GLOBAL INTERSTITIAL CYSTITIS BLADDER PAIN SOCIETY

Volume 8 Issue 5 || June 2026

GIBS NEWSLETTER

The impact of modified potassium testing in IC/BPS

Latest Updates

11th Annual Congress on IC/BPS - GIBS 2026

Date : 22nd & 23rd August 2026
Venue : Jaipur

Theme: Beyond the Bladder: Decoding Subtypes, Delivering Solutions"

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THE FACTS

- Urine is rich in potassium and hydrogen ions
- Urodynamic investigations are routinely performed with saline, a solution that is never found in urinary bladders in real life – thus, results do not reflect the physiologic bladder reactions to urine exposure
- There are no IC/BPS-specific toxins in urine that have to been looked for – potassium and hydrogen are an essential part of urine and toxic to bladder wall tissue and provoke pain and urgency in case of urothelial damage (as in simple bacterial cystitis)
- Every disorder of the urine-tissue barrier (that consists of the urothelium and the GAG layer) may facilitate urinary ingression to the bladder tissue and pain and urgency
- In these cases of urine-tissue-barrier disorder (that are included in the bladder-centric phenotype of IC/BPS) GAG substitution is an essential part of multimodal therapy and has a high chance of symptom improvement
- Thus, it is logical to expose IC/BPS bladders to a solution similar to urine to assess its effects on symptoms.

Potassium testing was first proposed by Lowell Parsons, however, the solution he used (0.4M KCl) was painful and pain was the measuring unit for IC/BPS diagnosis, which was very unpleasant for patients and prevented this test from wide acceptance. It is important to state the IC/BPS is a clinical diagnosis, and potassium testing does not identify or confirm IC/BPS.

Gero Hohlbrugger recommended to use a 0.2M KCl solution to perform comparative urodynamics, i.e.to assess maximal bladder capacity (Cmax) with normal saline and consecutive 0.2M KCl instillation (the "modified potassium test" - MPT). It was demonstrated that in patients with IC/BPS symptoms a positive MPT was an excellent prognostic factor to predict positive response to GAG substitution therapy. It was assumed that potassium sensitivity is increased in IC/BPS patients with a disorder of the urine tissue barrier, that can be restored by rebuilding the barrier with GAG substitution.

The MPT is considered positive, if Cmax with saline filling is reduced >30% with 0.2M KCl. In addition, patients report their real life bladder irritation with 0.2M KCl filling, while saline filling normally is without symptoms. It has to be emphasized that the MPT is PAINLESS!

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Two studies shed further light on the impact of the MPT: One study tried to assess if the MPT could be used to predict which patients might respond best to GAG replacement therapy. In this pilot study of 48 BPS patients, who underwent MPT and subsequently received intravesical hyaluronic acid treatment, all patients obtained symptomatic relief to some extent. However, the improvements appeared to be more significant in those who had a reduction in Cmax of more than 30% with KCl compared to saline. A subsequent study by Daha et al. found that BPS patients who responded to GAG replacement therapy with complete symptomatic remission showed a normalization of the modified potassium test, while potassium sensitivity remained unchanged in the group of non-responders. This suggests that whatever the nature of the disorder at the urine-tissue barrier is, it may be detected with potassium testing and cured with GAG substitution therapy.

In the era of phenotyping IC/BPS it seems to be extremely important to identify patients from a specific subtype that is best treated by a specific treatment, in the case of MPT it is GAG substitution.

References

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- Daha LK, Riedl CR, Lazar D, Simak R, Pfluger H. Effect of intravesical glycosaminoglycan substitution therapy on bladder pain syndrome/interstitial cystitis, bladder capacity and potassium sensitivity. Scand J Urol Nephrol 2008; 42(4):369-72.

Technique

A comparative assessment of maximal bladder capacity will be conducted using a consecutive bladder filling with saline and KCl 0.2M. The goal is to confirm or exclude a reduction of at least 30% in maximal bladder capacity with 0.2M KCl compared to saline.

Equipment Basic equipment includes 10F catheter (hydrophilic if possible) for bladder catheterization, 1L 0.9% NaCl sterile solution, 500 mL 0.2 M KCl sterile solution, infusion set, cup for measuring bladder capacity, infusion pump (optional).

Patient Preparation No anxiolytics or pain medications are given as premedications (within 24 hours prior to the procedure). No new sedatives, cholinergics, and anticholinergics should be added prior to the procedure. The patients taking stable dose of antidepressants, antihistaminics, hormonal agonists or antagonists for at least 3 months should continue taking them as usual.

Technique and risks are explained to the patient and consent is obtained. In all cases, patient is requested to void immediately prior to procedure.

Technique The patient is placed in a supine position. A 10F bladder catheter is inserted transurethrally and residual volume is evacuated. With the bladder empty, patient is asked to relax completely and refrain from any voluntary bladder contractions and abdominal straining.

The bladder is filled with sterile, room temperature normal saline. The rate of filling should be 50ml per minute. The use of infusion pump will allow continuous filling at a constant rate. However, if an infusion pump is not available, filling may be performed incrementally with gravity drainage. The patient is instructed: "Tell me when you can no longer hold any more". Filling is continued until the patient says "STOP FILLING". The bladder is then drained and the saline filling volume measured and recorded.

After making sure that all filling lines are emptied of saline solution, the same instillation procedure is repeated with 0.2M potassium chloride at a rate of 50ml per minute. Following bladder draining, the filling volume is measured and recorded. The % difference in maximal bladder capacity is then calculated.

AUTHOR

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GLOBAL INTERSTITIAL CYSTITIS,
BLADDER PAIN SOCIETY

GIBS Global Periodic Case-Based Discussion With Tribhuvan University Teaching Hospital

DATE : 15th May 2026
TIMING : 7:00 PM-8:00 PM IST
7:15 PM-8:15 PM Nepal Time (NPT)

Topic : "Management of Flares of BPS/IC In Young Female"

This Topic Helped Participants Think Beyond Usual Assumptions. It Showed That Flares In Young Females are Not Always Simple UTIs and May Need Deeper Evaluation In IC/BPS.

The Webinar Ran From 07:15 PM To 08:15 PM Nepal Time (7:00 PM To 8:00 PM IST) and Brought Together Urology Experts To Discuss Real Patient Cases In IC/BPS.

Webinar Leadership

Dr. Pawan Raj Chalise

Led The Session and Directed The Discussion With Clear Academic Insight.

Scientific Presentation

Dr. Diwas Gnyawali

Gave A Clear, Evidence-Based Presentation With Practical Points Useful For Daily Urology Practice.

Case Presenter

Dr. Umesh Pradhan

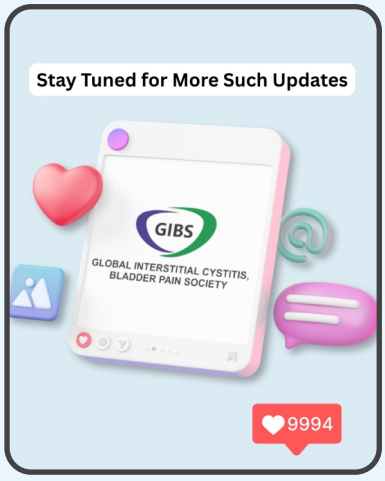
Presented An Insightful Clinical Case On Management Of Flares Of IC/BPS In Young Females, Leading To Meaningful Discussion And Practical Learning.

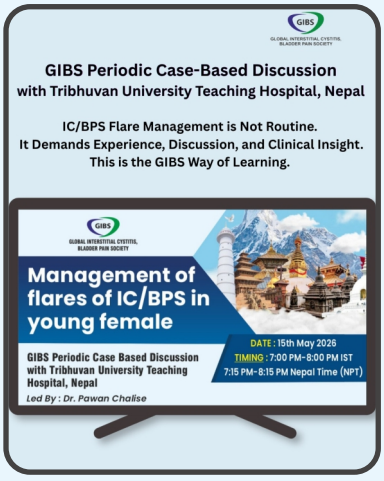
Expert Panel Discussion

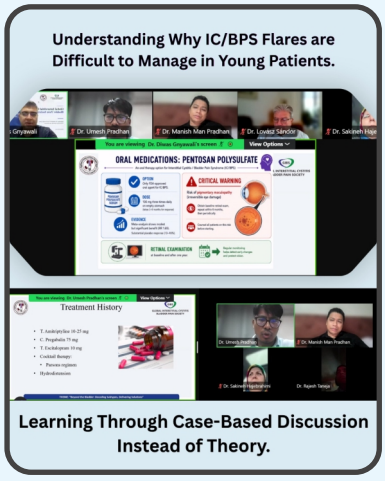
Our Expert Panel Shared Practical Insights And Real Experiences, Making The Session Highly Interactive, Engaging, And Rich In Learning For Everyone.

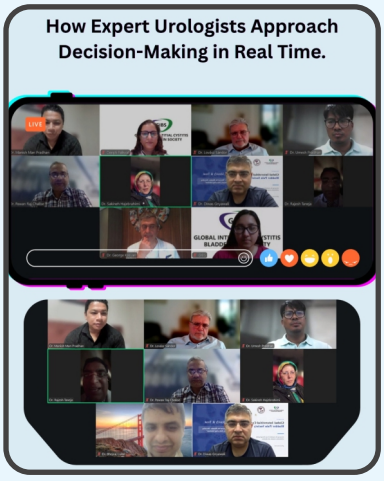
Key Learning Message

The Webinar Focused On Managing IC/BPS Flares In Young Females Using A Comprehensive, Multimodal Pain Management Approach When Routine Treatment Fails.









Acknowledgement

GIBS Thanks All Faculty, Panelists, And Participants For Making This Session A Meaningful Global Learning Experience.

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GIBS 2026

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22ND - 23RD AUGUST 2026

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GIBS 2026
Call for Abstracts

Under the compelling theme

"Beyond the Bladder : Decoding Subtypes, Delivering Solutions"

We invite clinicians, researchers, and students from across the globe to present their scientific work and contribute to advancing the understanding of IC/BPS.

This is your opportunity to:

- Showcase your research on a global platform
- Share innovative insights and clinical experiences
- Engage with leading experts in the field
- Be a part of shaping the future of IC/BPS management

Abstract Submission Deadline

31st May 2026
Venue: Jaipur, India

For more details **CLICK ON** the below link

https://gibsociety.com/2024/08/gibs-2025-call-for-abstract-submission/

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