

International Painful Bladder Foundation

The IPBF is a voluntary non-profit organization for interstitial cystitis/ painful bladder syndrome
www.painful-bladder.org

IPBF e-Newsletter and Research Update

Issue 29, April 2012

An IPBF update for patient support groups, country contacts, healthcare professionals and friends around the world in the field of interstitial cystitis (painful bladder syndrome, bladder pain syndrome, hypersensitive bladder syndrome, chronic pelvic pain syndrome) and related disorders.

This issue of the IPBF e-Newsletter includes the following topics:

- Future of Urology, journal editorial: review
- EAU Congress with 5th ICI: review
- IAPO 5th Global Patients Congress: review
- Chronic Pelvic Pain Patient Meeting
- Upcoming Meetings: - Convergences PP, ESSIC annual meeting, 6th European Conference on Rare Diseases, 1st International Sensory Bladder Meeting, 1st International Neuro-Urology Meeting, 14th World Congress on Pain/PUGO Meeting on Treating Chronic Pelvic Pain, 1st World Congress on Pelvic Pain
- Books, Newsletters, Articles, Websites etc
- Research Highlights
- Donations & Sponsoring

FUTURE OF UROLOGY – FOCUS ON THE PATIENT

EAU LOOKS TOWARDS THE FUTURE

THE FUTURE OF UROLOGY (EDITORIAL). Abrams P, Brausi M, Buntrock S, Ebert T, Hashim H, Tiselius HG, Wyndaele JJ. European Urology 61(2012) 534-540.

In this editorial recently published in *European Urology*, Professor Paul Abrams and colleagues look towards the future at a time of global economic crisis, emphasising that the patient focus is becoming increasingly important in urology. Writing on behalf of the EAU Executive and Strategy & Planning Office, they note that in these economically difficult times the first priority has to be the patient. This means providing full information about disease processes and urological procedures to patients and allowing them to judge the quality of the urological service that they may choose.

The EAU believes that the following themes will be important in the next ten years:

- Seeking increased involvement of and contact with patients while recognising that patient support and advocacy is an important driver when seeking to effect change
- Producing freely available patient information that will enable patients to take responsibility for aspects of their own urologic care
- Enhancing education, not only for the public but also for all individuals who deliver urologic care, be they general practitioners, nurses or urologists
- Emphasising quality and safety that applies to all aspects of care – investigation, assessment, management and treatment, and continued care – throughout Europe
- Promoting the expectation that all urologic treatments used are supported by an appropriate evidence base for their clinical effectiveness.

The authors stress in this document that patient understanding and involvement are central for optimal treatment selection and an active patient role in treatment and recovery. Patients must be given information so they can make fully informed choices.

On the subject of patient safety, Abrams and colleagues note that patient safety is paramount, and improvements in patient care should be promoted by interactions between the EAU and political bodies (e.g. the European Union and governments), national urologic associations, patient associations and other medical and nonmedical speciality groups.

The EAU believes that the future of urology will also depend on involving politicians in urology, by lobbying and creating a liaison with politicians across Europe who will promote urology as a vital speciality in the prevention and treatment of urologic diseases in an aging European population. With the possibility of increasing centralisation of European health care policy, it is important for the EAU to become involved in decision-making processes at a European Union level now.

However, although the authors mention seeking increased involvement and contact with *patients*, any specific mention of involvement of *patient representatives/patient associations* in decision-making seems to be limited to patient safety mentioned above, while other areas for involvement such as guidelines, lobbying of politicians, research, etc. are not mentioned. In fact, several patient organisations already have considerable experience with lobbying the EU. There is still some way to go before achieving real involvement of the patient organisations, since although the prostate patient organisations receive much attention from the urology association, this is not yet invariably the case for the more female-focused patient associations for bladder and pelvic disorders. It is nevertheless desirable in order to achieve all-round, patient-centred healthcare in this field.

Perhaps poignant to add that while this article about the future of urology would be of great interest to all patient organisations in this field, few will currently have access to it! However, we note that the authors state that having a single education portal, such as an EAU Knowledge and Learning Centre, would give patients, students and physicians access to all levels of urologic knowledge. Let's hope that this includes some form of access to scientific journal articles.

EAU CONGRESS WITH 5TH ICI

The Annual Congress of the European Association of Urology (EAU) was held at the Palais des Congrès de Paris, 24-28 February 2012 and opened with the 5th International Consultation on Incontinence (ICI), see brief review below.

- 5TH INTERNATIONAL CONSULTATION ON INCONTINENCE (ICI)

Committee 19: Bladder Pain Syndrome

P. Hanno (chair) (USA), P. Dinis (Portugal), A. Lin (Taiwan), C. Nickel (Canada), J. Nordling (Denmark), A. van Ophoven (Germany), T. Ueda (Japan).

The International Consultation on Urological Diseases (ICUD) this time organised the 2012 International Consultation on Incontinence (held every 4 years) jointly with the EAU as a special session and not as a separate conference as in the past. Professor Paul Abrams emphasised that the different ICI committees ultimately produce consensus statements, not to be confused with guidelines produced by a number of societies. The committee chairs presented their preliminary reports in Paris, after which they will be fine-tuned before being published as chapters in book and CD format. Further information about ICUD can be found on its website:

<http://www.icud.info/futureconsultations.html>, where previous ICI Incontinence books can be downloaded, including 2009 with its chapter on BPS.

The last ICI conference was held in 2008 and it is perhaps rather frustrating that Committee 19 on Bladder Pain Syndrome, chaired once again by Philip Hanno, MD, reported on 24 February that no major breakthroughs have been made since the previous ICI in research and/or treatment, although there is now a much better understanding of the urothelium and neurological aspects of the bladder. There have been many publications on the controversial topic of nomenclature and definitions on

which there is still no international agreement. Indeed, far from there being global consensus, Dr Hanno reported that there is an important difference of opinion with the East Asian countries of Japan, Korea and Taiwan which have their own approach to taxonomy and nomenclature in which pain is not a requirement for diagnosis. These countries take an approach which keeps all urgency-frequency syndromes in the picture, with and without pain and introduced the term hypersensitive bladder syndrome. While Committee 19 noted that Hunner's lesion is a subtype that should be treated differently to non-lesion, there was as yet no further progress or reports to report in the field of subclassification or phenotyping which are likely to play an important role in selection for specific types of treatment in the future. It is hoped that more progress will be made in the coming four-year period before the next ICI and hopefully we will see results emerging from the large-scale NIDDK MAPP project.

We will provide more detailed information on the report of Committee 19 and its recommendations when it reaches its final version and is published. There was regrettably no patient advocate on this ICI committee.

- Botulinum toxin

Bearing in mind that several IC studies presented at the EAU congress concerned botulinum toxin, it is perhaps useful to mention here that [ICI Committee 8 on Drug Treatment](#) reported different types of botulinum toxin now on the market. The various botulinum toxins possess individual potencies, and care is required to assure proper use and avoid medication errors. Recent changes to the established drug names by the FDA were intended to reinforce these differences and prevent medication errors. The available products include the following:

Botulinum toxin A

- Onabotulinumtoxin A (onabotA: Botox®)
- Abobotulinumtoxin A (abobotA: Dysport®)
- Incobotulinumtoxin A (incobotA: Xeomin®)

Botulinum toxin B

- Rimabotulinumtoxin B (rimabot B: Myobloc®)

- Excellent course on painful bladder/chronic pelvic pain in men and women

While relatively little attention was paid to IC in the EAU main scientific programme, with just a few posters being presented, an excellent ESU Course 11 was nevertheless provided, chaired by Professor J.J. Wyndaele, which made it all worthwhile. TTMed Urology webcasts happily included most of the ESU courses and everyone can therefore benefit from the superb **ESU Course 11 on Painful bladder/chronic pelvic pain in men and women**, chaired by Professor J.J. Wyndaele from Antwerp, Belgium. Other speakers were Professor J.C. Nickel from Kingston, Canada and Dr R. Posch-Zimmermann from Salzburg, Austria. Topics covered: Neurophysiology of chronic pelvic pain, causes and confusable diseases, Chronic Prostatitis and chronic pelvic pain in men, Clinical picture, diagnosis and classical treatment, Bladder Pain Syndrome BPS/IC clinical picture and diagnosis and finally Innovative treatment. To access the slides and spoken text, go to <http://www.ttmed.com/urology/> and follow instructions to access EAU 2012 or go directly to Webcast Home: <http://webcasts.prous.com/eau2012/html/1-en/template.aspx?section=1> and go to European School of Urology (ESU) Courses, Course 11.

A review of the research presented at the EAU congress related to IC and related fields can be found on the IPBF website. [Click here.](#)

REVIEW OF IAPO 5TH GLOBAL PATIENTS CONGRESS

The IPBF was one of the many organisations represented at the 5th Global Patients Congress held by the International Alliance of Patients' Organizations (IAPO) in London 17-19 March 2012. The

Congress brought together the most important voices in healthcare, those of the patients, with other healthcare stakeholders on an equal footing. Delegates from over 30 countries working across diseases and across borders came together to enable engagement and understanding of key policy issues affecting patients in the international arena.

Delegates came from as far east as China, Japan and New Zealand and as far west as Peru, the United States and Canada, with several members attending from Africa. The countries they represented varied from the most highly developed to the most under-developed. This mix brought us back to reality time and time again when the problems of the developed countries sometimes seemed to be “luxury” problems compared to the very basic problems experienced by developing countries, as pointed out by Ellos Lodzeni, presenting the Patient and Community Welfare Organisation of Malawi. Many countries – and not only developing countries - struggle with the problems of illiteracy that make health education so much more difficult as you can’t simply hand out written leaflets and need to use different approaches. It was therefore very exciting to hear about “speaking books” on many different health topics and in numerous languages from Elisabeth Matare, representing the South African Depression and Anxiety Group. Information about these speaking books can be found at: <http://www.booksofhope.com>.

- PATIENT-CENTRED HEALTHCARE

The 5th Global Patients Congress examined how we measure the extent to which patient-centred healthcare is achieved around the world. It not only highlighted examples of best practice but also examined how meaningful indicators can be developed to measure patient involvement within healthcare systems. IAPO has called for further research into the development of indicators for patient-centredness in its Patient-Centred Healthcare Indicators Review launched at this 5th Congress. The review identifies and explores current efforts to measure the patient-centredness of healthcare providers, organisations, national health systems and other stakeholders involved in healthcare provision. Throughout the Congress, many of these stakeholders highlighted the need for clarity about what it is to be patient-centred, how to measure it and track progress towards it.

- The Patient-Centred Healthcare Indicators Review

The *Patient-Centred Healthcare Indicators Review* is the first stage in a wider project being undertaken by IAPO to develop a set of process and outcome indicators that can be applied by relevant stakeholders to measure the extent and quality of their work towards operational patient-centredness. IAPO hopes this will provide a baseline measurement for patient-centredness amongst stakeholders and assist them in improving their vision, strategy and outcome in achieving patient-centredness.

According to IAPO Chair Durhane Wong-Rieger, “Patient-centred healthcare and patient engagement are no longer ‘nice-to-have’ ideas but truly at the core of healthcare mandates, programmes and initiatives. But we cannot truly meet the needs of patients without clearly defining the actions, outputs and processes that need to be implemented. The Congress provides us with a chance to do this in collaboration with all stakeholders to ensure the long term success of this project.”

The Patient-Centred Healthcare Indicators Review is open for consultation for six weeks and IAPO welcomes thoughts and suggestions from all interested parties in how to further this work towards the development of meaningful indicators of patient-centred healthcare.

It was emphasised at the Congress that the voice of patients is crucial if you want to improve any health system. However, patients should not simply be invited to the table, they should have the right to sit at that table. While patient organisations are increasingly in the picture, they do not yet have the role they should have.

Presentations from plenary and breakout sessions are available on the [website](#). Information on the full Congress programme with updates and resources are available on the [Congress webpage](#). To read thoughts of Congress participants, visit www.twitter.com/IAPOtweets / www.facebook.com/internationalallianceofpatientorganizations.

CHRONIC PELVIC PAIN PATIENT MEETING HELD IN LONDON ON 17 MARCH

A workshop hosted by the Pelvic Pain Support Network, CEO Judy Birch, was held on Saturday 17 March in the afternoon and was attended by patient representatives from pelvic pain, vulvar pain and bladder organisations from the UK and other parts of Europe, including the IPBF. This workshop was focused on working together to make the treatment of chronic pelvic and perineal pain more effective and patient-centred. The objectives were to discuss and understand perspectives and experiences of chronic pelvic pain – across different organisations; to discuss and agree the root causes and effects of ineffective care and treatment; to agree some priority areas on which participating organisations can work together and to agree on some next steps. A summary of this lively and interactive meeting will be produced by the organisers and we will keep you updated.

UPCOMING MEETINGS

- Registration fees are often too high for patient volunteers

There are a number of upcoming meetings in the field of chronic pelvic/bladder pain which are of interest to both patients and healthcare professionals. A recurrent problem for voluntary patient leaders is the unaffordability of registration fees for many of these conferences. We would like to put in a plea to all conference organisers for fee waivers or very low registration fees for voluntary patient representatives from non-profit organisations.

CONVERGENCES PP - CONVERGENCES IN PELVIPERINEAL PAIN, NÎMES, FRANCE 26-28 APRIL 2012

Convergences PP is a federative meeting on pelvipерineal pain with expert speakers in this field from around the world. For detailed information about the programme, go to:

<http://www.convergencespp.com/CPpbrochureBD.pdf>

There will be simultaneous translation French/English for the scientific programme. A number of patient representatives in this field will also be attending and this conference will be the ideal opportunity to learn about the latest developments.

ESSIC ANNUAL MEETING 2012, 10-12 MAY 2012, PORTO, PORTUGAL

This year, the ESSIC Annual Meeting will be held 10-12 May, 2012 at the Ipanema Park Hotel in Porto, Portugal. The theme of this meeting will be PAIN. Other topics will include harmonisation of guidelines and nomenclature, phenotyping (including MAPP) and pain from a patient perspective. A course on clinical diagnosis and management will be given on Saturday 12 May. Detailed information, including topics and speakers and how to register, is available on the home page of the ESSIC website: www.essic.eu.

6TH EUROPEAN CONFERENCE ON RARE DISEASES AND EURORDIS GENERAL ASSEMBLY 23-25 MAY 2012, BRUSSELS, BELGIUM

The **European Conference on Rare Diseases & Orphan Products** is an event where everyone from patients, to policy makers, healthcare professionals, industry, researchers and academics are given the opportunity to meet, exchange information and ideas and join together in the fight against rare diseases. With over 100 speakers, this annual conference covers the latest research, developments in new treatments and information regarding innovations in health care, social care and support at both European and national levels. This is a unique opportunity to network with all stakeholders in the rare disease community. Further details including the programme can be found at <http://www.rare-diseases.eu/2012/About-ECRD>.

The **EURORDIS General Assembly** for members will be held on 23 May 2012.

1ST INTERNATIONAL SENSORY BLADDER MEETING

The 1st International Sensory Bladder Meeting will be held 22-23 June, 2012 at Les Pensieres, Fondation Merieux, Veyrier du Lac, France. The Congress Language will be English. Further information from: <http://sbm2012.jimdo.com/>. This meeting offers a unique opportunity to meet and learn with some of the best experts on pelvi-perineology on a very exciting topic in a unique and captivating location.

1ST INTERNATIONAL NEURO-UROLOGY MEETING

The 1st International Neuro-Urology Meeting will be held 29-30 June 2012, at Balgrist University Hospital, Zurich, Switzerland. This exciting new initiative is being organized by the new Swiss Continence Foundation and features many top speakers from the neuro-urology world.

For information and registration, see:

<http://www.swisscontinencefoundation.ch/veranstaltungen/intro/detail.asp?IDEvent=1>

Programme information can be found at:

<http://www.swisscontinencefoundation.ch/files/Event/Final%20SCF.pdf>

Further information may be obtained from: info@swisscontinencefoundation.ch

14TH WORLD CONGRESS ON PAIN, MILAN CONVENTION CENTRE, MILAN, ITALY, 27-31 AUGUST, 2012 WITH SYMPOSIUM ON TAKING CARE OF THE PATIENT WITH CHRONIC PELVIC PAIN, SUNDAY 26 AUGUST.

“Taking Care of the Patient with Chronic Pelvic Pain” is an official satellite symposium of the 14th World Congress on Pain, organised by the International Association for the Study of Pain www.iasp-pain.org, to be held in Milan Convention Centre, 27-31 August. This symposium is organised by Pain of UroGenital Origin (PUGO), a special interest group of the IASP

1ST WORLD CONGRESS ON PELVIC PAIN, 30 MAY-1 JUNE 2013

BEURS VAN BERLAGE, AMSTERDAM, THE NETHERLANDS

This exciting 1st World Congress on Pelvic Pain in 2013 will be jointly organised by Pain of UroGenital Origin of the IASP (PUGO), the International Pelvic Pain Society (IPPS) and Convergences Pelvipereineal (ConPP). The programme will include: terminology, taxonomy and phenotyping; guidelines on diagnostics and treatment; pain management team; pain after surgery; male chronic pelvic pain; female chronic pelvic pain; myofascial aspects; psychology and sexology; neurology and nerve involvement; new developments in pain research. Further information: www.pelvicpain-meeting.com.

BOOKS, NEWSLETTERS, WEBSITES ETC

THE WOMAN'S FIBROMYALGIA TOOLKIT

By Dawn A. Marcus MD and Atul Deodhar MD

Published by DiaMedica Publishing 2012

ISBN: 978-0-9823219-6-6 (print)

ISBN: 978-1-936832-16-3 (e-book)

288 pp

www.diamedicapub.com

Fibromyalgia is steadily becoming an area of increased interest for the medical profession and particularly researchers, especially those looking at the whole spectrum of chronic pain. Many more patients are receiving a diagnosis of fibromyalgia. This book will therefore be welcomed by patients who have fibromyalgia or suspect they may have it. As the authors explain, they developed this Toolkit “as a guide to managing the symptoms of fibromyalgia, learning how to identify it,

understanding what causes it, and what treatments are worth trying.” It can help you take control of your fibromyalgia symptoms. This book is an essential part of any fibro patient’s library!

<http://www.diamedicapub.com/the-womans-fibromyalgia-toolkit/>

THE BRIGHTNESS OF HEALING

By Elspeth Scott

Paperback: 124 pages

Publisher: Upfront Publishing (January 17, 2012)

ISBN-10: 1780352352

ISBN-13: 978-1780352350

Elspeth Scott suffered from IC for a number of years, as well as other symptoms indicating a compromised immune system struggling to cope. After exploring many avenues and using a combination of alternative treatments and approaches, her health gradually began to improve and is now better than she could previously have imagined. This is her account of her recovery. It gives a personal approach to overcoming a problem that many people suffer from, offering advice to other sufferers.

VULVAL PAIN SOCIETY HANDBOOK

The Vulval Pain Society (VPS) in the United Kingdom has a useful 63 page handbook on all aspects of vulvodynia. This can be ordered directly from the VPS, price £ 10 in the UK and £ 15 outside the UK. Vulvodynia patients will find this very useful.

Vulval Pain Society, PO Box 7804, Nottingham, NG3 5ZQ.

Email: info@vulvalpainsociety.org, website: www.vulvalpainsociety.org.

UROLOGY NEWS - THE EFFECTS OF KETAMINE ON THE URINARY TRACT

[Urology News Jan/Feb 2012](#) carried an article on the effects of street ketamine on the urinary tract. The authors note that it has been used recreationally since the 1980s, was used as an adulterant in ecstasy tablets in the 1990s, but in the past decade has become more popular as a low cost party drug either alone or in combination with other drugs. A few years ago it was reported for the first time that this ketamine abuse could have deleterious effects on the urinary tract characterised by extreme frequency, urgency, urge incontinence, suprapubic pain, visible haematuria and dysuria. The mechanism of damage to the urinary tract is still unclear. Since ketamine is often taken with alcohol and sometimes other illicit drugs, the authors suggest that it could perhaps be an interaction between these that has a role in the effects on the urinary tract. Management needs a multidisciplinary approach so that patients receive the support they need to stop ketamine abuse and to comply with treatment. They believe that more research and long-term follow-up are needed since ketamine abuse is becoming increasingly widespread. Better education of general practitioners is also needed to ensure that they can identify potential ketamine users – especially young users - presenting with urinary tract disorders.

Authors of the article on The Effects of Ketamine on the Urinary Tract in Urology News (pp 10-13) were Linton KD, Inman RD, Smith DJ.

CAMPBELL-WALSH UROLOGY, 10TH EDITION

By Alan J. Wein, MD, PhD(hon), Louis R. Kavoussi, MD, Andrew C. Novick, MD, Alan W. Partin, MD, PhD and Craig A. Peters, MD, FACS, FAAP

Publisher: Elsevier Saunders 2012

pp 4320

ISBN: 978-1-4160-6911-9

This 10th edition of Campbell-Walsh Urology once again has a chapter (Chapter 12) on Bladder Pain Syndrome (Interstitial Cystitis) and Related Disorders by Philip M. Hanno, MD. It covers: definition, historical perspective, epidemiology, etiology, pathology, diagnosis, classification, treatment and principles of management.

RESEARCH HIGHLIGHTS

A REVIEW OF SELECTED RECENT SCIENTIFIC LITERATURE ON INTERSTITIAL CYSTITIS AND RELATED DISORDERS

A continually updated selection of new scientific literature can be found on our website: <http://www.painful-bladder.org/pubmed.html>. Most of these have a direct link to the PubMed abstract if you click on the title. An increasing number of scientific articles “In Press” or “Early View” are being published early online (on the Journal website) as “Epub ahead of print” sometimes long before they are published in the journals. While abstracts are usually available on PubMed, the pre-publication articles can only be read online if you have online access to that specific journal. However, in some cases there may be free access to the full article online. Click on the title to go to the PubMed abstract or to the full article in the case of free access.

Terminology: different published articles 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 article, we generally use the terminology used by the authors.

CHRONIC PELVIC PAIN SYNDROME/BLADDER PAIN SYNDROME: TAKING STOCK, LOOKING AHEAD: ICI-RS 2011.

*Hanno P, Andersson KE, Birder L, Elneil S, Kanai A, Pontari M. *Neurourol Urodyn.* 2012 Mar;31(3):375-83. doi: 10.1002/nau.22202. Epub 2012 Mar 13. PMID: 22431262*

This review reflects the presentations and subsequent discussions at the International Consultation on Incontinence Research Society's (ICI-RS) annual meeting in 2011. It updates the current definitions and diagnostic and treatment algorithms for bladder pain syndrome and chronic pelvic pain syndrome (non-bacterial prostatitis), highlights some specific basic research findings from discussion participants, looks at what we can hope to eventually learn from a large multicenter National Institutes of Health study, reviews future research pathways as articulated by the National Urologic Research Agenda of the American Urological Association and others, discusses recent therapeutic efforts, and concludes with discussion points from the ICI-RS meeting.

HOW DOES THE UROTHELIUM AFFECT BLADDER FUNCTION IN HEALTH AND DISEASE?: ICI-RS 2011.

*Birder L, Ruggieri M, Takeda M, van Koeveringe G, Veltkamp S, Korstanje C, Parsons B, Fry C. *Neurourol Urodyn.* 2012 Mar;31(3):293-299. doi: 10.1002/nau.22195. Epub 2012 Jan 24. PMID: 22275289*

The urothelium is a multifunctional tissue that not only acts as a barrier between the vesical contents of the lower urinary tract and the underlying tissues but also acts as a sensory organ by transducing physical and chemical stresses to the attendant afferent nervous system and underlying smooth muscle. This review considers the nature of the stresses that the urothelium can transduce; the transmitters that mediate the transduction process; and how lower urinary pathologies, including overactive bladder syndrome, painful bladder syndrome and bacterial infections, are associated with alterations to this sensory system. In particular, the role of muscarinic receptors and the TRPV channels system are discussed in this context. The urothelium also influences the contractile state of detrusor smooth muscle, both through modifying its contractility and the extent of spontaneous activity; potential pathways are discussed. The potential role that the urothelium may play in bladder underactivity is introduced, as well as potential biomarkers for the condition that may cross the urothelium to the urine. Finally, consideration is given to vesical administration of therapeutic agents that influence urinary tract function and how the properties of the urothelium may determine the effectiveness of this mode of delivery. The authors conclude by saying: “The lower urinary tract is

ideally suited for minimally invasive intravesical treatments. Thus, continued research efforts are needed not only to improve our understanding of the pathophysiological mechanisms that underlie bladder dysfunction, but also to improve our knowledge of the chemical and physical properties of the bladder wall and the processes that regulate drug transport across it.”

INTERSTITIAL CYSTITIS: DIAGNOSIS AND MANAGEMENT.

Vij M, Srikrishna S, Cardozo L. Eur J Obstet Gynecol Reprod Biol. 2012 Mar;161(1):1-7. Epub 2012 Feb 4. PMID: 22310942

Interstitial cystitis/painful bladder syndrome is a chronic condition that causes debilitating bladder pain which can be associated with urgency, frequency and nocturia. Its cause is not clear and it is still a disease diagnosed by exclusion. Oral or intravesical therapies are the main stay of treatment whilst surgical procedures are reserved for refractory cases. This condition usually warrants a multidisciplinary approach for optimum outcome. This article from the UK gives an overview of the changes in definition, aetiopathogenesis and available treatments.

[COMPLEX LOCAL AND CENTRAL THERAPY OF INTERSTITIAL CYSTITIS WITH DEVICES AMUS-01-INTRAMAG AND AMO-ATOS-E].

[Article in Russian]

Rokhlov IM, Raigorodskii IuM, Timoshenko VO, Otradnov MV. Urologiia. 2011 Sep-Oct;(5):15, 17-20. PMID: 22279780

A total of 86 females with interstitial cystitis (IC) aged 26-52 years with the disease history over 2.7 years were exposed to intravesical electrostimulation in combination with electromagnetophoresis of heparin-containing mixture of medicines. Relief of pain syndrome and elimination of central hypersensitization were achieved with local procedures on the urinary bladder (UB) alternating (every other day) with procedures of transcranial electrostimulation (TES-therapy, mesodiencephalic modulation). The authors report that the above treatment proved effective: subjective assessment of pain lowered to "rare" in 60% females, urgency decreased 2-fold, mean effective volume of the bladder increased by 46.2%.

DIET AND ITS ROLE IN INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME (IC/BPS) AND COMORBID CONDITIONS.

Friedlander JJ, Shorter B, Moldwin RM. BJU Int. 2012 Jan 11. doi: 10.1111/j.1464-410X.2011.10860.x. [Epub ahead of print]. PMID: 22233286

Friedlander and colleagues from the US note that nearly 90% of patients with interstitial cystitis/bladder pain syndrome (IC/BPS) report sensitivities to a wide variety of dietary comestibles. Current questionnaire-based literature suggests that citrus fruits, tomatoes, vitamin C, artificial sweeteners, coffee, tea, carbonated and alcoholic beverages, and spicy foods tend to exacerbate symptoms, while calcium glycerophosphate and sodium bicarbonate tend to improve symptoms. At present they recommend employing a controlled method to determine dietary sensitivities, such as an elimination diet, in order to identify sensitivities while at the same time maintain optimal nutritional intake. In this article, they review current literature with regard to diet's effect upon IC/BPS and common comorbidities (irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, neuropathic pain, vulvodynia, and headache) with a focus upon questionnaire-based investigations. They discuss the pathologic mechanisms that may link diet and IC/BPS related-pain, concentrating upon specific comestibles such as acidic foods, foods high in potassium, caffeine, and alcohol.

SPONTANEOUS BLADDER RUPTURE FOLLOWING CYSTOSCOPY WITH HYDRODISTENTION AND BIOPSY IN A FEMALE PATIENT WITH INTERSTITIAL CYSTITIS.

Platte RO, Parekh M, Minassian VA, Poplawsky D. Female Pelvic Med Reconstr Surg. 2011 May;17(3):149-52. PMID: 22453789

The authors report a case of remote spontaneous rupture of urinary bladder following cystourethroscopy with hydrodistention and a bladder biopsy in a patient with interstitial cystitis. This required abdominal exploration with cystorrhaphy. This case emphasizes a unique and dangerous complication of this procedure in a patient with interstitial cystitis.

SACRAL NERVE STIMULATION DURING PREGNANCY: CASE REPORT AND REVIEW OF THE LITERATURE.
El-Khawand D, Montgomery OC, Wehbe SA, Whitmore KE. Female Pelvic Med Reconstr Surg. 2012 Mar-Apr;18(2):127-9. PMID: 22453325

The use of sacral nerve stimulation during pregnancy is not recommended because of the unknown effects on the offspring. There is a paucity of literature on the subject. This case study from Philadelphia concerns a 25-year-old woman who had a sacral nerve stimulator for severe interstitial cystitis/bladder pain syndrome and who had had 2 successful pregnancies. Against medical advice, she kept the stimulator activated for symptom control during the pregnancies. The first child was later diagnosed with chronic motor tic disorder, and the second had a pilonidal sinus at birth. Whether this outcome is related to the neurostimulator is unknown. The efficacy of sacral nerve stimulation decreased after each pregnancy. The safety of sacral nerve stimulation in pregnancy has not been well established. Until further research is done, the authors recommend that women of reproductive age with a sacral nerve stimulator be advised about contraception and that the device should be deactivated before or as soon as pregnancy is confirmed.

GENE EXPRESSION ANALYSIS OF URINE SEDIMENT: EVALUATION FOR POTENTIAL NONINVASIVE MARKERS OF INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME.
Blalock EM, Korreect GS, Stromberg AJ, Erickson DR. J Urol. 2012 Feb;187(2):725-32. Epub 2011 Dec 16. PMID: 22177197

In this study from Kentucky, Blalock and colleagues determined whether gene expression profiles in urine sediment could provide noninvasive markers for interstitial cystitis/bladder pain syndrome with and/or without Hunner lesions. Fresh catheterized urine was collected and centrifuged from 5 controls, and 5 Hunner lesion-free and 5 Hunner lesion bearing patients. RNA was extracted from pelleted material and quantified by gene expression microarray using the GeneChip® Human Gene ST Array. Three biologically likely hypotheses were tested, including 1) all 3 groups are distinct from each other, 2) controls are distinct from the 2 types combined of patients with interstitial cystitis/bladder pain syndrome and 3) patients with Hunner lesion-interstitial cystitis/bladder pain syndrome are distinct from controls and patients with nonHunner-lesion interstitial cystitis/bladder pain syndrome combined. For statistical parity an unlikely fourth hypothesis was included, that is patients with nonHunner-lesion interstitial cystitis/bladder pain syndrome are distinct from controls and patients with Hunner lesion-interstitial cystitis/bladder pain syndrome combined. Analysis supported selective up-regulation of genes in the Hunner lesion interstitial cystitis/bladder pain syndrome group (hypothesis 3), which were primarily associated with inflammation. The inflammatory profile was statistically similar to that reported in a prior Hunner lesion interstitial cystitis/bladder pain syndrome bladder biopsy study. Gene expression analysis of urine sediment was feasible in this pilot study. It was interesting to note that expression profiles failed to discriminate nonHunner-lesion interstitial cystitis/bladder pain syndrome from controls and they are therefore unlikely to be a noninvasive marker for nonHunner-lesion interstitial cystitis/bladder pain syndrome. In contrast, patients with Hunner lesion had increased proinflammatory gene expression in urine sediment, similar to that in a prior microarray study of bladder biopsies. If these preliminary results are validated in future research, they may lead to a noninvasive biomarker for Hunner lesion-interstitial cystitis/bladder pain syndrome.

RISK FACTORS THAT AFFECT THE TREATMENT OF INTERSTITIAL CYSTITIS USING INTRAVESICAL THERAPY WITH A DIMETHYL SULFOXIDE COCKTAIL.
Hung MJ, Chen YT, Shen PS, Hsu ST, Chen GD, Ho ES. Int Urogynecol J. 2012 Mar 17. [Epub ahead of print]. PMID: 22426874

Hung and colleagues from Taiwan note that while dimethyl sulfoxide (DMSO) bladder instillation is a standard therapy for interstitial cystitis (IC, there however are varying degrees of success. They hypothesize that first-line intravesical therapy with a DMSO cocktail will optimize treatment outcome. In this study, ninety women with newly diagnosed IC were enrolled consecutively for the treatment. The IC symptom and problem index was used as an outcome measure. Six (6.7%) patients dropped out of the treatment due to intolerable bladder irritation. Fifty-five (65.5%) of the remaining 84 patients, who completed the treatment, experienced $\geq 50\%$ symptomatic improvement. After a regression analysis, three clinical variables were found to affect treatment adversely, i.e., the presence of advanced cystoscopic glomerulations, microscopic hematuria, and urodynamic detrusor underactivity, respectively. The authors conclude that their results suggest that bladder instillation with a DMSO cocktail may well be considered as first-line therapy for IC patients. However, there exists a subgroup of nonresponders who may have severe disease.

INTRAVESICAL APPLICATION OF LIDOCAINE AND SODIUM BICARBONATE IN THE TREATMENT OF OBSTRUCTIVE IDIOPATHIC LOWER URINARY TRACT DISEASE IN CATS.

Zeza L, Reusch CE, Gerber B. J Vet Intern Med. 2012 Mar 22. doi: 10.1111/j.1939-1676.2012.00911.x. [Epub ahead of print]. PMID: 22435459

Zeza and colleagues from the Clinic of Small Animal Internal Medicine, University of Zurich, Zurich, Switzerland, report that in human patients with interstitial cystitis, intravesical instillation of alkalinized lidocaine sometimes is associated with sustained amelioration of symptoms beyond the acute treatment phase. Interstitial cystitis shares many features in common with feline idiopathic cystitis. The purpose of this study was to evaluate whether intravesical instillation of alkalinized lidocaine decreases recurrence of urethral obstruction and severity of clinical signs in cats with obstructive idiopathic LUTD. Twenty-six cats with obstructive idiopathic LUTD participated: 12 cats in the case group (treatment with alkalinized lidocaine) and 14 control cats (treatment with placebo or standard treatment). They found that recurrence of urethral obstruction was 58% (7/12) in the case group and 57% (8/14) in the control group. Amelioration scores were similar between the 2 groups. They concluded that intravesical administration of lidocaine for up to 3 consecutive days had no apparent beneficial effect on decreasing recurrence rate and severity of clinical signs in cats with obstructive idiopathic LUTD.

[RELATIONSHIPS AMONG CLINICAL SYMPTOMS, BLADDER CONDITION, AND SUBJECTIVE PERCEPTIONS IN PATIENTS WITH INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME].

[Article in Chinese]

Lee PR, Yeh HL, Kuo HC, Lee RP, Peng TC, Subeq YM. Hu Li Za Zhi. 2012 Feb;59(1):51-60. PMID: 22314650

Interstitial cystitis (IC) is a silent challenge for patients. Various symptoms related to IC are causes of physical disability and mental distress. This study from Taiwan investigated the relationships between clinical symptoms, bladder condition and patient perceptions. This study enrolled 107 patients diagnosed with interstitial cystitis at a medical centre in eastern Taiwan and employed a cross-sectional design. Patient medical charts were reviewed. Structural questionnaires were used to collect data. Participants with a high symptom problem index had poor bladder compliance, severe glomerulation and high visual analog scale (VAS) scores. There was a positive correlation between Hunner's ulcer and a high VAS score. Patients with severe lower urinary symptoms, low competency and severe glomerulation earned significantly higher patient perception of bladder condition scores. This study found significant correlations between clinical symptoms, bladder condition and patient perceptions. This study may help enhance nursing staff knowledge of IC clinical symptoms so that they may provide appropriate interventions and education to improve patient self-care abilities and life quality.

[CORRELATIONS AMONG DISEASE PERCEPTIONS, ATTITUDES AND SELF-CARE BEHAVIORS IN PATIENTS WITH INTERSTITIAL CYSTITIS].

[Article in Chinese]

Yeh HL, Kuo HC, Lin ZC, Lee RP. Hu Li Za Zhi. 2012 Feb;59(1):30-40. PMID: 22314648

Interstitial cystitis (IC) is an enigmatic disease that currently remains incurable. Failure to adopt positive self-care behaviours can exacerbate recurrent clinical symptoms and significantly affect a patient's capacity to function normally in work, family and social setting. Proper disease perception can improve patient attitudes toward disease management and positively influence behaviour. This study from Taiwan investigated correlations between disease perceptions, attitudes and self-care behaviours in patients with interstitial cystitis. This study used a cross-sectional method and enrolled 82 outpatients currently receiving treatment for interstitial cystitis at a medical centre in East Taiwan. A structured questionnaire filled out individually and submitted by mail was used for data collection. They found positive correlations among disease perceptions, attitudes and self-care behaviours in patients with interstitial cystitis. They strongly recommend that all healthcare providers evaluate patient disease perception extent. Nurses should provide patients with correct disease concepts, and encourage positive attitudes and self-caring behaviours toward interstitial cystitis.

BLADDER PAIN SYNDROME: A REVIEW.

Adams K, Denman MA. Female Pelvic Med Reconstr Surg. 2011 Nov;17(6):279-89. PMID: 22453222

Adams and Denman from Portland, note that bladder pain syndrome (BPS) is a chronic condition characterized by bladder, urethral, and pelvic pain, urinary urgency and urinary frequency. Bladder pain syndrome poses many clinical challenges:

- The diagnosis is one of exclusion and is often inappropriately assigned;
- A wide-range spectrum of symptoms can be noted in the population from minimally affected to debilitated; and
- The etiology for the disease is unknown, which has made the development of directed therapies problematic.

The objective of this article was to review the current theories of etiology of BPS and the diagnosis of BPS and understand treatment options including surgical, complementary, and pharmaceutical.

LONG-TERM EXPERIENCE WITH SURGICAL TREATMENT OF SELECTED PATIENTS WITH BLADDER PAIN SYNDROME/INTERSTITIAL CYSTITIS.

Andersen AV, Granlund P, Schultz A, Talseth T, Hedlund H, Frich L. Scand J Urol Nephrol. 2012 Mar 27. [Epub ahead of print]. PMID: 22452583

The role of major surgery in patients with bladder pain syndrome/interstitial cystitis (BPS/IC) is not fully established. This report from Oslo, Norway presents a single-institution experience with major surgery in patients with disabling BPS/IC where conservative treatment had failed. Forty-one patients (34 women, seven men) with BPS/IC refractory to conservative treatment underwent major surgery from 1983 to 2004. Surgical approach was determined on a case-by-case basis. Postoperative pain and satisfaction were assessed by a questionnaire. Cystectomy was the primary procedure in five patients. The remaining 36 patients were primarily operated on with subtotal cystectomy and bladder augmentation (n = 16) or suprapubic urinary diversion with intact bladder (n = 20). Thirteen of these patients were later operated on with cystectomy due to persisting pain 12 (6-146) months after the primary procedure. The questionnaire was answered by 38 of 41 patients after a median follow-up of 66 (6-238) months. In total, 28 patients (74%) were free of pain, and 26 patients (68%) were satisfied with the end result. There was no difference in reported pain between cystectomized and non-cystectomized patients. When comparing patients who reported pain at follow-up with those who did not report pain, preoperative length of symptoms was significantly increased, with 12.1 compared to 5.4 years (p = 0.02). The authors concluded that major surgery is associated with good symptom relief in strictly selected patients with disabling BPS/IC, where conservative treatment has failed. Extended preoperative duration of symptoms may be a predictor for persisting pain after major surgery for BPS/IC.

MAPPING THE CYTOKINE PROFILE OF PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS IN HUMAN BLADDER AND URINE SPECIMENS.

Corcoran AT, Yoshimura N, Tyagi V, Jacobs B, Leng W, Tyagi P. World J Urol. 2012 Mar 24. [Epub ahead of print]. PMID: 22441309

This study from Pittsburgh investigated the cytokine profile in bladder tissue and urine of painful bladder syndrome/interstitial cystitis (PBS/IC) patients. Multiplex analysis of 23 cytokines was performed with a multiple antigen bead assay (Luminex 100 IS) on cold cup bladder biopsy and urine specimens collected during cystoscopy with hydrodistention (HD) under general anesthesia from 10 PBS/IC patients (ICS definition). Collected tissue specimens and urine from pre-HD and post-HD (mean 27 days) were compared to banked urine and tissue specimens (n = 10) collected from control subjects without PBS/IC symptoms. They concluded that their results indicate significant elevation of cytokines in PBS/IC bladder tissue relative to controls. Significant reduction in post-HD urine levels of MCP-3 and TRAIL relative to pre-HD in PBS/IC was associated with clinical improvement (as measured by PBS/IC symptom scores) to qualify them as biomarker candidates.

BLADDER AUGMENTATION USING THE GASTROINTESTINAL TRACT. INDICATION, FOLLOW UP AND COMPLICATIONS.

[Article in English, Spanish]

Molina Escudero R, Escribano Patiño G, Rodríguez Fernández E, Cancho Gil MJ, Lledó García E, Husillos Alonso A, Ogaya Piniés G, Piñeiro Sánchez J, Hernández Fernández C. Arch Esp Urol. 2011 Dec;64(10):953-959. PMID: 22228893

The purpose of bladder augmentation using the gastrointestinal tract is to create a low-pressure and high-capacity reservoir, permitting suitable continence and voiding, preserving the upper urinary tract. The purpose of this study from Madrid was to analyze the indications, complications and results of a series of augmentation enterocystoplasties. The authors retrospectively reviewed patients undergoing augmentation enterocystoplasty in our department between 1997 and 2010, both included. The indications were: Interstitial cystitis, neurogenic bladder and inflammatory bladder retraction. In all cases a cystography, urethrocystoscopy, urodynamic study and studies of each condition. Bladder release is performed by means of medial laparotomy and an extraperitoneal approach with bivalve opening to the urethral orifices. The bladder augmentation is performed with a 15-20 cm segment of detubularized ileum obtained at 20 cm from the ileocecal valve; in cases of kidney failure, a 7-cm gastric body wedge is added. The bladder catheter was removed following cystogram after 15 days. Monitoring was performed by means of ultrasound with postvoid residual, blood analyses, urine culture and voiding diary. They performed a descriptive study of the demographic characteristics, postoperative complications according to the Clavien classification and in the long term. They concluded from their results that in selected patients, augmentation enterocystoplasty constitutes an efficacious therapeutic option in the treatment of lower urinary tract dysfunction with scant morbidity and few complications.

WATER AVOIDANCE STRESS INDUCES FREQUENCY THROUGH CYCLOOXYGENASE-2 EXPRESSION: A BLADDER RAT MODEL.

Yamamoto K, Takao T, Nakayama J, Kiuchi H, Okuda H, Fukuhara S, Yoshioka I, Matsuoka Y, Miyagawa Y, Tsujimura A, Nonomura N. Int J Urol. 2012 Feb;19(2):155-62. doi: 10.1111/j.1442-2042.2011.02905.x. Epub 2011 Dec 5. PMID: 22142485

Water avoidance stress is a potent psychological stressor and it is associated with visceral hyperalgesia, which shows degeneration of the urothelial layer mimicking interstitial cystitis. Cyclooxygenase-2 inhibitors have been recognized to ameliorate frequency both in clinical and experimental settings. Yamamoto and colleagues from Osaka, Japan investigated the voiding pattern and cyclooxygenase-2 expression in a rat bladder model of water avoidance stress. After being subjected to water avoidance stress or a sham procedure, rats underwent metabolic cage analysis and cystometry. Real time reverse transcription polymerase chain reaction was carried out to examine cyclooxygenase-2 messenger ribonucleic acid in bladders of rats. Protein expression of

cyclooxygenase-2 was analyzed with immunohistochemistry and western blotting. Furthermore, the effects of the cyclooxygenase-2 inhibitor, etodolac, were investigated by carrying out cystometrography, immunohistochemistry and western blotting. Metabolic cage analysis and cystometrography showed significantly shorter intervals and less volume of voiding in water avoidance stress rats. Significantly higher expression of cyclooxygenase-2 messenger ribonucleic acid was verified by reverse transcription polymerase chain reaction. Immunohistochemistry and western blotting showed significantly higher cyclooxygenase-2 protein levels in water avoidance stress bladders. Furthermore, immunohistochemistry showed high cyclooxygenase-2 expression exclusively in smooth muscle cells. All water avoidance stress-induced changes were reduced by cyclooxygenase-2 inhibitor pretreatment. They concluded that chronic stress might cause frequency through cyclooxygenase-2 gene upregulation in bladder smooth muscle cells. Further study of cyclooxygenase-2 in the water avoidance stress bladder might provide novel therapeutic modalities for interstitial cystitis.

BOTULINUM TOXIN TYPE A FOR THE TREATMENT OF LOWER URINARY TRACT DISORDERS.

Yokoyama T, Chancellor MB, Oguma K, Yamamoto Y, Suzuki T, Kumon H, Nagai A. Int J Urol. 2012 Jan 6. doi: 10.1111/j.1442-2042.2011.02946.x. [Epub ahead of print]. PMID: 22220916

Many papers report the clinical success of botulinum toxin A as a method of management of various bladder dysfunctions. The rationale was that botulinum toxin A was able to block the presynaptic release of acetylcholine from the parasympathetic efferent nerve. The efficacy might result not only from an inhibitory effect on detrusor muscle, but also some effects might be mediated by altering the afferent nerve input. This systematic literature review discusses the efficacy and safety of botulinum toxin A therapy for idiopathic detrusor overactivity, neurogenic detrusor overactivity, interstitial cystitis/painful bladder syndrome and benign prostatic hyperplasia. The information was gathered from a PubMed literature research for abstracts from recent urological meetings. Injection of botulinum toxin A appears to have a positive therapeutic effect in multiple urological conditions, such as refractory idiopathic detrusor overactivity, neurogenic detrusor overactivity, interstitial cystitis/painful bladder syndrome and benign prostatic hyperplasia. Because the United States Food and Drug Administration has approved botulinum toxin A (Botox) for injection for the treatment of urinary incontinence as a result of neurogenic detrusor overactivity (e.g. spinal cord injury, multiple sclerosis) in adults who have an inadequate response to or are intolerant of an ant cholinergic medication, the use of botulinum toxin A will spread and be a more familiar therapy in the urological arena. However, further robust evidence should be awaited. The authors discuss the current use of this agent within the urological field.

PRIMARY MALT LYMPHOMA OF THE URINARY BLADDER IN THE BACKGROUND OF INTERSTITIAL CYSTITIS. (Letter to the Editor)

Morita K, Nakamura F, Nannya Y, Nomiya A, Arai S, Ichikawa M, Homma Y, Kurokawa M. Ann Hematol. 2012 Feb 3. [Epub ahead of print]. PMID: 22297664

MALT lymphoma is an uncommon form of Non-Hodgkin Lymphoma (NHL). MALT stands for 'Mucosa-Associated Lymphoid Tissue'. Unlike most other lymphomas that occur in lymph nodes (or lymph glands), this lymphoma arises from lymph tissue present in the lining of some other organs of the body. In this Letter to the Editor, Morita and colleagues from Tokyo, Japan describe the first case of primary bladder MALT lymphoma that occurred in the setting of interstitial cystitis.

INCREASED CELL APOPTOSIS OF UROTHELIUM MEDIATED BY INFLAMMATION IN INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME.

Shie JH, Liu HT, Kuo HC. Urology. 2012 Feb;79(2):484.e7-484.e13. PMID: 22310775

The objective of this study by Shie and colleagues from Taiwan was to investigate whether bladder inflammation could directly modulate the signaling pathway of increased urothelial cell apoptosis in interstitial cystitis/painful bladder syndrome (IC/PBS). Chronic inflammation and impaired urothelial homeostasis are possible pathogenesis of IC/PBS. A total of 29 patients with IC/PBS and 5

control patients were enrolled in the present study. Double stain, protein array analysis, and Western blotting were performed to analyze the alterations of caspase 3, Bad, Bax, phospho-p53, phospho-p38 α , and tumor necrosis factor- α (TNF- α) in bladder mucosa specimens from patients with IC/PBS and control patients. The intensities of the proteins in the arrays and Western blots were quantified using ImageJ processing. Inflammatory molecule-treated urothelial cells were analyzed using terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nick end labelling staining and Western blotting for the level of molecules involved in apoptosis. Phospho-p38 and terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nick end labeling double staining indicated that inflammatory and apoptotic events coexisted in the IC/PBS bladder. Protein-antibody array analysis showed that several inflammatory molecules were increased in the IC/PBS samples. They also found that the levels of pro-apoptotic proteins, including phospho-p53 (Ser 15), Bad, Bax, and cleaved caspase-3 were significantly increased in the IC/PBS bladders. These results were confirmed by immunoblotting and suggested that the tissue damage and abnormal urothelium in the IC/PBS bladder might be regulated concurrently by inflammatory signals, such as p38 mitogen-activated protein kinase and TNF- α . The in vitro analysis also showed that the apoptotic process could be induced by TNF- α treatment and anisomycin stimulation in normal urothelial cells. The authors concluded that apoptosis of urothelial cells in patients with IC/PBS could result from upregulation of inflammatory signals, including p38 mitogen-activated protein kinase and TNF- α .

POTENTIAL FACTORS THAT CAN BE USED TO DIFFERENTIATE BETWEEN INTERSTITIAL CYSTITIS/PAINFUL BLADDER SYNDROME AND BLADDER OVERSENSITIVITY IN WOMEN.

Kuo YC, Kuo HC. Int J Clin Pract. 2012 Feb;66(2):146-51. doi: 10.1111/j.1742-1241.2011.02767.x. Epub 2011 Sep 26. PMID: 21951755

Kuo and colleagues note that there is considerable overlap between symptoms of interstitial cystitis/painful bladder syndrome (IC/PBS) and bladder oversensitivity, thereby making it difficult to differentiate between the two based on symptoms alone. In this study, they investigated factors that could potentially be used to differentiate between IC/PBS and bladder oversensitivity in women.

Video-urodynamic study (VUDS) results in women with lower urinary tract symptoms (LUTS) were retrospectively analysed. Patients classified as having increased bladder sensation (IBS) were selected for analysis. A potassium chloride (KCl) test was performed and pain or urgency elicited was considered positive response. Cystoscopic hydrodistention demonstrating glomerulation was considered diagnosis of IC/PBS; otherwise bladder oversensitivity was diagnosed. LUTS, urodynamic variables and results of the KCl test were used to predict IC/PBS in these women. They concluded that a diagnosis of IC/PBS can be made without cystoscopic hydrodistention in women with increased bladder sensation, having storage symptoms, a CBC \leq 350 ml, a positive KCl test result and a VAS score \geq 2.

Note regarding use of term oversensitivity in this article. This originates from the 2010 IUGA/ICS joint report on the terminology for female pelvic floor dysfunction: *An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction.* Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, Monga A, Petri E, Rizk DE, Sand PK, Schaer GN; International Urogynecological Association; International Continence Society. *Neurourol Urodyn. 2010;29(1):4-20.*

DIAGNOSIS OF INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME IN WOMEN WITH CHRONIC PELVIC PAIN: A PROSPECTIVE OBSERVATIONAL STUDY.

Cheng C, Rosamilia A, Healey M. Int Urogynecol J. 2012 Mar 8. [Epub ahead of print]. PMID: 22398828

This study from Cheng and colleagues in Australia assesses the prevalence of interstitial cystitis (IC)/bladder pain syndrome (BPS) in women with chronic pelvic pain (CPP). This was a prospective study of 150 women undergoing laparoscopy as investigation for CPP in an Endometriosis and Pelvic Pain unit. Preoperative questionnaires [demographic details, pelvic pain symptoms, the Pelvic Pain and Urgency/Frequency (PUF) and O'Leary-Sant (OLS) Symptom and Problem Index scores] were completed, and concurrent standardized cystoscopy with hydrodistention performed at laparoscopy. The primary outcome measures the proportion of IC in this group, defined by presence of

glomerulations with CPP and urinary symptoms (urinary frequency, nocturia, urgency). The secondary outcome measures the proportion of BPS [defined by the European Society of the Study of Interstitial Cystitis (ESSIC)]. IC was diagnosed in 48/150 (32%) individuals, and 80/150 (53%) had BPS. There were no significant differences in symptomatology or questionnaire results between groups with and without IC. Women with BPS had higher PUF (17.2 vs 12.9, $p < 0.001$), OLS Symptom (8.2 vs 6.0, $p = 0.001$) and Problem (7.5 vs 4.2, $p < 0.001$) scores and more severe pain symptoms. Visually proven endometriosis was seen in 90/150 (60%), and 27/150 (18%) had both endometriosis and IC. Of the 80 women with BPS, 45/80 (60%) had endometriosis. The prevalence of IC/BPS varies depending on the definition used. This study showed IC in 32% of women with CPP based on symptoms and presence of glomerulations. BPS as defined by ESSIC was diagnosed in 53%. History and questionnaires did not correlate with positive cystoscopic findings.

BLADDER PAIN SYNDROME ASSOCIATED WITH HIGHEST IMPACT ON SEXUAL FUNCTION AMONG WOMEN WITH LOWER URINARY TRACT SYMPTOMS.

Sacco E, D'Addessi A, Racioppi M, Pinto F, Totaro A, Bassi P. Int J Gynaecol Obstet. 2012 Feb 21. [Epub ahead of print]. PMID: 22361478

The purpose of this Italian study was to investigate the differential impact of lower urinary tract symptoms (LUTS) on female sexual function (FSF). In a cross-sectional study in Agostino Gemelli Hospital, Rome, Italy, 188 sexually active patients with LUTS, as assessed by self-reported questionnaires, underwent comprehensive urologic and urodynamic examination between January 2008 and December 2010. Patients with urinary incontinence, voiding-phase LUTS, overactive bladder (OAB), and bladder pain syndrome (BPS) were included. FSF was assessed by PISQ-12 questionnaire, and scores (0-100; higher scores indicate worse FSF) were compared between the patients and a group of age-matched women without LUTS. PISQ-12 scores of different clinical and urodynamic patient subgroups were also compared by multivariate analysis. The global PISQ-12 mean score was significantly higher among patients with LUTS (32.7) than among controls (18.4; $P < 0.0001$). Women with BPS reported the highest global PISQ-12 score (46.1), followed by those with urodynamic detrusor overactivity (45.0), clinical urgency (41.4), mixed (37.7) and stress urinary incontinence (28.1), dry OAB (22.2) and voiding-phase LUTS (19.6). Age, urinary incontinence, BPS, and detrusor overactivity were independent predictors of FSF. The authors concluded that BPS was associated with the greatest impairment of FSF among women with LUTS. Clinical and urodynamic urgency-type urinary incontinence affected FSF more markedly than other types.

TRANSIENT RECEPTOR POTENTIAL A1 RECEPTOR-MEDIATED NEURAL CROSS-TALK AND AFFERENT SENSITIZATION INDUCED BY OXIDATIVE STRESS: IMPLICATION FOR THE PATHOGENESIS OF INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME.

Furuta A, Suzuki Y, Hayashi N, Egawa S, Yoshimura N. Int J Urol. 2012 Feb 21. doi: 10.1111/j.1442-2042.2012.02966.x. [Epub ahead of print]. PMID: 22353309

Although the pathogenesis of interstitial cystitis/bladder pain syndrome remains unknown, there is a significant correlation of interstitial cystitis/bladder pain syndrome with other chronic pain disorders, such as irritable bowel syndrome, endometriosis and fibromyalgia syndrome. In this review from Pittsburgh and Tokyo, Furuta and colleagues highlight evidence supporting neural cross-talk in the dorsal root ganglia, spinal cord and brain levels, which might play a role in the development of chronic pain disorders through central sensitization. In addition, they focus on transient receptor potential V1 and transient receptor potential A1 as the receptor targets for chronic pain conditions, because transient receptor potential V1 and transient receptor potential A1 act as a nociceptor to mediate not only an afferent signal to the dorsal horn of the spinal cord, but also an efferent signal in the periphery through secretion of inflammatory agents, such as substance P and calcitonin gene-related peptide in nociceptive sensory neurons. Furthermore, peripheral inflammation produces multiple inflammatory mediators that act on their cognate receptors to activate intracellular signal transduction pathways and thereby modify the expression and function of transient receptor potential V1 and transient receptor potential A1 (peripheral sensitization). During tissue damage and

inflammation, oxidative stress, such as reactive oxygen species or reactive carbonyl species is also generated endogenously. The highly diffusible nature might account for the actions of free radical formation far from the site of injury, thereby producing systemic pain conditions without central sensitization through neural cross-talk. Because oxidative stress is considered to induce activation of transient receptor potential A1, they also discuss exogenous and endogenous oxidative stress to elucidate its role in the pathogenesis of interstitial cystitis/bladder pain syndrome and other chronic pain conditions.

DO THE URINARY BLADDER AND LARGE BOWEL INTERACT, IN SICKNESS OR IN HEALTH?: ICI-RS 2011.

Malykhina AP, Wyndaele JJ, Andersson KE, De Wachter S, Dmochowski RR. NeuroUrol Urodyn. 2012 Mar;31(3):352-8. doi: 10.1002/nau.21228. Epub 2012 Feb 29. PMID: 22378593

Normal functioning of the urinary bladder and the distal gut is an essential part of daily physiological activity coordinated by the peripheral and central nervous systems. Pathological changes in one of these organs may induce the development of cross-organ sensitization in the pelvis and underlie clinical co-morbidity of genitourinary and GI dysfunctions. Experimental human and animal data suggest that the bladder and distal colon interact under both normal and pathological conditions, however, the directions of these interactions can change dramatically depending on the nature and duration of the applied stimuli. This review article aimed to summarize the clinical data on colon-bladder cross-reflexes in healthy individuals, as well as in patients with co-morbid disorders. It also discusses currently used animal models, experimental approaches, and suggested mechanisms of colon-bladder cross-talk. Additionally, it provides an overview of the potential pharmacological targets to develop treatment options for patients with co-morbid disorders. The presented work resulted from the discussion of colon/bladder interactions during "Think Tank 9" presentations at the International Consultation on Incontinence Research Society meeting held in Bristol, UK, 2011.

EVIDENCE OF BLADDER OVERSENSITIVITY IN THE ABSENCE OF AN INFECTION IN PREMENOPAUSAL WOMEN WITH A HISTORY OF RECURRENT URINARY TRACT INFECTIONS.

Arya LA, Northington GM, Asfaw T, Harvie H, Malykhina A. BJU Int. 2011 Nov 30. doi: 10.1111/j.1464-410X.2011.10766.x. [Epub ahead of print]. PMID: 22129305

Arya and colleagues from Philadelphia report that urinary tract infections (UTIs) have been implicated in the aetiology of interstitial cystitis/painful bladder syndrome (IC/PBS). Prior studies have described symptoms and laboratory tests suggestive of UTI at the onset of IC/PBS as well as a significant history of childhood recurrent UTIs. However, the mechanism by which recurrent UTIs contribute to the development of IC/PBS is not clear. This study shows that women with recurrent UTI suffer from bladder oversensitivity. Their findings have useful clinical implications. Women with bladder oversensitivity complain of urinary frequency which is often misdiagnosed as an infection and treated with unnecessary antibiotics. Additionally, there are no effective therapies for bladder oversensitivity. Therefore, women with recurrent UTI should undergo prompt evaluation and treatment of episodes of infection to prevent the development of bladder oversensitivity. Their findings also provide a possible mechanism for the development of IC/PBS. Whether women with recurrent UTI are at increased risk for developing IC/PBS in the future will need to be confirmed in future studies. The purpose of the study was to compare the mean voided volume and bladder sensation during filling cystometry in women with a history of recurrent urinary tract infection (UTI) and controls. In the absence of an infection, premenopausal women with a history of recurrent UTI have significantly greater urinary frequency, lower average voided volume and a lower threshold of bladder sensitivity than controls.

Note regarding use of term oversensitivity in this article. This originates from the 2010 IUGA/ICS joint report on the terminology for female pelvic floor dysfunction: *An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction.* Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, Monga A, Petri E, Rizk DE, Sand PK, Schaer GN; International Urogynecological Association; International Continence Society. *NeuroUrol Urodyn.* 2010;29(1):4-20.

KETAMINE

THE CHINESE VERSION OF THE PELVIC PAIN AND URGENCY/FREQUENCY SYMPTOM SCALE: A USEFUL ASSESSMENT TOOL FOR STREET-KETAMINE ABUSERS WITH LOWER URINARY TRACT SYMPTOMS.

Ng CM, Ma WK, To KC, Yiu MK. Hong Kong Med J. 2012 Apr;18(2):123-30. PMID: 22477735

[Open access article](#), [click here](#).

The purpose of this cross-sectional study from Hong Kong was to investigate the use of a translated Chinese version of the pelvic pain and urgency/frequency symptom scale as an assessment and prognostic tool to evaluate the severity of street-ketamine-associated lower urinary tract symptoms and their reversibility after abstinence. It was concluded from the results that the Chinese version of the pelvic pain and urgency/frequency questionnaire is reliable and valid for assessment in patients with street-ketamine-associated lower urinary tract symptoms. The pelvic pain and urgency/frequency score correlates well with symptom severity as well as endoscopic, urodynamic and radiological abnormalities in patients with street-ketamine-associated lower urinary tract symptoms. A cut-off total pelvic pain and urgency/frequency score of 17 may suggest more serious urological sequelae from ketamine abuse. Abstinence from ketamine reduced lower urinary tract symptoms, but the extent of reversibility of urinary tract damage is yet to be evaluated.

KETAMINE-SNORTING ASSOCIATED CYSTITIS.

Chen CH, Lee MH, Chen YC, Lin MF. J Formos Med Assoc. 2011 Dec;110(12):787-91. Epub 2011 Dec 27. PMID: 22248834

Chen and Colleagues from Taiwan report that ketamine hydrochloride is an N-methyl-d-aspartic (NMDA) acid receptor antagonist with rapid onset and short duration of action. It produces a cataleptic-like state where the patient is dissociated from the surrounding environment by direct action on the cortex and limbic system. It has emerged as an increasingly popular choice among young drug users, especially within dance club venues. Cases of bladder dysfunction among recreational ketamine users were reported since Shahani et al first reported nine cases of ketamine-associated ulcerative cystitis in 2007. The authors report on four patients who had history of ketamine abuse, presenting with dysuria, fluctuating lower urinary tract symptoms (LUTS), lower abdominal or perineal pain, and impaired functional bladder capacities. Urinalysis showed pyuria and microhematuria. Urine culture was sterile. Bladder ulceration with severe diffuse hemorrhage and low bladder capacity was noted under anesthetized cystoscopic examination. Transurethral bladder mucosa biopsy was consistent with chronic cystitis. Cessation of ketamine abuse was the milestone of treatment, followed by the administration of mucosal protective agents, such as pentosan polysulphate or hyaluronic acid. Suprapubic pain was improved in three patients during follow-up. However, the outcome of treatment depends on the severity of the disease process, similar to that of interstitial cystitis (IC).

THE PREVALENCE AND NATURAL HISTORY OF URINARY SYMPTOMS AMONG RECREATIONAL KETAMINE USERS.

Winstock AR, Mitcheson L, Gillatt DA, Cottrell AM. BJU Int. 2012 Mar 14. doi: 10.1111/j.1464-410X.2012.11028.x. [Epub ahead of print]. PMID: 22416998

Case series have described lower urinary tract symptoms associated with ketamine use including severe pain, frequency, haematuria and dysuria. Little is known regarding the frequency of symptoms, relationship of symptoms with dose and frequency of use and natural history of symptoms once the ketamine user has stopped. This study from Bristol describes the prevalence of ketamine use in a population of recreational drug users in a dance music setting. It shows a dose-frequency relationship with ketamine use. It shows that urinary symptoms associated with recreational ketamine use may lead to a considerable demand on health resources in the primary-, secondary- and emergency-care settings. It shows that symptoms may improve once ketamine use is decreased. The purpose of the study was to investigate the prevalence and natural history of urinary

symptoms in a cohort of recreational ketamine users. The authors concluded that urinary tract symptoms are reported in over a quarter of regular ketamine users. A dose and frequency response relationship has been shown between ketamine use and urinary symptoms. Both users and primary-care providers need to be educated about urinary symptoms that may arise in ketamine users. A multi-disciplinary approach promoting harm reduction, cessation and early referral is needed to manage individuals with ketamine-associated urinary tract symptoms to avoid progression to severe and irreversible urological pathologies.

NOCTURIA

NOCTURIA × DISTURBED SLEEP: A REVIEW.

Furtado D, Hachul H, Andersen ML, Castro RA, Girão MB, Tufik S. *Int Urogynecol J.* 2012 Mar;23(3):255-67. Epub 2011 Aug 17. PMID: 22052440

In this article from Brazil, Furtado and colleagues provide a concise review of the literature on nocturia and its interference with sleep and, consequently, on quality of life. There are few studies addressing the possible influences of nocturia on sleep disruption. Nocturia is a potential contributor to sleep disorders because affected individuals experience nonrestorative sleep due to frequent interruptions. They also attempted to determine whether individuals with nocturia wake to urinate or, alternately, urinate because they are awake. This review attempts to outline this specific association by examining the possible interactions with other medical conditions and the pathophysiology and prevalence. Most studies have observed a higher prevalence among women; however, the impact on quality of life is higher in men. Nocturia is not necessarily associated with natural aging. The exploration of these topics provides information to clarify the implications of nocturia on sleep, sleep disruption, and other related consequences. Additional evidence is still required to address the question of whether nocturia leads to disordered sleep or whether disordered sleep leads to nocturia.

CHRONIC PAIN

COANALGESICS FOR CHRONIC PAIN THERAPY: A NARRATIVE REVIEW.

Bair MJ, Sanderson TR. *Postgrad Med.* 2011 Nov;123(6):140-50. PMID: 22104463

[Open access article, click here.](#)

Chronic pain is inadequately treated in many patients, which has led clinicians and researchers to investigate new indications for existing medications with pain-relieving or adjuvant properties. These medications are known as coanalgesics. This review from Indianapolis provides an evidence-based overview of select coanalgesics that are used in clinical practice for a variety of neuropathic and musculoskeletal pain disorders. The coanalgesics include antidepressants, anticonvulsants, topical agents, skeletal muscle relaxants, and antispasmodic agents. An update on emergent treatments and uses is also presented. The goals of this article are to highlight coanalgesic treatment options that are currently available for patients with chronic pain as well as provide guidelines for their use in clinical practice.

PELVIC PAIN IN UROGYNECOLOGY. PART II: TREATMENT OPTIONS IN PATIENTS WITH LOWER URINARY TRACT SYMPTOMS.

Kavvadias T, Baessler K, Schuessler B. *Int Urogynecol J.* 2012 Jan 21. [Epub ahead of print]. PMID: 22270729

Therapeutic options for chronic pelvic pain in women offer only a limited symptom relief. Especially in the patient with lower urinary tract symptoms (LUTS), where overlap of pain, storage and voiding symptoms is common, data on the efficacy of treatment of pain are limited. Kavvadias and colleagues from Lucerne, Switzerland conducted a literature review to detect articles which pertained to female patients with LUTS and pelvic pain and included articles which evaluated the efficacy of the treatment of pelvic pain. Forty-one articles were detected, which included nerve stimulation (sacral

and pudendal), intravesical instillations and injections, oral pharmacological treatments, periurethral injections as well as physical and manual therapy as treatment options. Only five controlled trials were found, which did not show superiority of the active treatment versus placebo. Although some treatment options show promising results in the treatment of pelvic pain in patients with LUTS, more randomised controlled trials are needed to confirm these results.

EFFECTS OF PERCUTANEOUS TIBIAL NERVE STIMULATION THERAPY ON CHRONIC PELVIC PAIN.

Gokyildiz S, Kizilkaya Beji N, Yalcin O, Istek A. Gynecol Obstet Invest. 2012;73(2):99-105. Epub 2012 Jan 20. PMID: 22269443

This research from Turkey is a prospective study which was designed to determine the effects of percutaneous tibial nerve stimulation (PTNS) therapy on the quality of life and sexual life of patients with chronic pelvic pain (CPP). The sample consisted of an experimental group (n = 12) and a control group (n = 12), in total 24 patients. The experimental group was treated with PTNS once a week (in total 12 sessions), while the control group received routine intervention. The pain frequency and intensity in women who underwent PTNS decreased considerably. Women had less pain during sexual intercourse after PTNS. Gokyildiz and colleagues determined in their study that PTNS improved the quality of life of women with CPP by decreasing the intensity of pain and contributed to a more comfortable performance of their daily activities. They concluded that PTNS is a type of treatment which contributes to the quality of life of women with CPP by decreasing the intensity of pain.

TOPICAL ANALGESICS.

Flores MP, de Castro AP, Nascimento Jdos S. Rev Bras Anesthesiol. 2012 Mar;62(2):244-52. PMID: 22440379

Pain treatment involves the usage of common and opioid analgesics, nonsteroidal anti-inflammatory drugs (NSAIDs) and adjuvant analgesics. Traditionally, these drugs are administered systemically or into the neuraxis. However, when analgesics are applied through these pathways, they are associated with significant side effects, which can hinder its use. Topical administration of analgesics is an alternative. The objective of this paper is to discuss topical analgesics, the mechanisms of action and clinical efficacy. This is a review paper addressing the usage of the topical local anesthetics: capsaicin, clonidine, tricyclic antidepressants, ketamine, opioids and cannabinoids, discussing mechanism of action and effectiveness. Topical analgesics are promising as a strategy for pain treatment, as they are associated with lower incidence of side effects. The benefit of local anesthetics, NSAID's and capsaicin is well established. However, the efficacy of clonidine, tricyclic antidepressants, ketamine, opioids and cannabinoids is still questionable. Studies have shown that the multimodal approach is an alternative, but studies are needed to confirm this hypothesis.

INFLAMMASOMES

Nature Immunology. Focus issue: April 2012 Volume 13, No 4:

<http://www.nature.com/ni/focus/inflammasomes/index.html>

The inflammasome is associated with inflammation, and its dysregulation results in a variety of diseases ranging from cancer to autoimmunity. *Nature Immunology* presents five specially commissioned pieces on the activation, regulation and function of the inflammasome which may be of interest to the wide field of IC and its associated disorders. They note that it seems clear that inflammasomes will be a productive area of research in the coming years. Delineating the mechanisms and consequences of their activation may provide a link with which to connect a host of otherwise unrelated responses and conditions.

IRRITABLE BOWEL SYNDROME

NEURAL AND NEURO-IMMUNE MECHANISMS OF VISCERAL HYPERSENSITIVITY IN IRRITABLE BOWEL SYNDROME.

Feng B, La JH, Schwartz ES, Gebhart GF. *Am J Physiol Gastrointest Liver Physiol*. 2012 Mar 8. [Epub ahead of print]. PMID: 22403791

Feng and colleagues from Pittsburgh note that irritable bowel syndrome (IBS) is characterized as 'functional' because a pathobiological cause is not readily apparent. Considerable evidence, however, documents that sensitizing pro-inflammatory and lipotoxic lipids, mast cells and their products, tryptases, enteroendocrine cells and mononuclear phagocytes and their receptors are increased in tissues of IBS patients with colorectal hypersensitivity. It is also clear from recordings in animals of the colorectal afferent innervation that afferents exhibit long-term changes in models of persistent colorectal hypersensitivity. Such changes in afferent excitability and responses to mechanical stimuli are consistent with relief of discomfort and pain in IBS patients, including relief of referred abdominal hypersensitivity, upon intra-rectal instillation of local anesthetic. In the aggregate, these experimental outcomes establish the importance of afferent drive in IBS, consistent with a larger literature with respect to other chronic conditions in which pain is a principal complaint (e.g., neuropathic pain, painful bladder syndrome, fibromyalgia). Accordingly, colorectal afferents and the environment in which these receptive endings reside constitute the focus of this review. That environment includes under-studied and incompletely understood contributions from immune-competent cells resident in and recruited into the colorectum. The authors conclude close this review by highlighting deficiencies in existing knowledge and identifying several areas for further investigation, resolution of which they anticipate would significantly advance understanding of neural and neuro-immune contributions to IBS pain and hypersensitivity.

THE ROLE OF DIET IN THE PATHOGENESIS AND MANAGEMENT OF IRRITABLE BOWEL SYNDROME (REVIEW).

El-Salhy M, Ostgaard H, Gundersen D, Hatlebakk JG, Hausken T. *Int J Mol Med*. 2012 May;29(5):723-31. doi: 10.3892/ijmm.2012.926. Epub 2012 Feb 24. PMID: 22366773

Most patients with irritable bowel syndrome (IBS) believe that diet plays a significant role in inducing IBS symptoms and desire to know what foods to avoid. This research team from Stord, Norway report that it has been found that the intake of calories, carbohydrates, proteins and fat by IBS patients does not differ from that of the background population. IBS patients were found to avoid certain food items that are rich in fermentable oligo-, di- and monosaccharides and polyols (FODMAPs), but they did have a high consumption of many other FODMAP-rich food items. The diet of IBS patients was found to consist of a low calcium, magnesium, phosphorus, vitamin B2 and vitamin A content. There is no consistent evidence that IBS patients suffer from food allergy, nor is there documented evidence that food intolerance plays a role in IBS symptoms. Abnormalities in gut hormones have been reported in IBS patients. As gut hormones control and regulate gastrointestinal motility and sensation, this may explain the abnormal gastrointestinal motility and visceral hypersensitivity reported in these patients. Guidance concerning food management which includes individually based restrictions of FODMAP-rich food items and individual evaluation of the effects of protein-, fat- and carbohydrate-rich/poor diets may reduce IBS symptoms.

DIET AND EFFECTS OF DIET MANAGEMENT ON QUALITY OF LIFE AND SYMPTOMS IN PATIENTS WITH IRRITABLE BOWEL SYNDROME.

Ostgaard H, Hausken T, Gundersen D, El-Salhy M. *Mol Med Report*. 2012 Mar 22. doi: 10.3892/mmr.2012.843. [Epub ahead of print]. PMID: 22446969

[Open access article, click here.](#)

This study from Stord, Norway investigated the diet and quality of life of irritable bowel syndrome (IBS) patients in comparison to the background population. Furthermore, it studied the effects of guidance on diet management on changes in food intake, quality of life and symptoms. A total of 35 healthy controls, 36 IBS patients and 43 IBS patients who had received guidance on diet management 2 years earlier were included. The controls and patients were asked to complete an FFQ questionnaire, an SF-NDI questionnaire, an IBS-QoL questionnaire and a Birmingham IBS symptom score questionnaire. There were no statistical differences in the intake of calories, carbohydrates,

proteins and fat between the controls and IBS patients, with or without guidance on diet management. IBS patients made a conscious choice to avoid certain food items, some of which belong to fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAPs). They had a higher consumption, however, of other food items that are rich in FODMAPs. They also avoided other food sources which are crucial for their health. Two years after receiving guidance on diet management, IBS patients had a different diet profile. They avoided all FODMAP-rich food, consumed more food with probiotic supplements and did not avoid food sources that were crucial to their health. In addition, they had improved quality of life and reduced symptoms. Although at first sight the diet of IBS patients did not differ from that of the background population, detailed examination showed avoidance of certain food items. Guidance on the management of diet improved their choice of a healthier diet, improved quality of life and reduced IBS symptoms.

HERBAL MEDICINES FOR THE MANAGEMENT OF IRRITABLE BOWEL SYNDROME: A COMPREHENSIVE REVIEW.

Rahimi R, Abdollahi M. World J Gastroenterol. 2012 Feb 21;18(7):589-600. PMID: 22363129

[Open access article, click here.](#)

Irritable bowel syndrome (IBS) is a functional gut disorder with high prevalence. Because of various factors involved in its pathophysiology and disappointing results from conventional IBS medications, the treatment of IBS is challenging and use of complementary and alternative medicines especially herbal therapies is increasing. In this paper from Iran, electronic databases including PubMed, Scopus, and Cochrane library were searched to obtain any in vitro, in vivo or human studies evaluating single or compound herbal preparations in the management of IBS. One in vitro, 3 in vivo and 23 human studies were included and systematically reviewed. The majority of studies are about essential oil of *Mentha piperita* as a single preparation and STW 5 as a compound preparation. Some evaluated herbs such as *Curcuma xanthorrhiza* and *Fumaria officinalis* did not demonstrate any benefits in IBS. However, it seems there are many other herbal preparations such as those proposed in traditional medicine of different countries that could be studied and investigated for their efficacy in management of IBS.

VULVODYNIA

CO-MORBID PAIN CONDITIONS AND FEELINGS OF INVALIDATION AND ISOLATION AMONG WOMEN WITH VULVODYNIA.

Nguyen RH, Ecklund AM, Maclehose RF, Veasley C, Harlow BL. Psychol Health Med. 2012 Feb 13. [Epub ahead of print]. PMID: 22329615

Many women with vulvodynia also suffer from other chronic co-morbid pain conditions. Alone, these pain conditions are associated with feeling invalidated by others and feeling socially isolated. It is unclear, however, how the presence of additional pain co-morbidities are associated with the psychosocial wellbeing of women with vulvodynia. In a study from Minneapolis, Nguyen and colleagues used data from a survey administered by the National Vulvodynia Association. Women reported clinician-diagnosed vulvodynia, presence of co-morbid pain, and how often they felt that they felt no one believed their pain existed (invalidated) and isolated. Analyses determined prevalence of feeling invalidated or isolated, and the difference in prevalence when co-morbidities existed. Forty-five percent of these 1847 women with vulvodynia reported having at least one of the following five chronic pain conditions, chronic fatigue syndrome, endometriosis, fibromyalgia, interstitial cystitis, or irritable bowel syndrome. Adjusted baseline prevalence among all women of feeling invalidated was 9% and of feeling isolated was 14%. Having a co-morbid condition with vulvodynia, as well as having an increasing number of co-morbid conditions with vulvodynia, was significantly associated with the presence of feeling both invalidated and isolated. Chronic fatigue syndrome was the co-morbidity most strongly associated with feelings invalidation and isolation. One or more co-morbid pain conditions in addition to vulvodynia were significantly associated with psychosocial wellbeing. However, the temporality of the association could not be elucidated and

therefore we cannot conclude that these pain conditions cause poor psychosocial wellbeing. Despite this, future studies should explore the utility of promoting validation of women's pain conditions and reducing social isolation for women with chronic pain.

UPDATE ON THE DIAGNOSIS AND TREATMENT OF VULVODYNIA.

[Article in English, Spanish]

Itza F, Zarza D, Gómez-Sancha F, Salinas J, Baurtrant E. Actas Urol Esp. 2012 Feb 23. [Epub ahead of print]. PMID: 22365080

[Open access article in Spanish, click here.](#)

Vulvodynia is a complex and multifactorial clinical condition. It is defined as chronic vulvar discomfort characterized by burning, stinging or irritation. Its diagnostic difficulty and treatment is known. The purpose of this study from Madrid was to review the medical literature of the last 10 years from a critical point of view. The authors found that in spite of the advances achieved in all of the aspects of vulvodynia, the methodology used at present in many cases does not have the desirable statistical soundness: there are few control or placebo-controlled groups and double-blind studies. Uniformity is lacking in the scales, indexes and questionnaires for the correct evaluation of pain before and after the treatment and debatable diagnostic criteria are use. The limited use of neurophysiological diagnostic resources that validate the clinical findings has been observed in the studies analyzed. In most of the works, the medical treatments have been shown to be ineffective. Physiotherapy and cognitive-behavioral therapy seem to be promising therapeutic tools. Surgery (vestibulectomy) stands out by its demonstrated efficacy in the publications studied. They concluded that a multidisciplinary approach is always necessary. Topical medical, psychological and physical therapy treatments may have sum effects and become an alternative to surgery. New pathways of research and more regulated studies are required.

DEVELOPING AN INTERDISCIPLINARY CONSULTATION SERVICE FOR VULVAR DISORDERS.

Anemüller W, Recke A, Altgassen C, Kelling K. J Dtsch Dermatol Ges. 2012 Feb 14. doi: 10.1111/j.1610-0387.2012.07837.x. [Epub ahead of print]. PMID: 22329403

Diseases of the vulva often cause severe impairment and long-term problems for the affected women. Adequate treatment requires expert knowledge on the part of treating dermatologists and gynecologists. This was the reason for the initiation of an interdisciplinary consultation service for vulvar diseases at the University Hospital of Lübeck. Over a period of 2½ years, 208 patients were seen in the new consultation service. Cases were classified as inflammatory diseases, neoplastic diseases, infectious diseases, vulvodynia, or genodermatoses. The effectiveness of treatment was documented by photography, biopsy and - whenever applicable - a quality of life assessment using the Dermatology Life Quality Index (DLQI). Inflammatory dermatoses were diagnosed in 133 patients and neoplastic diseases in 32 patients. Infection was diagnosed in 25 patients, vulvodynia in 8, genodermatoses in 3 and other diseases in 7. The DLQI was assessed in 140 patients. Of these, 55 patients had a DLQI > 10 (0-30), indicating severe or extreme impairment of quality of life. A follow-up DLQI was collected in 81 patients, showing a significant improvement. The authors concluded that the patients and both hospital facilities benefited from the interdisciplinary consultation service. The initial high costs in terms of medical staff and time was compensated by the development of diagnostic and treatment algorithms. Overall, the concept received positive feedback from patients and medical staff members.

AUTOIMMUNITY

INTRODUCING POLYAUTOIMMUNITY: SECONDARY AUTOIMMUNE DISEASES NO LONGER EXIST.

Rojas-Villarraga A, Amaya-Amaya J, Rodriguez-Rodriguez A, Mantilla RD, Anaya JM. Autoimmune Dis. 2012;2012:254319. Epub 2012 Feb 20. PMID: 22454759

[Open access article, click here.](#)

Similar pathophysiological mechanisms within autoimmune diseases have stimulated searches for common genetic roots. Polyautoimmunity is defined as the presence of more than one autoimmune disease in a single patient. When three or more autoimmune diseases coexist, this condition is called multiple autoimmune syndrome (MAS). Rojas-Villarraga and colleagues from Bogotá, Colombia analyzed the presence of polyautoimmunity in 1,083 patients belonging to four autoimmune disease cohorts. Polyautoimmunity was observed in 373 patients (34.4%). Autoimmune thyroid disease (AITD) and Sjögren's syndrome (SS) were the most frequent diseases encountered. Factors significantly associated with polyautoimmunity were female gender and familial autoimmunity. Through a systematic literature review, an updated search was done for all MAS cases (January 2006-September 2011). There were 142 articles retrieved corresponding to 226 cases. Next, they performed a clustering analysis in which AITD followed by systemic lupus erythematosus and SS were the most hierarchical diseases encountered. Their results indicate that coexistence of autoimmune diseases is not uncommon and follows a grouping pattern. **Polyautoimmunity** is the term proposed for this association of disorders, which encompasses the concept of a common origin for these diseases.

FIBROMYALGIA

TREATMENT-RELATED CHANGES IN BRAIN ACTIVATION IN PATIENTS WITH FIBROMYALGIA SYNDROME.

Diers M, Yilmaz P, Rance M, Thieme K, Gracely RH, Rolko C, Schley MT, Kiessling U, Wang H, Flor H. Exp Brain Res. 2012 Mar 17. [Epub ahead of print]. PMID: 22427134

Little is known about the effects of successful treatment on brain function in chronic pain. This study from Mannheim, Germany examined changes in pain-evoked brain activation following behavioral extinction training in fibromyalgia patients. Using functional magnetic resonance imaging, brain activation to painful mechanical stimuli applied to the 2nd phalanx of the left 2nd digit (m. flexor digitorum) was assessed in 10 patients with fibromyalgia syndrome (FM) before and after behavioral extinction training. The behavioral treatment significantly reduced interference from pain in the FM patients. Mechanical pain threshold and pain tolerance increased significantly after treatment. Activation in the insula shifted bilaterally from a more anterior site before treatment to a more posterior location after treatment. The pre- to post-treatment reduction in both interference related to pain and pain severity were significantly associated with bilateral activation in pain-evoked activity in the posterior insula, the ipsilateral caudate nucleus/striatum, the contralateral lenticular nucleus, the left thalamus and the primary somatosensory cortex contralateral to the stimulated side. These data show a relation between successful behavioral treatment and higher activation bilaterally in the posterior insula and in the contralateral primary somatosensory cortex. Future studies should compare responders and non-responders for differential treatment effects and examine in more detail the mechanisms underlying these changes.

CANNABINOIDS

DO CANNABINOIDS REDUCE BRAIN POWER?

Alger BE, Tang AH. Nat Neurosci. 2012 Mar 27;15(4):499-501. doi: 10.1038/nn.3072. PMID: 22449955
Commenting on the research article by Bénard and colleagues from France, Alger and Tang from Baltimore note that extracts from the Cannabis plants, or cannabinoids, bind to the same receptors as do endogenous cannabinoids. Although usually found on nerve terminals, where their activation inhibits transmitter release, cannabinoid receptors are now reported to exist on mitochondria, where their activation by endocannabinoids regulates energy metabolism. Cannabis derivatives and the ECS are being investigated for their physiological effects and therapeutic potential in a variety of phenomena. An important tactic is to enhance the levels of eCBs, which are physiologically produced when and where needed, by interfering with their degradation. They ask how will regulation of mitochondrial respiration by cannabinoids alter our interpretations of the problems and answers

arising from these studies? Like gas-guzzling cars, brains use much more energy than their size alone would seem to justify. Unlike gas guzzlers, however, brains use energy efficiently. The brain's energy, in the form of ATP, must be supplied by mitochondria. As a result, the brain is highly sensitive to mitochondrial dysfunction, and many neurological diseases or aging-related neurological disorders are associated with mitochondria. Although commonly called the cell's power plants, mitochondria are also involved in a variety of other metabolism-related functions, such as regulation of membrane potentials and Ca²⁺ signals that participate in synaptic plasticity. Recently, the endocannabinoid system (ECS) has emerged as a ubiquitous and potent overseer of neuronal synaptic communication. In this issue of Nature Neuroscience, Bénard and colleagues find that its influence extends to the control of neuronal energy metabolism.

MITOCHONDRIAL CB(1) RECEPTORS REGULATE NEURONAL ENERGY METABOLISM.

Bénard G, Massa F, Puente N, Lourenço J, Bellocchio L, Soria-Gómez E, Matias I, Delamarre A, Metna-Laurent M, Cannich A, Hebert-Chatelain E, Mülle C, Ortega-Gutiérrez S, Martín-Fontecha M, Klugmann M, Guggenhuber S, Lutz B, Gertsch J, Chaouloff F, López-Rodríguez ML, Grandes P, Rossignol R, Marsicano G. Nat Neurosci. 2012 Mar 4;15(4):558-64. doi: 10.1038/nn.3053. PMID: 22388959

According to Bénard and colleagues from France, the mammalian brain is one of the organs with the highest energy demands, and mitochondria are key determinants of its functions. Here they show that the type-1 cannabinoid receptor (CB(1)) is present at the membranes of mouse neuronal mitochondria (mtCB(1)), where it directly controls cellular respiration and energy production. Through activation of mtCB(1) receptors, exogenous cannabinoids and in situ endocannabinoids decreased cyclic AMP concentration, protein kinase A activity, complex I enzymatic activity and respiration in neuronal mitochondria. In addition, intracellular CB(1) receptors and mitochondrial mechanisms contributed to endocannabinoid-dependent depolarization-induced suppression of inhibition in the hippocampus. Thus, mtCB(1) receptors directly modulate neuronal energy metabolism, revealing a new mechanism of action of G protein-coupled receptor signalling in the brain.

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