

出國報告（出國類別：演講發表）

2017年美國泌尿科醫學會年會  
(American Urological Association's 2017  
Annual Meeting)心得報告

服務機關：衛生福利部 豐原醫院

姓名職稱：李明輝院長

派赴國家：美國 波士頓

出國期間：05/11-05/18

報告日期：07/12

## 摘 要

藉由參與 AUA 與各國做學術上的交流，不僅有助於拓展我們的視野，提升自我的醫療水準與概念，並能與世界各地的專家分享我們在台灣的努力成果，驗證我們研究發展方向正確性與有效性。

經此次獲邀演講，我們向全世界的先進與專家，讓各國了解我們目前的研究現況與方向及對 IC 付出的心力，經由與國際一流專家的溝通，驗證成果的有效性，也透過其他專家學者的分享，也帶給我們不同的觀點與新資訊，使我們能重新審視現況的不足與未來發展的方向與可行性。

# (2017 年美國泌尿科醫學會年會會議)

## 目 次

	頁 碼
壹、封面.....	1
貳、摘要.....	2
參、目次.....	3
肆、本文（心得建議）.....	4-19
伍、照片.....	20-23

# 本 文

藉由各國IC學者的學術發表與討論，使我們除了解目前各國發展治療IC的發展方向與最新研究外，與國際專家的詢答討論，可提高我們對於IC認知的視野，進而利於國內發展IC治療理論之突破。

## 過程

以下報告心得及演講發表。在發表過程中，對於其他不同切入點可以看見衍生出的成果，並讓我們思考其他可能性。

## 課程學習心得 (一)

肉毒桿菌毒素 A (BOTOX) 的使用已經在下尿路狀況的範圍內擴大。本課程概述了目前 BOTOX -A 在下尿路的適應症，BOTOX -A 的經典應用一直在治療難根治性神經源性逼尿肌過度活動 (NDO) 和膀胱過度活動症 (OAB)。許多隨機安慰劑對照試驗，證明 BOTOX -A 在長期追蹤期間的療效。劑量為 200 U 的劑量為 200 U 和 OAB 的 NDO 的二線治療，劑量為 100 U. BOTOX -A 的其他應用使用在許可的基礎上，包括間質性膀胱炎/膀胱疼痛綜合徵 (IC / BPS)，良性前列腺增生症 (BPH) 和逼尿肌括約肌絨毛球麻醉 (DSD)。

文獻快速發展下，推薦使用 BOTOX -A 注射作為近期國際指南中的第四線選項，儘管需要更長時間的研究來確認初步發現。作為 DSD 的治療，BOTOX -A 注射的重要性，僅在少量試驗中。不能根據現有證據作出明確的建議。

最後，治療 BPH 的結果是可變的，最近的高質量隨機對照試驗 (RCT) 已經表明沒有比安慰劑有益，所以目前不能推薦用於常規臨床實踐。BOTOX -A 的未來進展包括作為膀胱內注射替代物開發的脂質體包封的製劑。

The use of botulinum toxin A (BoNT-A) has expanded across a range of lower urinary tract conditions. This review provides an overview of the current indications for BoNT-A in the lower urinary tract and critically evaluates the published evidence within each area. The classic application of BoNT-A has been in the management of refractory neurogenic detrusor overactivity (NDO) and overactive bladder (OAB). There is a large volume of high-quality evidence, including numerous randomized placebo-controlled trials, which demonstrate the efficacy of BoNT-A over a long follow-up period. The culmination of this robust

evidence-base has led to onabotulinumtoxin A (onaBoNT-A) receiving regulatory approval as a second-line treatment for NDO at a dose of 200 U and OAB at dose of 100 U. Other applications for BoNT-A are used on an off-license basis and include interstitial cystitis/bladder pain syndrome (IC/BPS), benign prostatic hyperplasia (BPH), and detrusor sphincter dyssynergia (DSD). These applications are associated with a less mature evidence-base although the literature is rapidly evolving. At present, the results for painful bladder syndrome (PBS) are promising and BoNT-A injections are recommended as a fourth line option in recent international guidelines, although larger randomized study with longer follow-up are required to confirm the initial findings. As a treatment for DSD, BoNT-A injections have shown potential but only in a small number of trials of limited quality. No definite recommendation can be made based on the current evidence. Finally, the results for the treatment of BPH have been variable and recent high quality randomized controlled trials (RCTs) have suggested no benefit over placebo so at present it cannot be recommended for routine clinical practice. Future advances of BoNT-A include liposome encapsulated formulations which are being developed as an alternative to intravesical injections.

## 課程學習心得 (二)

環境壓力對下尿路症狀的作用？下尿路症狀（LUTS）與焦慮和抑鬱等合併症有關。此外，壓力似乎會影響 LUTS 的症狀加劇。

最近發現：許多作者已經發表了關於幼兒經歷，急性和慢性壓力和精神疾病在 LUTS 發展中的影響。

膀胱症狀與社會心理測量之間的關聯的確切性質仍然未知，可能是由於遺傳性，社會心理因素和環境壓力之間複雜的相互作用。涉及情緒狀態如：焦慮和抑鬱。壓力和膀胱功能的提議的病理生理途徑包括下丘腦 - 垂體軸的激活。對於臨床基礎科學工作的新發展，我們對環境壓力對 LUTS 發展和惡化的作用的理解有許多發展。臨床醫生必須承認 LUTS 患者情感障礙的高發率。

### 課程學習心得 (三)

間質性膀胱炎/膀胱疼痛症候群 (IC / BPS) 是一種慢性疾病，通常對生活品質產生嚴重的負面影響。自身免疫性遺傳疾病與發病機理相關。診斷需要歷史，日誌，身體檢查，排除其他疾病，膀胱鏡檢查有或沒有做水擴張檢查。

新型生物標誌物的產生，提供了廣泛報導成功的行為，藥理學口服和膀胱內，介入和手術治療。建議採用多模態方法，儘管大多數治療方案缺乏高度的證據。

Interstitial cystitis/bladder pain syndrome (IC/BPS) is a chronic debilitating condition which generally has a severely negative impact on quality of life. An autoimmune genetic predisposition correlates with the theory of pathogenesis. Diagnosis requires history, diaries, physical examination, exclusion of other diseases, cystoscopy with or without hydrodistension and/or bladder biopsy. Novel biological markers are upcoming but not established. Behavioural, pharmacological oral and intravesical, interventional and surgical therapies with a wide range of reported success are available. A multimodal approach is recommended, although most of the therapeutic options lack a high degree of evidence.



## 課程學習心得 (四)

在過去二十年中，對於通過膀胱內途徑施用的藥物，{脂質體}作為基於脂質的生物相容性載體的使用，已經有很多。{脂質體}的脂質雙層結構，有助於粘附到膀胱中空腔內細胞的頂端膜表面，它們的囊泡形狀允許它們在滴注之後用於膀胱攝取。

已經顯示脂質體增強水溶性和不溶性藥物，毒素和寡核苷酸穿過膀胱上皮的滲透。完全由內源性磷脂，鞘磷脂組成的空脂質體可以抵抗粘膜炎症，並促進患有間質性膀胱炎的患者傷口癒合。

最近的臨床研究已經測試了完全由鞘磷脂組成的多層脂質體作為間質性膀胱炎的新型膀胱內治療。

此外脂質體已被用作在膀胱過度活動症患者中，滴注肉毒桿菌毒素的平台。

Over the past two decades, there has been lot of interest in the use of liposomes as lipid-based biocompatible carriers for drugs administered by the intravesical route. The lipidic bilayer structure of liposomes facilitates their adherence to the apical membrane surface of luminal cells in the bladder, and their vesicular shape allows them to co-opt the endocytosis machinery for bladder uptake after instillation. Liposomes have been shown to enhance the penetration of both water-soluble and insoluble drugs, toxins, and oligonucleotides across the bladder epithelium. Empty liposomes composed entirely of the endogenous phospholipid, sphingomyelin, could counter mucosal inflammation and promote wound healing in patients suffering from interstitial cystitis. Recent clinical studies have tested multilamellar liposomes composed

entirely of sphingomyelin as a novel intravesical therapy for interstitial cystitis. In addition, liposomes have been used as a delivery platform for the instillation of botulinum toxin in overactive bladder patients. The present review discusses the properties of liposomes that are important for their intrinsic therapeutic effect, summarizes the recently completed clinical studies with intravesical liposomes and covers the latest developments in this field.

# 演講報告 (五)



World Chinese Urological Society (WCUS) International Society

Holistic Approach by Bio-Psycho-Social model to Patients with Interstitial Cystitis / Bladder Pain Syndrome

Friday, May 12 1:43 PM - 1:51 PM Location: BCEC: Room 104



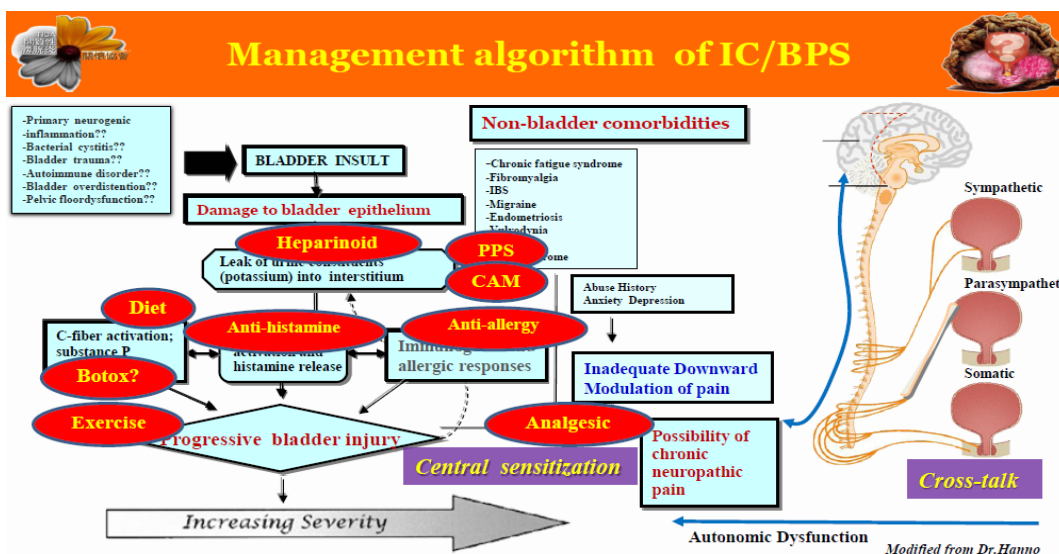
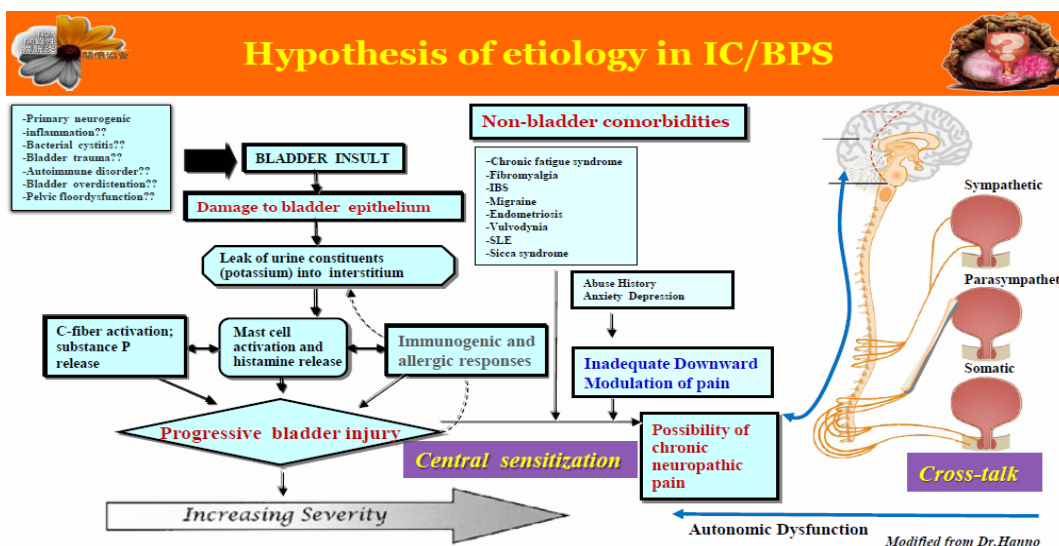
## Holistic Approach by Bio-Psycho-Social model to Patients with Interstitial Cystitis / Bladder Pain Syndrome

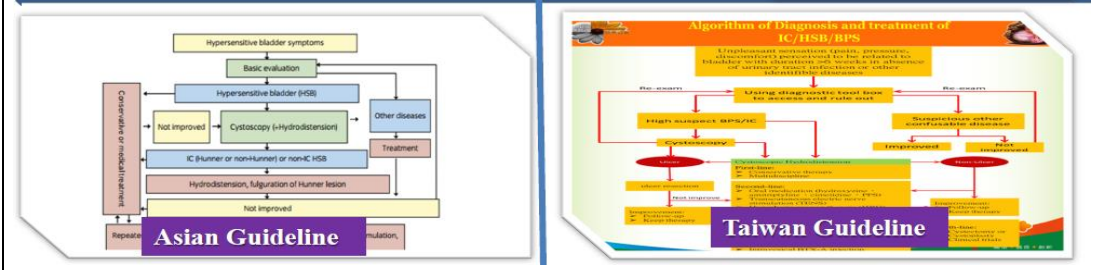
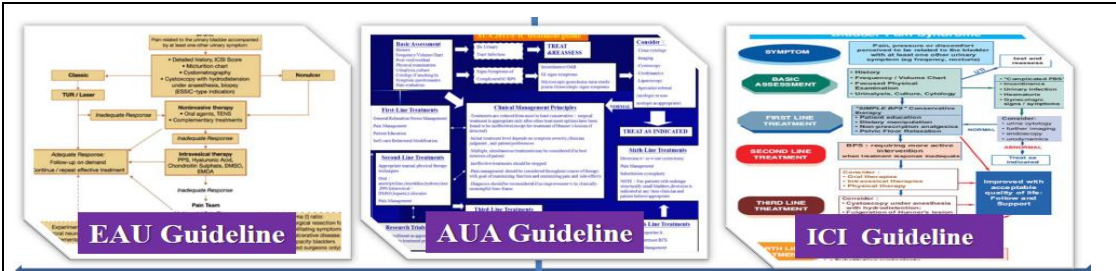
Ming-Huei Lee, M.D., M.H.A

<sup>1</sup>Department of Urology, Feng-Yuan Hospital, Department of Health, Taiwan

<sup>2</sup>Central Taiwan University of Science and Technology, Taiwan

2017-05-12 AUA-Boston





## Principles of management for IC/BPS

**History/ Initial Assessment**

- History •Focus physical examination •Voiding diary
- Questionnaire •Urinalysis •Cystoscopy

**Initial Treatment(Conservative)**

- Patient education •Dietary manipulation
- Nonprescription analgesics •Pelvic floor relaxation

**Secondary Assessment & Treatment**

- Urodynamics •Cystodilation •CAM
- UB Bx •Intravesical MX

**Refractory IC**

- Neuromodulation •Pain clinic referral (Narcotic)
- Experiment protocol

**Last Resort**

- Cystoplasty •Diversion C/S cystectomy

Improved with acceptable quality of life:

**-Follow up**

**-Support**

## What drives IC/BPS patients to search for treatment? (patient's view)

**Physical Symptoms**

Endometriosis    Vulvodynia    CPP    Advanced CPP Syndrome

↓ ↓ ↓ ↓

**Increasing Severity** →

↑ **Frequency**    ↑ **Pain**    ↑

Recent UTI    Urethral    Urge/Freq    NIDDK    Advanced

"Misdiagnosis"    Syndrome    Failed OAB Tx    IC    IC

**Rational(Bio)**

What's my problem?  
Do I have cancer?  
Flare up and down –  
Problem behind me?

**Emotional (Psycho)**

Depression  
Anxiety  
Somatic  
Dissociation

**Behavioral(Social)**

Relationship stress  
Sexual disability  
Job performance  
Social activity  
QoL



## The Goal of management IC/BPS from patient's perspective



### The Goal of Patient's Perspectives Cure the disease!!

- **Rational (Bio)**
  - What's my problem? - Do I have cancer?
  - Flare up and down - Problem behind me?
- **Emotional (Psycho)**
  - Depression -Anxiety
  - Somatic -Dissociation
- **Behavioral (Social)**
  - Relationship stress -Sexual disability
  - Job performance -Social activity
  - QoL

#### Review Article

**Patient-centred** standardization in interstitial cystitis/bladder pain syndrome—a PLEA

Jane M. Meijlink

International Painful Bladder Foundation, Rotterdam, the Netherlands  
Correspondence to: Jane M. Meijlink, International Painful Bladder Foundation, Rotterdam, the Netherlands. Email: jme@ipbf.nl

#### Review Article

A **multidisciplinary** approach to the evaluation and management of interstitial cystitis/bladder pain syndrome: an **ideal model of care**

Priyanka Gupta<sup>1</sup>, Natalie Gaines<sup>1</sup>, Larry T. Sirls<sup>1,2</sup>, Kenneth M. Peters<sup>1,2</sup>

#### Review Article

**Complementary and alternative medical therapies** for interstitial cystitis: an update from the United States

Megan Danielle Atchley<sup>1</sup>, Nima M. Shah<sup>2</sup>, Kristene E. Whitmore<sup>3</sup>

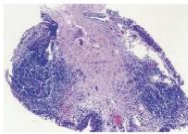


## Aspects of effect of urinary bladder and nonbladder on IC/BPS patient (physician's view)



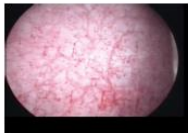
### • Patient's own perception

- Symptom scores
- different from physician's perceptions



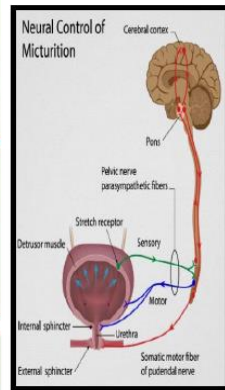
### • Disease Damage

- Accumulated over time due to disease itself, or combined conditions
- Results of therapy
- Irreversible change in anatomy, physiology or function



### • Disease activity

- provoked by potential factors
- potentially reversible with treatment



### FSSs

- TMD
- CFS
- FM
- IBS
- Sicca syndrome

### -Migrain

### -CPP

### -Anxiety

### -Depression

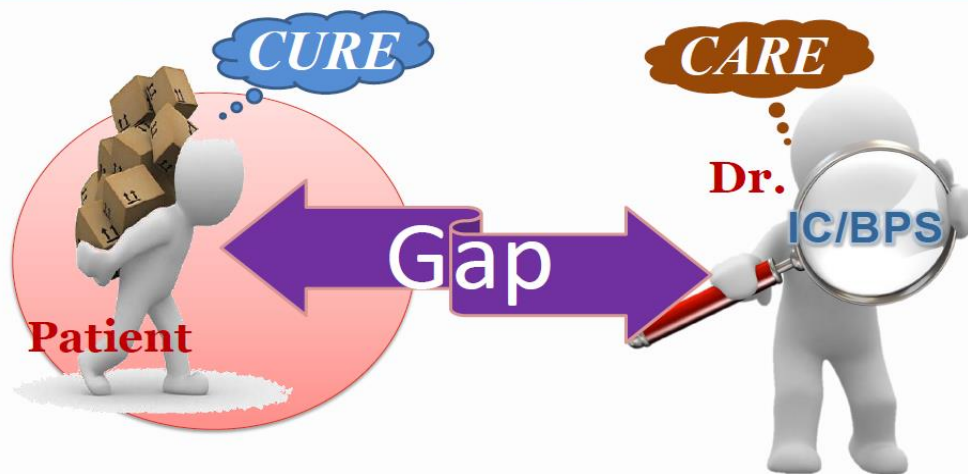
### -Allergy

### -Asthma

Sultan SM. *Curr Rheumatol Rep* 2003;5:445-50.2  
Warren JW. *Urology* 2011,78(4)

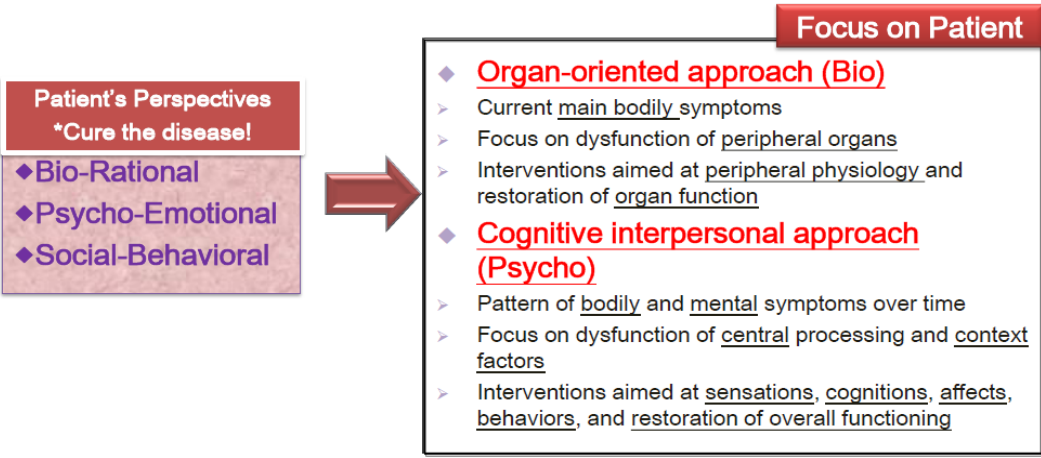


## Gaps between IC/BPS patients and physicians





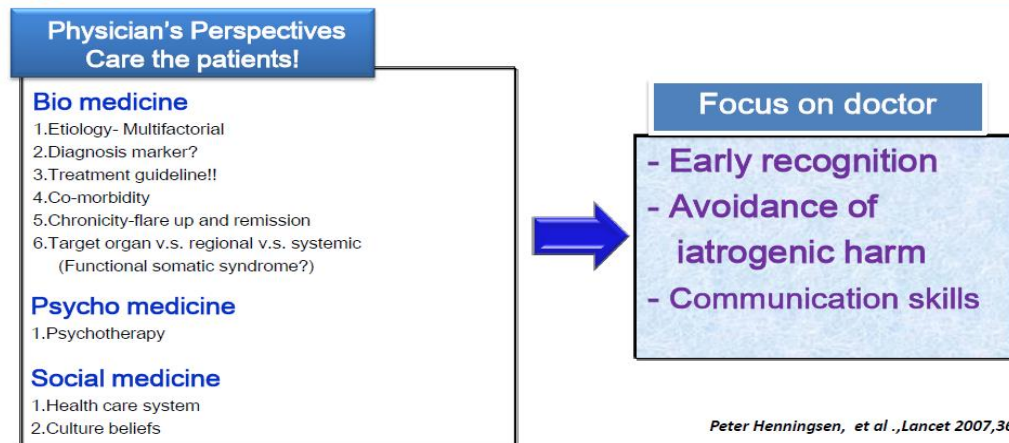
## Management the Gaps between IC/BPS Patients and Physicians



Peter Henningsen, et al., Lancet 2007, 369



## Management the Gaps between IC/BPS Patients and Physicians



Peter Henningsen, et al., Lancet 2007, 369





# Algorithm of Taiwan-Lee Model



**豐原醫院**  
Feng-yuan Hospital  
Department of Health

**Treatment Process of Interstitial Cystitis**

There are diverse treatments for interstitial cystitis, but no single one is specific for it. The long-term physical distress could lead to psychological burden, impaired interpersonal and occupational performance, as well as declined quality of life. The multidisciplinary treatment is the best treatment model for these patients.

① **Outpatient department**

- ◆ Physical examination, Initial OPD sheet, 3-days urine diary, symptom-score
- ◆ Urodynamic test (optional)
- ◆ Potassium test (optional)

② **Inpatient care**

- ◆ Cystoscopy, Cystodilation, (local or anesthesia) ;
- ◆ Consultation of gynecologist, psychiatrist, nutritionist, Chinese-medicine, rheumatologist (Referral for psychological consultation, nutritional consultation, Chinese-medicine OPD, rheumatology OPD if indicate)
- ◆ Pelvic floor muscle exercise (Biofeedback if indicated)
- ◆ Multidisciplinary-team and patient meeting (Communication of the finding and treatment)

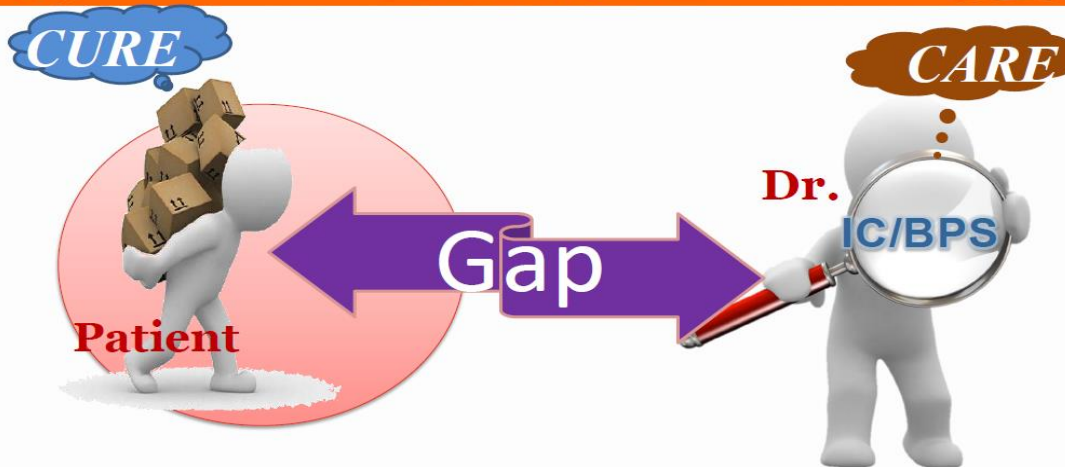
③ **Outpatient follow-up**

- ◆ Oral medication, intravesical medication, bladder rehabilitation, nutritional consultation, ...etc.
- ◆ Taiwan International Cystitis Association (TICA)
- ◆ E-health care

豐原醫院泌尿科與癌同行  
TICA專線：04-25299123  
e-Mail：icat@mail.taich.doh.gov.tw

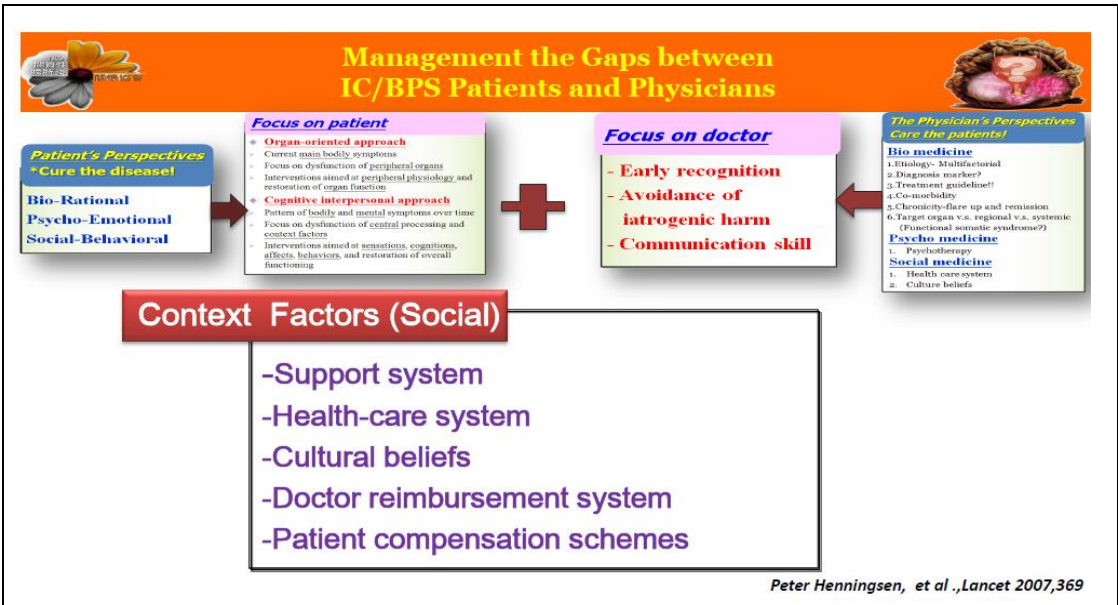


## Gaps between IC/BPS patients and physicians



## Communication between IC/BPS patients and physicians





## Establishment and Goals of TICA

(Taiwan Interstitial cystitis Association)

TICA established in Dec, 2004

### Goals of TICA

**Educational Goal** : Through the aid of doctors and nurse, we would like to provide workshops about medicine and nursing care. We would also like to offer correct knowledge about IC prevention, self-caring, and treatment.

**Supportive Goal** : Through the help of TICA, we would like to help IC patients and their family relax and adjust to their lives, especially in the aspect of different types of pressure such psychology, emotion, family, and social environment.

**Self-help Goal** : We integrate experience sharing and emotional assistance to engage patients in mutual concern and encouragement. Finally, IC patients can establish positive perspective of life and can be more able to solve relevant problems.

## TICA- Educational Goal

專家學者蒞臨演講 - TCS理事長  
台北榮民總醫院 林登龍教授(Alex Lin)

小型聚會活動 - 骨盆底肌肉訓練  
中山物理治療系 陳怡靜博士

**News reports**

**Newspapers and magazines**

**IC press conference**





# TICA- Support Goal



**UROLOGY**

**Original Article**

**Development and evaluation of an E-health system to care for patients with bladder pain syndrome/interstitial cystitis**

**Sheng-Ching Chen, Jen-Ching Lee, Tzu-Hsin Tsai, Tzu-Chen Tsai and Ting-Fu Chen\***

**TICA E-health system**

**Quarterly issue**

**Association website**

**TICA 台灣 間質性膀胱炎 關懷協會**

**TICA Facebook**

**TICA Newsletter**



# TICA- Self-Help Goal



**Regular patients gathering**

**Inpatients Support of IC patients**

**TICA annual tour (once a year)**

**TICA annual meeting (once a year)**



# Achievement of TICA (Taiwan Interstitial cystitis Association)



**Holistic care** **Supporting system** **E-health care**

**Public education** **International conference** **Guideline**

全國社區區域人民團體立案證書

中華民國 94 年 12 月 17 日

蘇嘉全

2011年國家品質標授證典禮

**SNQ** Safety and Quality

國家品質標授證典禮

Symbol of National Quality Award

## Why holistic management for IC?

- multifocal etiologies
- chronic visceral pain syndromes  
(Cross talk vs. Up regulation )
- co-morbidities

- nature histories poor described
- unpredictable treatment outcome  
(Wax vs. Wane )
- patients centered care

**Multidisciplinary  
(Bio-Psycho) Approach**

**Social Approach**

**Bio-psycho-social model**

↓

**Health promotion**

Proposed by Lee Team

**Wish we can cure IC/BPS!**

**Hope we can conquer IC/BPS!**

http://www.twicb.org.tw TEL: 04-22998643

## 心得及建議

透過彼此的交流，吸收各國在治療上的不同方式與成果，發現更多值得探討的問題點，有利於改善目前的治療方式，提高病患的滿意度，進而提升醫病關係。期望能有所突破讓更多病患受惠，也建議與病患互相合作也許能加速研究的成形，了解下一步的方向。

# 照 片







