patients are not satisfied with their pain treatment and that in many cases the patient blames this on a poor relationship with the doctor. Chronic pain impacts household activities, occupational activities, sleep and rest and sexuality and these aspects were to surface time and time again during this ESSIC meeting. This first presentation really set the stage for the meeting and reflected the current interest by national and international health authorities in the economic and social impact of chronic pain.

The following session presented by Professors Philip Hanno (USA), Tomohiro Ueda (Japan) and Magnus Fall (Sweden) concerned harmonisation of guidelines and nomenclature. It was noted that one only has to look at the differences in epidemiologic prevalence data to realise the extent of the confusion. While prevalence data differ enormously, Professor Hanno suggested that a "guesstimate" prevalence could be around 100-300 per 100,000. New prevalence studies are clearly needed, but this will be pointless if they are not all done worldwide on the same basis. Cultural and social differences may also play a substantial role in the differing results of prevalence surveys around the world. In many countries urogenital problems are a taboo subject, while in others it is "not done" to admit to pain or patients may minimise the amount of pain they say they are experiencing.



Throughout this meeting, it became clear that there is still no international consensus and that this is at least in part due to the differing diagnostic approaches used in different parts of the world, but also to the lack of firm scientific evidence, indicating that more research is needed in very specific areas.

Regarding harmonisation of the name, there really is no global harmonisation! The problem this causes, according to Professor Hanno, is "that the use of different terms can lead to major discrepancies when

comparing findings, depending on exact definitions in individual publications”. At the present time, Bladder Pain Syndrome (BPS) is understood to identify the syndrome in Europe and the USA. However, Interstitial Cystitis (IC) remains a part of the American nomenclature (IC/BPS) and is synonymous with BPS. East Asian nomenclature uses the terms Interstitial Cystitis, Painful Bladder Syndrome and Hypersensitive Bladder Syndrome under the umbrella of Frequency/Urgency Syndrome (FUS). Where the patients and support groups are concerned, interstitial cystitis remains an important term of diagnosis when it comes to official recognition of an accepted diagnosis, reimbursement of treatment, social benefits, etc. and there is little doubt that the European patient organisations would prefer the name IC to be retained at the beginning of the name as in the USA (IC/BPS). This could go some way towards preventing lack of reimbursement and many other similar problems.

In the discussion on definitions, Hanno asked “is there new information that needs to be acquired to allow for harmonisation of nomenclature?” He also noted that when a complaint has no known cause and has subjective symptoms, competing case definitions are inevitable, as in the case of fibromyalgia.

Current definitions include the following that were summarised by Professor Hanno:

ESSIC:

Chronic (6 months or more) pelvic pain, pressure or discomfort perceived to be related to the urinary bladder accompanied by at least one other urinary symptom like persistent urge to void or urinary frequency. Confusable diseases as the cause of the symptoms must be excluded.

This definition is based on symptoms and exclusion.

EAU

BPS or PBS indicates at least 6 months of pain perceived to be related to the bladder:

pain, urinary frequency and nocturia. The pain, which is sometimes extreme, typically increases with bladder filling and is located suprapubically. This may radiate to the groins, vagina, clitoris, penis, rectum or sacrum and it is relieved by voiding although it soon returns.

Interstitial Cystitis to be reserved for a subset of patients with verified signs of chronic inflammation extending submucosally.

East Asian Guideline:

- **Frequency/urgency syndrome:** frequency (frequent voiding) and urgency (strong desire to void). It is an inclusive term incorporating overactive bladder syndrome (OAB), hypersensitive bladder syndrome (HBS) and other conditions that are associated with frequency and urgency.
- **Hypersensitive bladder syndrome (HBS):** in which urgency is persistent and due to fear of pain.
- **Painful bladder syndrome (PBS):** HBS with pain.
- **Interstitial cystitis (IC):** frequency, hypersensitivity, and/or bladder pain AND abnormal cystoscopy AND no confusable disease.

It was noted here that this guideline is in fact in line with the original NIDDK criteria which stated that patients “must have **either** pain associated with the bladder **or** urinary urgency”. The East Asian hypersensitive bladder syndrome (HBS) is a frequency/urgency syndrome (FUS) with an emphasis on urgency due to pain. Urgency remains a key concept in East Asia.

US AUA Guideline:

“An unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms of more than 6 weeks duration, in the absence of infection or other identifiable causes”.

The NIDDK MAPP IC Inclusion Criteria for the Multidisciplinary Approach to the Study of Chronic Pelvic Pain

- Females or males having an unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms of at least 3 consecutive months duration, in the absence of infection or other identifiable causes.

- Scoring at least 1 on the frequency scale and at least 1 on the pain, pressure discomfort scale.

DISCUSSION & COMMENTS

Symptom duration: there is a difference in symptom duration in many of the criteria/definitions.

Symptom duration required before a diagnosis can be made varies considerably in definitions and guidelines. For the EAU and ESSIC, this is 6 months, the MAPP inclusion criteria 3 months, while the AUA states 6 weeks. The AUA opted for 6 weeks to avoid a delay in diagnosis and starting treatment. Professor Fall underlined that symptom duration for definition and diagnosis is arbitrary at this time while Professor Hanno noted that future studies may further harmonise duration if symptoms at 6 weeks can be shown to be chronic in the majority of patients.

Pain: the East Asian definition allows for diagnosis in the absence of pain, while pain is obligatory in other definitions. Professor Fall suggested that requirements that pain may be related to bladder filling may be too limited. He also felt that there may be cultural differences in terms of patient reporting of symptoms and asked whether Asian patients may perhaps be reluctant to use the term “pain”. He also said that while pathologic afferent activity is a feature of OAB and IC/BPS, there are important differences from a neurophysiologic point of view and suggested that further research is needed.

The term “unpleasant sensation” comes from the IASP (International Association for the Study of Pain) definition of pain as *“an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”* and is derived from an older 1964 definition by Harold Merskey, first published in 1979 by IASP in Pain journal, number 6, page 250. During the ESSIC meeting, both Professor T. Ueda from Japan and IPBF Chair Jane Meijlink pointed out that a problem arises here from the fact that patients do not consider an unpleasant sensation, pressure, discomfort etc. to be pain and will not describe this as pain.

Urgency: this is constantly a controversial topic of debate, largely arising from the ICS 2002 definition (“A sudden compelling desire to pass urine which is difficult to defer”) which focused on “OAB wet” with sudden incontinence episodes and regrettably led to the term “urgency” being removed from many definitions of IC and even to some claims that IC patients do not suffer from an urgent need to urinate. The controversial word here is “sudden” since, as delegates pointed out, IC patients are more likely to experience a more gradual build-up of this sensation until it reaches an intolerable level. Suggestions have been mooted to divide the definition into two types: urgency for fear of leakage and urgency due to pain or other unpleasant sensation. It was deemed inaccurate by some delegates at the ESSIC meeting to say: urgency for fear of pain. It is clear, however, that many of the clinicians and researchers still do not understand what IC patients mean exactly when they say they have an urgent need to find a toilet and that more research is needed to discover what exactly is causing this sensation of “can’t-wait urgency” in IC patients. This was also emphasised by Professor Magnus Fall who noted that there is need for clarity regarding the meaning of the term urgency as it pertains to patients versus clinicians and researchers. The term “**persistent urge**” was introduced a few years ago, but does not mean the same as an urgent need to urinate. Furthermore, while some IC patients may indeed have a persistent or constant feeling of needing to empty their bladder, others may not have this, but rather may feel this sensation returning and increasing as the bladder fills.

HARMONISATION

It was pointed out that there is clearly a need for harmonisation by international regulatory authorities. However, this is no easy matter when there is still so much disagreement and still a lack of clarity on many issues.

It was mentioned that the USA Foods and Drug Administration has not yet moved on from the NIDDK Criteria of 1988. At present the FDA states that to be diagnosed with IC, patients must have either glomerulations on cystoscopic examination or a classic Hunner’s ulcer and either pain associated with the bladder or urinary urgency. As already mentioned, according to the original NIDDK criteria, pain was not a compulsory element, similar to the East Asian Criteria today.

A further problem in achieving any consensus is that there are many different taxonomy, guideline and standardisation groups around the world currently involved in terminology, definitions and criteria of IC/BPS

and/or chronic pelvic pain. It is also hindered by lack of real evidence and knowledge. Hopefully the large-scale MAPP project in the USA will fill a few gaps.

CONTROVERSIES RELATED TO DIAGNOSIS

Hydrodistension: There was much discussion of whether hydrodistension is necessary for diagnosis. While this is favoured by European and Asian guidelines as an essential ingredient of a comprehensive workup, others question its value. Professor Fall stressed that he believed it to be essential for diagnosing Hunner's lesions.

Glomerulations are also a controversial topic. As noted by Professor Nordling, they were originally mentioned in 1949 by J.R. Hand who described "discrete, submucosal haemorrhages" and "dotlike bleeding points". In 1978, Walsh also used the same description, adding that these sometimes "take the form of tiny, punctuate red dots throughout the body of the bladder, an appearance that we describe as glomerulation". Although he emphasised even then that this was not specific to IC patients and could be found in other patients following hydrodistension, this comment was ignored and most urologists thought you had to see either glomerulations or lesions. Studies have now indicated that glomerulations should not be seen as a hallmark of IC. However, at the present time, nobody is entirely clear as to what causes glomerulations to occur, and why in some IC patients and not others, and why they are seen in some people with a normal bladder and not in others. We don't know what glomerulations mean and maybe they are of no significance at all. It was felt by participants at this meeting that more research was needed to shed light on this.

Hunner's lesion: It was suggested that Hunner's lesion may be much more common than previously thought. In any case, it is important to find it if it is present in the bladder, since this could have a positive impact on the patient as treatment can be effective.

MANAGEMENT

In a discussion on whether it is important to standardise management, it was suggested that it might be better to wait until there are better outcome data and better long-term epidemiologic data. It was emphasised, however, that there is a need for a multidisciplinary approach to treatment and that comorbidities should always be taken into account..

FURTHER PRESENTATIONS

On Thursday, Dr Afina Glas from the Netherlands then took a look at evaluation and treatment of BPS/IC followed by Dr Silvia Malaguti on future therapeutic targets and a discussion based on patient histories.

On the Friday morning, a workshop session was devoted to the (mentally-challenging!) complexities of afferent processing from the periphery to the central nervous system in BPS/IC, with Dr Lori Birder, Dr Matthew Fraser and Professor JJ Wyndaele as speakers.

This session began with Dr Lori Birder and included an in-depth look at the barrier function of the urothelium and how changes may be more complicated than just an altered barrier, looking at factors/conditions (that may be altered in BPS) which influence the urothelial barrier function and/or signalling. Urothelial cells have a role in the transfer of information from the urinary bladder to the nervous system. Barrier function can be altered by various "stressors" in health and disease. When the barrier function is altered, it can lead to passage of toxic substances into the underlying tissue, resulting in urgency, frequency and pain during distension. Dr Birder explained that patients with BPS or OAB also suffer a variety of comorbid symptoms and disorders which can include irritable bowel syndrome and even gastro-esophageal reflux disease (GERD), noting that many functional syndromes (BPS, IBS, GERD, asthma) may involve a disturbance of the epithelium. She suggested that changes in barrier function in a number of chronic GI/GU disorders may result from aberrant epithelial repair mechanisms with inability to restore cell-cell contacts. These structural and functional abnormalities may lead to altered signalling between the epithelium and underlying immune and structural cells. She suggested that epithelial weakness/increased susceptibility to damage may be due to changes in adhesion factors (i.e. cadherins) which regulate development of structural elements in the epithelium. Summarising she said that the urothelium exhibits both sensor and transducer functions and responds to a number of sensory inputs, including mechanical stresses and substances in the urine. Altered release of urothelial mediators can activate underlying nerves, contributing to bladder instability, hyperactivity and altered sensations in a number of

conditions. Non-neuronal cells can amplify signalling, particularly in pathology. Patients with IC/BPS exhibit comorbid conditions which may involve changes in epithelial functions.

Dr Matthew Fraser (USA) then took over and began by discussing functional pain syndromes. He described the points along the pain pathway from the pelvic viscera to the brain where bidirectional interactions could result in a positive feedback amplification of pain processing for both the insulted organ and the neighbouring, un insulted organs - or, more simply, how bidirectional communication can turn a bad situation into a very much worse situation resulting in co-morbid pelvic visceral chronic pain conditions. This process begins even at the level of the pain sensory terminals innervating each pelvic visceral organ, where neuroinflammatory mediators are released upon sensing of a noxious stimulus. Such neuroinflammatory mediators, released locally, can sensitize neighbouring nerve terminals of other sensory neurons, as well as other non-neuronal cells that also signal tissue damage. As the nerve axons leave each individual organ, some of them coalesce with branches from the same parent axon that project to other organs (e.g. colon, uterus, prostate), allowing for signal backfiring to those organs, setting up a neuroinflammatory cascade in neighbouring organs that received no insult. This is the very first level of cross-sensitization. As the pathways move more centrally from the periphery to the brain, sensitized processing in the dorsal root ganglia and the spinal cord results in field stimulation of neighbouring afferent cell bodies and terminals, respectively, a condition that results in backfiring and forward firing of other sensory nerves cells, further amplifying the pain signal. Under normal conditions, these mechanisms are held in check by descending inhibitory pathways under the control of the brain. But under conditions of chronic pelvic pain, it is thought that decreased descending inhibition and/or increased descending stimulation can result in a runaway sensitization in the sacral spinal cord and subsequently in higher, sub-cortical sensory regions, fuelled by the aforementioned peripheral mechanisms. Left unchecked, field stimulation-induced dorsal root reflexes will send signals to the pelvic viscera triggering the release of neuroinflammatory mediators, and the cycle begins anew, leading to a positive feedback spiral of chronic pain.

Professor J-J Wyndaele from Antwerp was the final speaker in this brain-stretching neurological session and summarised everything by describing the implications for treatment. He explained that afferent processing starts in the bladder wall and ends in the sensory brain. These processes involve consecutive steps: bladder wall activity, bladder wall pathology, peripheral nerves upwinding, spinal cord upwinding, and central pain. It is therefore important to evaluate at what stage a patient is at the time of diagnosis. If a patient has spent many years with symptoms but without a diagnosis, the process may already be advanced. Different approaches and treatment can be aimed at one or more of these stages of the process: at bladder wall activity, bladder wall pathology, peripheral nerves, spinal cord or central pain. He concluded by saying that hypersensitisation plays an important role and reiterating that many IC/BPS patients will have a high grade of sensitisation at diagnosis. He suggested that treatment options will probably need to be combined and balanced to procure the best effect.

Dr A.J. Kanai (USA) then described epigenetic and molecular alterations in the bladder wall in BPS, with clinical and biologic views, explaining his team's research with mouse models into mechanisms of action and possible sites of action in the bladder of botulinum neurotoxin type A. He also looked at β_3 -adrenergic agonists, PDE5 inhibitors and TNS in treating neurogenic/myogenic overactivity, and nitro oleic acid (OA-NO₂) and TRPA1 antagonists in preventing radiation-induced cystitis and colitis. Addressing neuromodulation studies, he noted that sacral, pudendal and tibial neuromodulation stimulate mixed nerves so there may be peripheral, spinal or supraspinal sites of action.

Doctors Fiona Burkhard and Katia Monastyrskaya from Bern followed this up with a joint presentation on molecular alterations in the bladder wall in IC/BPS. They touched on the use of tetracyclines: although antibiotics are in principle not used for IC which is nonbacterial, studies have shown that tetracyclines reduce pain and inflammation.

PATIENT SESSION

This session comprised two presentations by two patient advocates.

Jane Meijlink from the Netherlands (International Painful Bladder Foundation IPBF) looked at pain from a patient perspective, noting that our perception of pain and how we interpret it evolves from birth and may

depend on many different factors: our country and culture, social background, family environment, upbringing, character, temperament, experiences in early life, and even religious upbringing. Cultural influences may also determine whether you admit to pain, or whether you deny pain, and how you communicate that pain. It can be exceedingly difficult for any patient to describe to someone else how pain feels, and that makes it a challenge for a patient to communicate, and a doctor to evaluate. The speaker felt that pain questionnaires and pain scales are a random snapshot and consequently have their limitations, and suggested that they may not be sufficiently reliable for research purposes and do not even give a reliable picture for clinical purposes. She stressed that if an IC patient is referred to a pain consultant, it is essential for that consultant to have a good understanding of the bladder, the pelvic floor and all the IC symptoms, not only the pain, and the referring doctor needs to ensure that the pain consultant is fully informed of not only all the patient's IC symptoms, but also all comorbidities. She also noted that patients need emotional support, time, sympathy and understanding from all players in the equation: for example the family doctor, the specialist, the physiotherapist, the patient's family and partner, the patient's employers as well as the support group.

Loredana Nasta from Italy (Italian IC Patient Association AICI and the Italian Rare Disease Foundation UNIAMO) presented an excellent overview of the results of a 2 year study conducted from 2009 to 2012 aimed at quantifying the socio-economic costs and healthcare needs of people affected by IC/BPS, including the families, analysing the services and assessing the impact of the disease on society in terms of costs and quality of life. It examined different areas including socio-demographic, medical, social & healthcare services, financial and psychosocial. The study indicated that patients lose confidence in the healthcare system when they discover that the doctors know so little about the disease that the patients are frequently misdiagnosed, sometimes several times by different doctors. The results of this important study will be useful to create awareness, establish priorities, anticipate needs and allocate resources. Further information on this study will be published in the ESSIC Bladder Pain Syndrome book to be published later this year by Springer. (*Data courtesy of AICI*)

RESEARCH PRESENTATIONS

Not all the research abstracts in the programme were presented in Porto, but presentations and abstracts included the following:

Professor Ueda from Japan discussed the neurometer to detect hypersensitivity of the bladder epithelium and Narrow Band Imaging (NBI) to detect angiogenesis of the bladder epithelium, adding that bladder lesions are easily and clearly recognised by NBI. He said that "future studies on IC should aim to improve the sensitivity of cystoscopic diagnosis to accurately detect lesions in the bladder and to establish disease concepts in which hyperesthesia is a major symptom". He proposed that the term hypersensitive bladder should be used to describe diagnoses performed on the basis of symptoms. He also suggested that the diagnosis of IC based on symptoms only in the USA is based on political and economic considerations rather than academic ones.

There was great interest in a new method of bladder distension presented by Dr Sandor Lovasz from Budapest. He suggested standardising intravesical pressure to 70 cm H₂O and maintaining this for 5 minutes by means of balloon dilation of the bladder. "By using standardised high intravesical pressure and time at balloon distension of the bladder, more lesions of the mucosa can be visualised," he added. So far studies have been performed in a small number of patients; larger studies are now needed to be able to draw final conclusions. Dr Lovasz also recommended extended and deep coagulation of all mucosal lesions and suggested that adjuvant GAG replenishment therapy helps.

Speaking on generalised and localised forms of vulvodynia, Dr Pedro Vieira Baptista from Porto felt that vulvodynia is underdiagnosed in the population and that vulvodynia should be seen as a symptom rather than a syndrome. He suggested that generalised vulvodynia might be a consequence of pudendal nerve dysfunction.

Perepanova and colleagues from Moscow have been looking at experimental evidence of hyaluronic acid (HA) application for different types of chronic cystitis, firstly the modelling of the pathogenic process of interstitial and bacterial cystitis, and secondly a series of experiments involving modelling of acute inflammation with injection of hyaluronate into rat bladders in different concentrations. On the basis of their data, they concluded that application of HA in high concentrations can lead to an increase in the functional activity of epithelial cells and improves their ability for physiologic regeneration. They reported that during the course of their experiments, they noted no negative effects of HA use on the bladder mucosa.

Two studies looked at the use of botulinum toxin. A team from Birmingham, UK, looked at the outcomes of women with intractable detrusor overactivity who underwent repeated injections of botulinum toxin-A, concluding that injections are effective and safe after repeated administration and that the duration of the injection tends to get prolonged after the second injection. Cabral and colleagues from Porto discussed their experience with botulinum toxin A in the treatment of BPS/IC in 6 female patients. They found it to be effective and that the effect became more substantial with retreatment. There was some discussion about where the injections should be done and it was felt that injecting the trigone is best and leads to fewer retention problems.

A team from Yokohama, Japan looked at pregabalin and amitriptyline, comparing the effects and side effects in 40 patients diagnosed with BPS. They found that pregabalin was better tolerated than amitriptyline. However, if patients can tolerate the amitriptyline, it may be more effective than pregabalin for pain control. In this study, the pregabalin was started from 25 mg to 150 mg and the amitriptyline from 10 mg to 30 mg for 2 months. This was a first study; in future studies, they plan to compare pregabalin 300 mg with amitriptyline 50 mg. They emphasised that the main effect was on the pain and not the urinary symptoms.

Dr Rajesh Taneja from India reported on experiences with intravesical steroids which have the advantage of lack of systemic side effects. At his centre in New Delhi, they have been using intravesical hydrocortisone in the initial phase to reduce pain, followed by judicious use of systemic triamcinolone in the case of recurrence of symptoms. He stressed that more rigorous multicentre trials are needed to firmly establish the role of steroids in BPS.

Coelho and colleagues from Porto and Pittsburgh presented a study on NGF modulating TRPV1 trafficking on urothelial cells. They noted that the urothelium, once considered to be a passive structure, is now known to be a very dynamic structure. They found that NGF increased urothelial response to capsaicin by modulating the expression or the translocation of TRPV1 to the membrane. The increased expression of TRPV1 correlated with increased sensitivity to capsaicin. They also reported that inhibition of PI-3 kinase and TrkA reduces TRPV1 signalling and supports their role in NGF-mediated TRPV1 activity. They concluded that their findings that inhibition of PI-3 kinase reduces NGF-evoked TRPV1 urothelial cell trafficking support a role for this pathway and likely additional pathways in neurotrophin mediated increases in channel availability.

Charrua and colleagues presented a rat study looking at chronic adrenergic stimulation. They reported that their current work indicates that chronic adrenergic stimulation in rats mimics some aspects observed in BPS/IC patients such as visceral pain, bladder hyperactivity and histological changes. They noted that inflammation increases activity of sympathetic fibers. They suggested that the results may be relevant to determine the pathophysiology of BPS/IC.

Professor Kristene Whitmore from the Pelvic and Sexual Health Institute in Philadelphia presented a study by Rejba-Hoffman and colleagues on complementary and alternative medicine (CAM), noting that with few very effective treatments existing for IC, the interest in complementary and alternative medicine therapies among patients is high. She reported that no studies have gauged patients' use of these therapies or compared their perceived effectiveness. The aim of this study was to determine the use and perceived efficacy of CAM therapies among IC patients. Reference was made to a study conducted in 2009 by the ICA on use of CAM therapies by IC patients. It included question on 49 different therapies known to be used by IC patients, including for example dietary approaches, acupuncture, movement therapies, mind-body techniques, physical manipulation, herbal supplements, nutritional supplements and lifestyle changes. A significant number of patients who tried the therapies rated 22 as helpful and 20 as not helpful. Results were inconclusive for 7 therapies. Professor Whitmore noted that since both diet and physical therapy are now listed in the AUA guidelines for IC, these two therapies may now be considered more fundamental than complementary and alternative. The fact that more patients responded to this survey than any other survey of the patient population demonstrates their high interest in CAM. According to Professor Whitmore, randomised placebo-controlled studies are needed to demonstrate which therapies may indeed control IC symptoms.

Professor Whitmore then presented a study by Kellogg-Spadt and colleagues also from Philadelphia on vaginal dilation: clinical indications and recommendations. Vaginal dilators are smooth plastic, rubber or glass cylinder-shaped objects in a variety of graduated sizes and weights. They are used to restore vaginal capacity, to expand

the vagina in width and depth, to provide elasticity to tissues and to allow for comfortable sexual activity. They can be typically used in, for example, high tone pelvic floor dysfunction, vaginismus, vaginal atrophy, dyspareunia, vulvar dermatoses, vaginal agenesis and post-radiation adhesions. A number of successful case studies were presented as an example.

Pinto and colleagues from Porto looked at whether the sympathetic nervous system is involved in the pathogenesis of BPS/IC. Their study showed an increase in sympathetic activity and an increased excretion of u-NA in patient with BPS/IC. They found that OnaBotA decreased u-NA without changing s-NA and concluded that OnaBotA causes a direct effect on bladder sympathetic fibers.

Dr Nagendra Mishra, who was unable to be present, submitted an abstract on lessons learnt from the past 20 years, pointing out for example that 20 years ago IC was considered to be very uncommon and present only in the Western world, while today it is known to be present worldwide and not so rare. He also noted that the many definitions around today are a cause of considerable confusion.

The final day of the 2012 meeting was devoted to the now traditional ESSIC Educational Course on clinical diagnosis and management of BPS which was well attended.

All in all, this was an interesting and successful meeting, which led to much discussion and revealed many gaps in our knowledge which need to be filled by further research.

The next ESSIC Annual Meeting will be a joint meeting with ICICJ in Kyoto, 21-23 March 2013. This will also mark the 10th anniversary since the first ICICJ international consultation in 2003. Details will be announced later on the ESSIC website www.essic.eu.

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