Preface

Interstitial cystitis/bladder pain syndrome (IC/BPS) 2015: Part 1

It is an honor to pen an introduction to this special issue of *Translational Andrology and Urology* (*TAU*) focused on interstitial cystitis (IC)/bladder pain syndrome (BPS). The response to our invitations to contribute manuscripts on this timely subject has been overwhelming and resulted in the need to publish two issues of the journal—October 2015 and December 2015—to accommodate the submitted manuscripts.

Over the last 25-30 years there has been a significant increase in government and foundation funding for research into IC—both basic and clinical—in the USA and worldwide. The disease/syndrome has been defined and redefined as IC, painful bladder syndrome (PBS), BPS and hypersensitive bladder (HSB) and this has led to a lack of uniformity of disease definition for clinicians and patients. Furthermore, there are a number of association, society and regional guidelines for diagnosis and treatment. Awareness of the disease has increased mainly as a result of the sterling work and contribution of various patient advocacy groups throughout the world. Disappointingly, in spite of the above efforts and research funding, no new treatment for IC has achieved regulatory approval in the United States (US) since Elmiron (pentosan polysulfate sodium) in 1996.

As editors, we strove to present a current, state-of-the-art and global perspective on this chronic and potentially debilitating disease. Established national and international experts as well as rising stars were invited to contribute and manuscripts were received from many continents and countries worldwide. The papers in the October 2015 issue of the *TAU* journal issue provide insightful updates and perspectives on the epidemiology, pathophysiology and mechanistic aspects of this enigmatic disease, overviews of IC diagnosis and treatment in India and Japan and patient advocacy group contributions from the US and European Union (EU).

A review of the 30-year history of the Interstitial Cystitis Association (ICA) patient advocacy group highlights lessons learnt regarding the value of advocacy groups to patients, clinicians, researchers and funding agencies. The confusing proliferation of disease definitions for IC is highlighted and effectively challenged from the International Painful Bladder Foundation (IPBF) and hopefully the plea for "patient-centered" standardization does not fall on deaf ears!

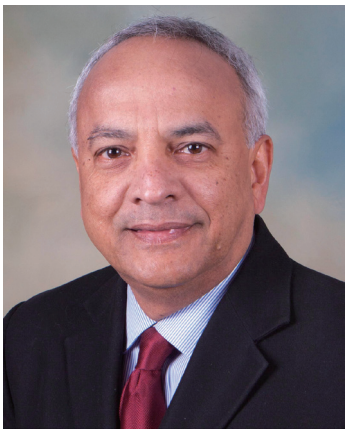
The more inclusive modern diagnostic criteria for IC has led to increased recognition of the disease and this is succinctly reviewed and increased internet search activity documented in the US, Canada, United Kingdom, Australia, Ireland and India. IC is still under-diagnosed in many countries and the evolving state of the art in diagnosis and treatment of IC in India is presented based on the author's personal experience of over 900 patients (women to men 3:2 ration) over the last 21 years. A survey of 114 institutions by the Interstitial Cystitis Society of Japan (ICSJ) presents data on the number of IC patients in Japan and points out the high (45%) incidence of Hunner's lesions.

The association of IC with other pain syndromes such as vulvodynia, fibromyalgia, chronic pelvic pain and irritable bowel syndrome suggest involvement of the nervous system in the genesis of IC. A state of the art review from the National Institutes of Health/National institute of Diabetes and Digestive and Kidney Diseases (NIH/NIDDK) in the USA highlights various new avenues of research inquiry aimed at elucidating the pelvic and systemic associations of IC "beyond the bladder". The putative role of the autonomic sympathetic nervous system in IC and other pelvic pain syndromes is nicely summarized and the potential for pelvic organ cross-sensitization highlighted. Mast cells have long been suspected as an inflammatory effector cell in IC and two papers deal with pelvic organ mast cells and their possible functions and mast cell activation syndrome as a factor in the pathogenesis of IC.

Alterations in bladder permeability has been proposed as a putative cause of IC and this topic is admirably summarized and in another paper contrasted with the finding that vascular endothelial growth factor (VEGF) is a permeability factor that could modulate bladder inflammation and neuronal responses to stimuli and bladder neuroplasticity. Intravesical drug treatment for IC has a long history and the potential role of intravesical liposomes (urothelial protectant/repair agent) and liposome drug delivery is reviewed and experimental and early human data presented. It is widely accepted that pain is an important symptom of IC and treatment with intravesical Botulinum toxin A (BTA) has been studied with varying results. The mechanisms of action of BTA are reviewed and reasons for lack of uniform treatment outcomes highlighted.

The editors would like to thank all the authors for their lucid, up to date contributions and the timely submission of their manuscripts. Thanks also to Professor Tom F. Lue (Editor-in-Chief, *Translational Andrology and Urology*) for his kind invitation

to edit this special two part *TAU* journal issue on IC/BPS. It has been a distinct pleasure and highly rewarding experience to work with Eunice X. Xu and Lucine M. Gao from the journal's editorial office to shepherd this issue from concept to fruition. Our sincere hope is that readers would find this journal issue on IC/BPS both informative and enlightening.



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doi: 10.3978/j.issn.2223-4683.2015.10.06
Conflicts of Interest: The authors have no conflicts of interest to declare.
View this article at: http://dx.doi.org/10.3978/j.issn.2223-4683.2015.10.06

Cite this article as: Sant GR, Saban R. Interstitial cystitis/bladder pain syndrome (IC/BPS) 2015: Part 1. Transl Androl Urol 2015;4(5):484-485. doi: 10.3978/j.issn.2223-4683.2015.10.06

