出國報告（出國類別：口頭海報發表）

2017年國際尿控協會(International Continence Society Annual Meeting 2017)心得報告

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摘　　要

每年一次的國際學術發表，藉由參與 ICS 與各國做學術上的交流，不同方向的實驗研究讓我們對 IC 有更突破性的見解，遠觀各國的研究可以觀察不同國家的切入點以及研究成果，引起我們深切的思考。口頭報告發表中，探討議題的方向讓在場人士都能有所思考並提出發問，在這過程中，審視自己未注意到的部分並了解下一步的方向。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的正確性與有效性。

(2017 年國際尿控協會會議)

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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

以下為報告心得及海報及口頭發表。

課程學習心得 (一)

骨盆底肌肉訓練是物理治療還是行為療法？

本演講將討論骨盆底肌肉訓練（PFMT）目標是證明它在女性尿失禁和脫垂的管理中是否是身體或行為治療。我們還將顯示，用於 PFMT 的術語過多可能會造成混亂。雖然物理治療師（PT）可能熟悉運動術語，但細節通常不完整。此外，PT 對於準確地表示認知和行為治療干預的術語不那麼熟悉，這導致這些因素無法得到更好的報告。因此，我們的另外的目的是提高 PFMT 報告中使用的術語的更加清晰，特別是對運動和行為要素的描述。首先，我們將 PFMT 解釋為主要通過物理治療學科的身體和運動療法。然而，有效的實施要求我們利用心理學學科的認知和行為觀點。第二，我們總結了 PFMT 心理學知識要素的理論基礎。第三，為了解決當前術語和報告中的一些確定的限制和混淆，我們建議 PT 如何將心理學知識要素納入 PFMT，以及更熟悉的運動治療通知要素。第四，我們提供一個例子，說明如何在 PFMT 干預中描述和報告兩個要素。總而言之，本演講將探討 PFMT 的基本概念，以證明它既是物理的和行為的干預，也可以並且需要被描述，我們將提供一個將這些元素整合到臨床中的最佳描述的例子實踐。

慢性陰部疼痛

國際陰道疾病研究學會將外陰視為至少 3 個月的外陰疼痛，沒有明確的可鑑定的原因可能有潛在的相關因素。這定義最近已經與國際婦女性健康研究學會和國際骨盆疼痛學會達成共識，作為外陰患者新術語的組成部分。它將外陰概述為多因素條件，而不是特定實體，其中相關因子本身是疾病的病理生理成分，在每個個體中具有不同的相關性。 灼痛，疼痛和內分泌性痛經，其強度可能抑製或預防性交，往往是呈現症狀。外陰病的病因尚未完全了解。許多研究結果表明，

神經病理機制可能是疾病的臨床症狀的基礎，包括神經增生，炎症，中樞或外周傷害性功能障礙，以及連續骨盆底肌肉的參與。在任何“觸發因素”（感染，創傷，過敏，激素因子等）已經解決之後，中樞和周圍敏感化似乎對長期存在的症狀負責。這些導致敏感的傳入神經纖維更容易排出並且處於較低的閾值，有助於解釋為什麼顯然不可察覺或最小的刺激有時會引起疼痛。

外陰治療的終點可歸納如下：

●減少觸發和刺激刺激

●周邊傷害性封鎖

●中央抑制

●限制骨盆底功能障礙

●限制綜合徵的心理功能障礙

伸展和盆底肌肉訓練 - 科學狀態

盆腔器官脫垂是指失去對子宮，膀胱，結腸或直腸的支持，導致一個或多個器官向陰道脫垂。塌陷的特徵在於各種骨盆底症狀，最常見的是引起陰道膨脹的感覺，或“下降的東西”。治療取決於脫垂的嚴重程度及其症狀，以及女性的一般健康狀況。一般來說，保守治療是適合那些較少脫垂的人的一種治療方法。

保守的脫垂管理包括骨盆底肌肉訓練。骨盆底肌肉在骨盆器官和盆腔開口的結構支撐方面發揮關鍵作用。假設改善骨盆底肌肉功能可以改善骨盆腔器官的這種結構支持。

現在有 30 多項臨床試驗，涉及骨盆底肌肉訓練在脫垂治療中的作用。盆底肌肉訓練作為輔助手術或子宮托的作用也是隨機研究的主

題。專門針對這一問題的 Cochrane 評估於 2004 年首次出版，2011 年和 2017 年更新，國際尿失禁協會也在第 3,4,5 和 6 版的審查中提出了有關證據的建議。

本演講將報告現在有關骨盆底肌肉訓練的相當證據及其在脫垂管理中的有效性。

膀胱過動（OAB）

膀胱過動症是以緊急症狀為特徵的男性和女性患者的普遍情況。這是臨床病症，不限於逼尿肌過度活動的存在。 在填充期間除了膀胱活動的變化之外，還存在其它表型，其可以基於尿道和/或骨盆底的功能障礙。 此外，由於生殖器或結腸直腸系統的變化，外周或中樞神經系統的變化也可能影響膀胱過度活動症狀。 在演講中，將討論不同表型的診斷和治療數據，並強調骨盆底物理治療的可能作用。

Is pelvic floor muscle training a physical therapy or a behavioural therapy?

This presentation will discuss whether pelvic floor muscle training (PFMT), in the management of female urinary incontinence and prolapse, is a physical or behavioral therapy. Our aim is to demonstrate it is both. We will also show that the plethora of terms used for PFMT is potentially confusing and current terminology inadequately represents the full intent, content and delivery of this complex intervention. While Physical Therapists (PT) may be familiar with exercise terms, the details are often incompletely reported; furthermore PTs are less familiar with the terminology to accurately represent cognitive and behavioral therapy interventions, which results in these elements being even less well reported. Thus, our additional aim is to provide greater clarity in the

terminology used in the reporting of PFMT interventions, specifically the descriptions of the exercise and behavioral elements. First, we explain PFMT as a physical and exercise therapy informed predominantly by the discipline of physical therapy. However, effective implementation requires that we utilize the cognitive and behavioral perspectives of the discipline of psychology. Second, we summarise the theoretical underpinning of psychology-informed elements of PFMT. Third, to address some identified limitations and confusion in current terminology and reporting we recommend how PTs can incorporate the psychology-informed elements to PFMT alongside the more familiar exercise therapy-informed elements. Fourth, we provide an example of how both elements can be described and reported in a PFMT intervention. In summary, this presentation will explore the underlying concepts of PFMT to demonstrate that it is both a physical and a behavioral intervention, can and needs to be described as such, and we will provide an example of optimal description of integration of these elements into clinical practice.

Vulvodynia

The International Society for the Study of Vulvovaginal Disease defines vulvodynia as vulvar pain of at least 3 months' duration without a clear identifiable cause that may have potential associated factors. This definition has been recently introduced in consensus with the International Society for the Study of Women's Sexual Health and the International Pelvic Pain Society as a component of new terminology around vulvar pain. It outlines vulvodynia as a multifactorial condition, rather than a specific entity, in which the associated factors are themselves pathophysiological components of the disease, with differing

relevance in each individual. Vestibulodynia describes the most common localization, at the vulvar vestibule. Burning, pain, and introital dyspareunia, the intensity of which may inhibit or prevent intercourse, are often the presenting symptoms. The etiology of vulvodynia is not fully understood. Many findings suggest that neuropathic mechanisms may underlie the clinical symptoms of the disease including neural hyperplasia, inflammation, central or peripheral nociceptive dysfunction, and involvement of contiguous pelvic floor muscles. Central and peripheral sensitization seems to be responsible for perpetuation of the symptoms long after any “triggering factor” (infections, trauma, allergy, hormonal factors,etc.) has been resolved. These sensitized afferent nerve fibers discharge more readily and at lower thresholds, helping to explain why apparently imperceptible or minimal stimulation sometimes causes pain.

End-points for vulvodynia therapy can be summarized as follows:

- Reduction of triggers and irritating stimuli
- Peripheral nociceptive blockade
- Central inhibition
- Limit associated pelvic floor dysfunction
- Limit psychosexual dysfunctions of the syndrome

Prolapse and pelvic floor muscle training – state of the science

Pelvic organ prolapse refers to the loss of support for the uterus, bladder, colon or rectum leading to prolapse of one or more of these organs into the vagina. Prolapse is characterised by a variety of pelvic floor

symptoms, the most commonly reported being a sensation of bulging into the vagina, or “something coming down”. Treatment depends on the severity of the prolapse and its symptoms, and the woman's general health. Conservative treatment is generally considered for those with a lesser degree of prolapse, those who wish to have more children, those with frailty or those unwilling to undergo surgery.

Conservative management of prolapse includes the delivery of pelvic floor muscle training. The pelvic floor muscles play a critical role in giving structural support to the pelvic organs and pelvic openings. It is hypothesized that improving pelvic floor muscle function may improve this structural support for the pelvic organs.

More than 30 trials now exist relating to the role of pelvic floor muscle training in the treatment of prolapse. The role of pelvic floor muscle training as an adjunct to surgery or pessary has also been the subject of randomised studies. A Cochrane review specifically addressing this question was first published in 2004, and updated in 2011 and 2017, and the International Consultation on Incontinence has also reviewed and offered recommendations from the evidence in its 3rd, 4th, 5th and 6th editions.

This presentation will report on the now substantial body of evidence relating to pelvic floor muscle training and its effectiveness in the management of prolapse.

Overactive Bladder (OAB)

The overactive bladder syndrome is a prevalent condition in male and female patients characterized by urgency. This is a clinical condition, not

limited to the presence of detrusor overactivity. Beside changes in bladder activity during filling, other phenotypes also exist, which may be based on dysfunctions of the urethra and or pelvic floor. Furthermore changes in the peripheral or central nervous system as changes in the genital or colorectal system may also influence symptoms of overactive bladder. During the presentation, the data on diagnosis and treatment of the different phenotypes will be discussed and the possible role of pelvic floor physiotherapy will be highlighted.

課程學習心得 (二)

成人功能的保守管理：物理療法

本次研討會的目的是提供：

1.了解 UI 和 POP 的物理治療評估以及臨床推理診斷和規劃 UI＆POP 的保守管理。

2.修改骨盆功能解剖和 PFM 的機會。

3.骨盆底功能障礙臨床評估原理包括 PFM 評估。

4.討論運動控制，力量訓練和功能訓練的 PFM 練習原理的論壇，包括：理由，證據基礎，臨床應用和進展。

5.對特殊人群 - 老年人，懷孕期間骨盆底管理的基本了解。

6.在骨盆底運動障礙中使用電刺激和生物反饋的證據

ICS CORE CURRICULUM (FREE): CONSERVATIVE MANAGEMENT OF ADULT PELVIC FLOOR DYSFUNCTION: A PHYSIOTHERAPY APPROACH

The aims of this workshop are to provide:

1. An understanding of physiotherapy assessment of UI and POP and the clinical reasoning to diagnose and plan the conservative management of UI & POP.

2. An opportunity to revise functional anatomy of the pelvis and PFM.

3. Principles of clinical assessment of pelvic floor dysfunction including PFM assessment.

4. A forum to discuss the principles of teaching PFM exercise for motor control, strength training and functional training, including; rationale, evidence base, clinical application and progression.

5. A basic understanding of the pelvic floor management in special populations - older age, pregnancy.

6. Evidence for the use of electrical stimulation and biofeedback in pelvic floor dysfun

課程學習心得 (三)

兒童和青年成人的協調委員會關於過渡性心理健康問題。

脊柱裂，膀胱外翻/尿道上裂，後尿道瓣膜，尿道下裂和肛門直腸畸形在兒童期手術治療，但所有這些患者都需要終身泌尿科護理來治療。 定義的關鍵方面有：

- 童年時期正確管理，避免損害成人生活的程序。
- 過渡到童年，實際上令人困惑。
- 兒科和成人保健專業人員的知識不足，有關成人生活問題和先天性病變。

研討會的目的是提供對上述膀胱和腸失禁最佳實踐管理的實際建議的概述。

CHILDREN AND YOUNG ADULTS WORKSHOP COMMITTEE ON TRANSITIONAL CARE FOR CONTINENCE IN CONGENITAL MALFORMATIONS.

Spina bifida, bladder exstrophy/epispadia, posterior urethral valves, hypospadia and anorectal malformations are surgically managed in childhood but all these patients require life-long urological care for the treatment of continence. There are critical aspects to define:

- Correct management in childhood to avoid procedure that impair adult life.

- Transition out of childhood, actually confusing.

- Lack of knowledge in paediatric and adult health care professionals, about adult life problems and congenital pathologies respectively.

The objectives of workshop are to offer an overview with practical suggestions for best practice management of bladder and bowel incontinence in the above pathologies.

海報發表 (四)

Correlation between Bladder Urothelial Thickness and Clinical Symptoms in Patients with Interstitial Cystitis / Bladder Pain Syndrome (IC/BPS)

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Hypothesis / Aim of study :

Interstitial Cystitis / Bladder Pain Syndrome (IC/BPS) is a chronic bladder condition characterized by bladder pain, urinary urgency, urinary frequency, and nocturia. Recent studies showed that increased apoptosis and denudation/thinning of the bladder urothelium are common findings in IC/BPS patients. Thus, the aim of our study is to investigate the relationship between urothelial thickness and clinical symptoms of IC/BPS patients

Study design, materials and methods :

The study group consisted of 30 patients with IC/BPS and the control group consisted of 12 volunteers without any IC/BPS symptoms. Bladder biopsies were taken from both groups. We determined the thickness of the bladder urothelium by immuno-histochemical staining for CK7 (cytokeratin 7; an epithelial marker). There are six clinical symptoms in consist of symptom questionnaire and potassium chloride sensitivity test (KCL test). The five symptom questionnaire including visual pain analogue scale (VAS-pain scale), visual urgency analogue scale (VAS-urgency scale), O'Leary-Sant Symptom Index (ICSI), O'Leary-Sant Problem Index (ICPI), and Pain and Urgency / Frequency symptom scale (PUF scale) were also recorded. The pain score of KCL Test was also performed. We analyzed the correlation between bladder urothelial thickness and clinical symptoms by using Spearman's rho.

Results:

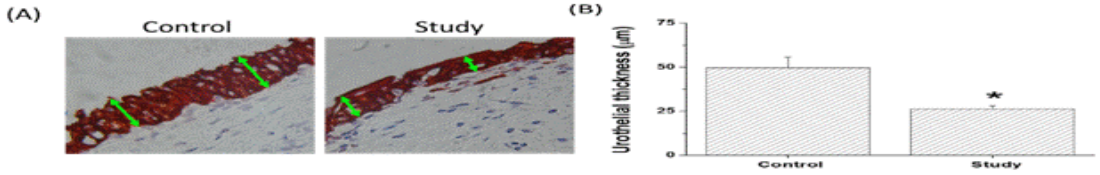
<Table 1> Demographics of IC/BPS patients

Items (unit or range)	N	Value (mean ± standard error)
Age (years)	30	40.5 ± 1.77
No. 24-h frequency	21	14.66 ± 2.24
No. nocturnal frequency	21	3.30 ± 0.99
Visual pain analogue scale (0-10)	25	4.52 ± 0.72
Visual urgency analogue scale (0-10)	25	6.16 ± 0.56
O'Leary-Sant Symptom Index (0-20)	20	12.25 ± 0.55
O'Leary-Sant Problem Index (0-16)	20	9.90 ± 0.77
Pain and Urgency/Frequency symptom scale (0-35)	20	18.25 ± 1.81
Pain score of KCl test (0-5)	25	2.92 ± 0.31

<Table 2> The correlation between urothelial thickness and symptoms in IC/BPS patients

Group	Thickness	Symptom	N	Spearman R	Spearman P
Thicker group (Thickness >26.42 μm)					
		Visual pain analogue scale	11	-0.161	0.318
		Visual urgency analogue scale	11	-0.546	0.041*
		O'Leary-Sant Symptom Index	9	0.336	0.188
		O'Leary-Sant Problem Index	9	0.025	0.474
		Pain and Urgency/Frequency symptom scale	9	-0.647	0.030*
		Pain score of KCl test	11	-0.422	0.098
Thinner group (Thickness <26.42 μm)					
		Visual pain analogue scale	14	-0.327	0.127
		Visual urgency analogue scale	14	-0.029	0.461
		O'Leary-Sant Symptom Index	11	-0.238	0.240
		O'Leary-Sant Problem Index	11	-0.275	0.207
		Pain and Urgency/Frequency symptom scale	11	-0.446	0.085
		Pain score of KCl test	14	-0.683	0.004*

<Figure 1> The bladder urothelium in IC/BPS and control group



Conclusions :

The bladder urothelial thickness was significantly decreased (approximately 50% less) in the IC/BPS group compared with that in the control group. Additionally, the pain score of KCl test has significantly negative correlation with urothelial thinner group than in thicker group of IC/BPS patients.

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Morbidity and medical utilization of Interstitial Cystitis/Painful Bladder Syndrome in Taiwan -A nationwide population-based study

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Hypothesis / Aim of study :

The morbidity (incidence and prevalence) of IC/PBS varies greatly depends on the definition of studies among distinctive areas. Contradictory findings exist among these available reports. We calculated the morbidity rate and medical utilization of IC/PBS over twelve years using a nationwide database of Taiwan.

Study design, materials and methods :

This was a cohort study of the Longitudinal Health Insurance Database 2010 with new diagnoses of IC/PBS from 2002 through 2013. The morbidity rate was adjusted for age, sex, and calendar date using density methods. Moreover, medical utilization during the study period was measured.

Inclusion criteria for IC/PBS: Diagnosis with ICD code 595.1 at least once in the LHID2010, age ≥18 years, first date was before 2002.

Incidence = Number of new IC/PBS cases each year ÷ Number of people observed in the population each year

Yearly Prevalence = Number of new IC/PBS cases that occurred within two years ÷ Number of people observed in the population each year

Surgery fees: fee for cystoscope-hydrodistention;

Total fee: includes drug, non-drug and procedure or surgery fee

Results:

It was observed that the incidence of IC/PBS was 21.8/100,000 in 2002 and 21.1/100,000 in 2013. The prevalence of IC/PBS was 21.8/100,000 in 2002 and 40.2/ 100,000 in 2013. In 2003, the incidence and prevalence of females was 28.6/100,000 and 63.5/100,000, respectively. The incidence and prevalence of males was 12.3/100,000 and 19.4/100,000, respectively. In 2002, the incidence was 45.5/100,000, 32.4/100,000, and 9/100,000 in ages above 65, 40-65 and under 40 years, respectively. The prevalence in 2003 was 86.3/100,000, 63.1/100,000, and 16.4/100,000 in ages above 65, 40-65 and under 40 years, respectively. This pattern was similar until 2013. The mean outpatient and inpatient visit time was 4.8 and 1.8 times per year, respectively. The mean surgical fee (US$ 246.6±304.5) was 23.6% of the total fee.

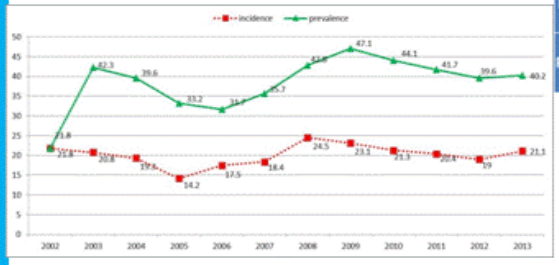

Figure 1. Interstitial Cystitis / Painful Bladder Syndrome incidence and prevalence between 2002~2013 in LHID 2010 (per 100,000)

IC/PBS Interstitial Cystitis / Bladder Pain Syndrome; LHID 2010: Longitudinal Health Insurance Database 2010

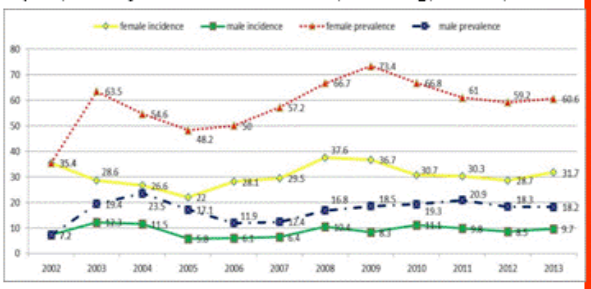

Figure 2. Interstitial Cystitis / Painful Bladder Syndrome incidence and prevalence between 2002~2013 (by sex) in LHID 2010 (per 100,000)

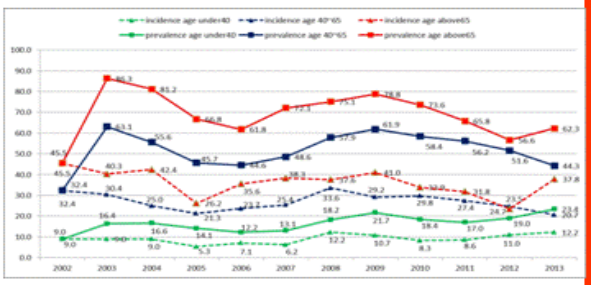

Figure 3. Interstitial Cystitis / Painful Bladder Syndrome incidence and prevalence between 2002~2013 (by age) in LHID 2010 (per 100,000)

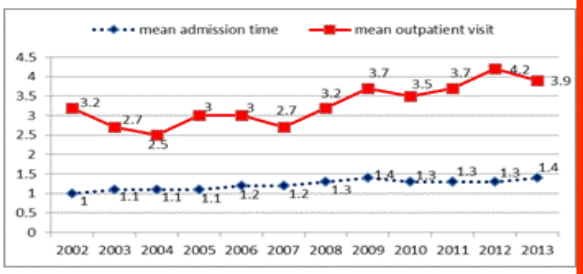

Figure 4 . Distribution of hospitalizations and outpatient visits for IC/PBS patients between 2002~2013 in LHID 2010

Table Surgery fees (US$) and percentages between 2002~2013 in LHID 2010 (n=269)

variables	Mean	sd	min	median	max.
Surgery fee	248	302	0	138	1470
Total fee	1241	2090	4	703	24599
Percentage	23.6	18.5	0	24.3	67.1

Conclusion :

The morbidity rate of IC/PBS showed a higher incidence and prevalence in females and older patients during our study period (2002-2013). The use of a new drug for treatment of IC/PBS is a factor of the peak in the morbidity rate of IC/PBS. The increase in medical utilization could be explained by the awareness of physicians and patients seeking for medical help. Research to identify IC/PBS patients is an important step in motivating patients' willingness to obtain medical help.

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A Comparison Study on Outpatient Reimbursement between Interstitial Cystitis/ Bladder Pain Syndrome and Rheumatoid Arthritis Patients in Taiwan Public Health Insurance

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Hypothesis / Aim of study :

Interstitial cystitis/bladder pain syndrome (IC/BPS) is an enigmatic chronic pain disease. Studies have investigated differences in medical utilization between IC/BPS and non-IC/BPS. However, no study has compared medical expenditures between IC/BPS and rheumatoid arthritis (RA). This study is aimed to compare outpatient reimbursement between IC/BPS and RA in Taiwan public health insurance.

Study design, materials and methods :

This was an observational study using Taiwan Longitudinal Health Insurance Database between 2002- 2013. Patients with ICD-9-CM codes for IC/BPS or RA were selected and matched under 1:5 ratio based on index year. Possible confounders, including age, sex, income, hospital levels and the reimbursements from 24 comorbidities (modified from an automated risk-adjustment model [RxRisk]) were surveyed and adjusted. Yearly and each visit of pharmacy, non-pharmacy and total claims were determined.

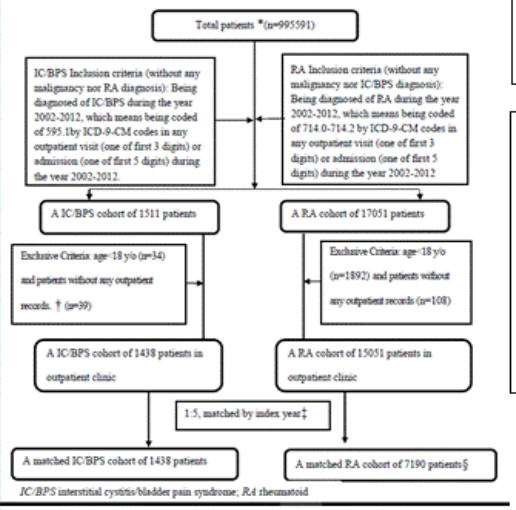

Figure 1. The procedures of selecting outpatient IC/BPS and RA cohorts.

Results:

A Total of 1438 IC/BPS patients and 7190 RA patients were identified. IC/BPS patients were significantly younger and with higher female ratio. Income of IC/BPS was lower, but no statistically different. Both cohorts had no significant difference in the reimbursements from comorbidities, except end stage renal disease, which reimbursement was higher in RA. After confounders adjusted, Regression co-efficient of IC/BPS to RA were significantly lower in yearly total pharmacy claim ($-65.8), yearly total claim ($-64.1), pharmacy claim per visit ($ -3.4) and total claim per visit ($-5.0).

Table 1. Characteristics and outpatient reimbursements of comorbidities between IC/BPS and RA cohorts

Variable	IC/BPS (n=1438)	RA (n=7190)	p
Age, mean (SD), year	46.6 (15.82)	52.3 (15.05)	0.000
Female, n (%)	1143 (79.5%)	5137 (71.4%)	0.000
Income, mean (SD) , $	1029.7 (705.60)	1061.9 (759.33)	0.135
Hospital Level, n (%)			
1. medical center	288 (20.0%)	1207 (16.8%)	0.000
2. regional hospital	460 (32.0%)	1440 (20.0%)	
3. local hospital	206 (14.3%)	1343 (18.7%)	
4. clinic	484 (33.7%)	3200 (44.5%)	
Comorbidity* *(ICD-9-CM)*	N†; fee $, mean(SD) (min., median, max.) 13; 1571.0 (4685.70)	N; fee $, mean(SD) (min., median, max.) 74; 7244.0 (9472.07)	
ESRD‡ *(585)*	(31.4, 69.1, 17019.6)	(7.6, 395.7, 23546.8)	0.038

IC/BPS interstitial cystitis/bladder pain syndrome; *RA* rheumatoid arthritis

Table 2. Outpatient reimbursement* comparisons between IC/BPS cohort (n=1438) and RA cohort (n=7190), without confounders adjusted.

Variable	IC/BPS; fee $		RA; fee $		p
	mean (SD)	range	mean (SD)	range	
pharmacy claim	39.3 (142.80)	0-2506.3	94.3 (413.33)	0-13430.7	0.000
non-pharmacy claim	104.7 (308.03)	3.0-4201.6	92.9 (277.77)	0-17983.3	0.151
total claim	144.1 (377.83)	3.0-4505.6	187.3 (549.83)	3.0-17983.3	0.004
pharmacy claim per visit	8.2 (12.00)	0-144.1	11.2 (24.56)	0-636.0	0.000
non-pharmacy claim per visit	27.1 (41.53)	3.0-552.7	26.0 (47.10)	0-1695.2	0.402
total claim per visit	35.3 (42.70)	3.0-558.7	37.2 (52.90)	3.0-1695.2	0.193

IC/BPS interstitial cystitis/bladder pain syndrome; *RA* rheumatoid arthritis

Table 3. Outpatient reimbursement comparisons with regard IC/BPS cohort (n=1438) to RA cohort (n=7190), with confounders adjusted.*

Variable	Regression coefficient; $	(95% confidence interval; $)
Pharmacy claim	-65.8†	(-87.5~-44.0)
Non-pharmacy claim	1.8	(-14.2~17.8)
Total claim	-64.1†	(-93.7~-34.5)
Pharmacy claim per visit	-3.4†	(-4.7~-2.2)
Non-pharmacy claim per visit	-1.5	(-4.0~1.0)
Total claim per visit	-5.0†	(-7.7~-2.2)

IC/BPS interstitial cystitis/bladder pain syndrome; *RA* rheumatoid arthritis

* *adjusted confounders* of age, sex, hospital level and end stage renal disease.

†indicate $p<0.05$

Limitations:

The limitations of using outpatient reimbursement representative of medical utilization are (1) outpatient reimbursement is not the whole picture of medical utilization; (2) without outcome information, and inefficient IC/BPS management possibly causing reluctant follow-up; (3) self-pay and pay for alternative medicine not available.

Conclusion :

The results suggest that, outpatient reimbursement of IC/BPS was significantly lower than RA, mainly on the pharmacy expenditure. Less reimbursement indicates less medical utilization possibly due to unsatisfied outcome. Further advance in IC/BPS treatment should be emphasized.

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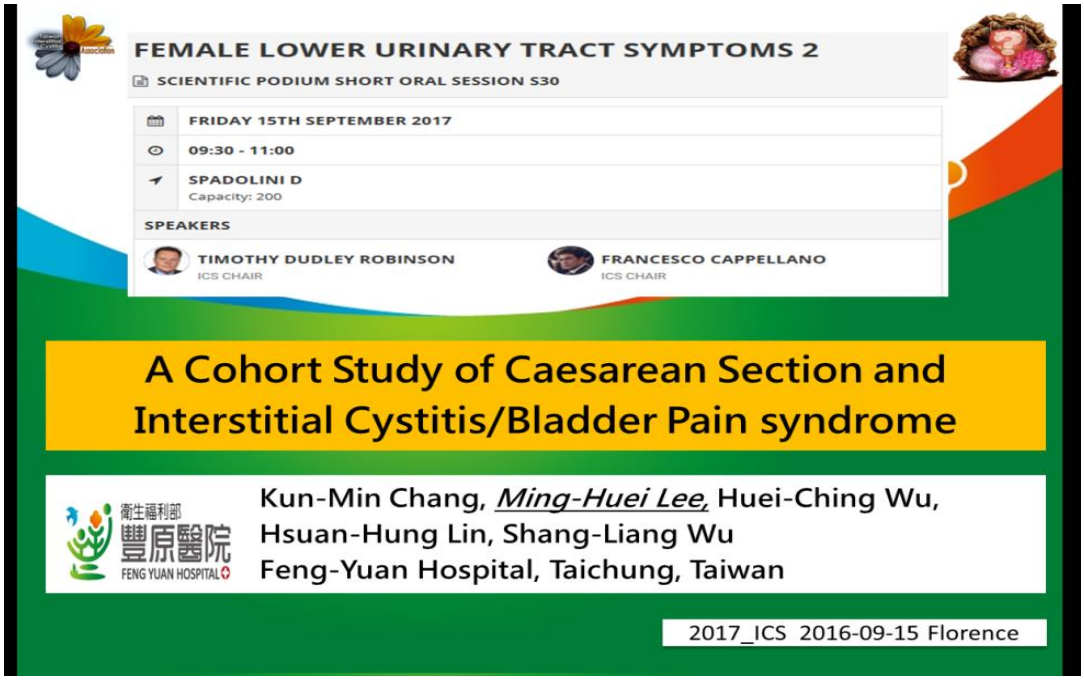
FEMALE LOWER URINARY TRACT SYMPTOMS 2
SCIENTIFIC PODIUM SHORT ORAL SESSION S30
FRIDAY 15TH SEPTEMBER 2017
09:30 - 11:00
SPADOLINI D
Capacity: 200
SPEAKERS
TIMOTHY DUDLEY ROBINSON
ICS CHAIR
FRANCESCO CAPPELLANO
ICS CHAIR
A Cohort Study of Caesarean Section and Interstitial Cystitis/Bladder Pain syndrome
衛生福利部 豐原醫院 FENG YUAN HOSPITAL
Kun-Min Chang, Ming-Huei Lee, Huei-Ching Wu,
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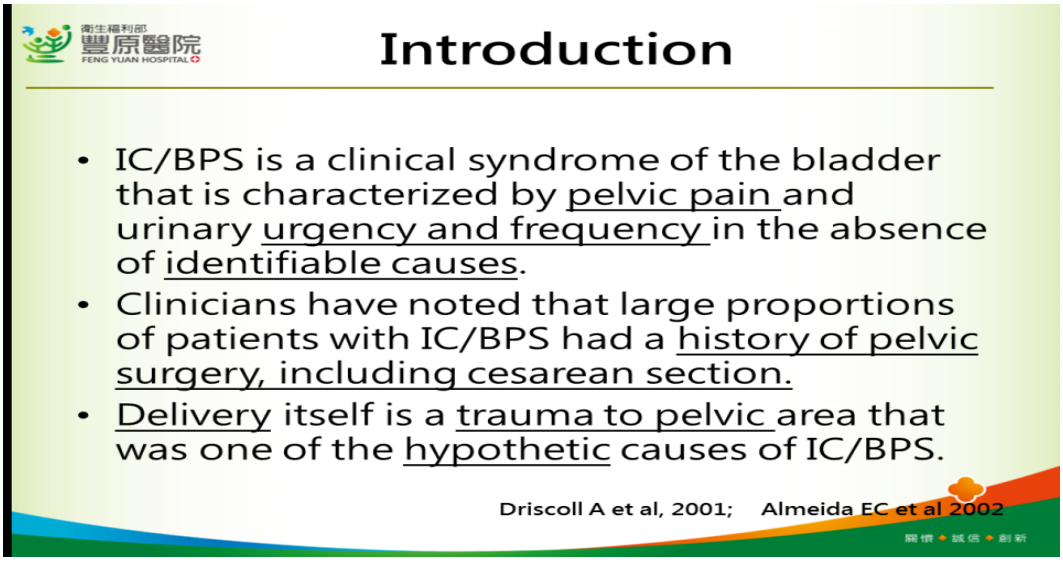
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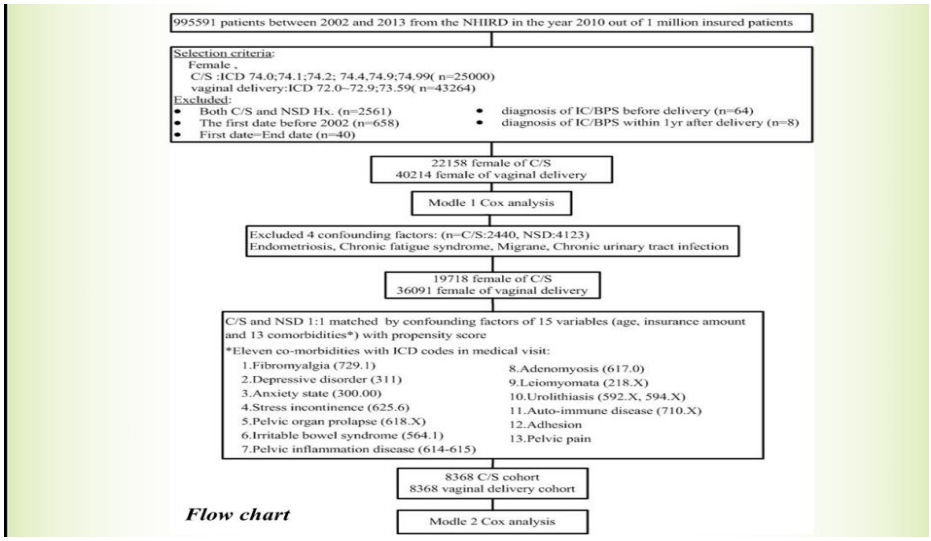
Introduction
• IC/BPS is a clinical syndrome of the bladder that is characterized by pelvic pain and urinary urgency and frequency in the absence of identifiable causes.
• Clinicians have noted that large proportions of patients with IC/BPS had a history of pelvic surgery, including cesarean section.
• Delivery itself is a trauma to pelvic area that was one of the hypothetic causes of IC/BPS.
Driscoll A et al, 2001; Almeida EC et al 2002

Aims of study

- To investigate the causal effect of cesarean section on IC/BPS after controlling confounding factors in a large nationwide cohort study.
- Compare the risk of developing IC/BPS between different delivery method (cesarean section *vs.* vaginal delivery).
- Compare the incidence density of IC/BPS among general female population and female of different delivery type.

Materials and methods:

- This is a cohort study of Longitudinal Health Insurance Database from 2002 through 2013.
- ***Inclusion criteria*** for IC/PBS:
  Women received caesarean section or vaginal delivery between 2002 and 2013 were included.
- ***Exclusion criteria*** :
  Age <18
  Those with both methods of delivering.
  IC/BPS diagnosed before delivery or occurred within 1year after delivery.
- **Sample size:** 8368 C/S cohort and 8368 vaginal delivery chort.
- All included women were followed until the end of 2013 to detect the event of IC/BPS.



Flow chart

Demographics

Variable (n, %)	C/S cohort (n=8368)	NSD cohort (n=8368)	p
Age (y/o) mean ± SD (range)	29.59 ± 4.74 (15.55-45.70)	29.58 ± 4.74 (13.64-47.75)	0.918
Fibromyalgia	3347 (40.00%)	3348 (40.01%)	1.000
Depressive disorder	7 (0.08%)	5 (0.06%)	0.581
Anxiety state	1064 (12.72%)	1065 (12.73%)	1.000
Stress incontinence	4 (0.05%)	4 (0.05%)	1.000
Pelvic organ prolapse	2 (0.02%)	3 (0.04%)	0.687
Irritable bowel syndrome	748 (8.94%)	698 (8.34%)	0.169
Pelvic inflammation disease	3399 (40.62%)	3399 (40.62%)	1.000
Adenomyosis	3 (0.04%)	0 (0.00%)	0.250
Leiomyomata	2 (0.02%)	5 (0.06%)	0.289
Urolithiasis	3 (0.04%)	1 (0.01%)	0.625
Auto-immune disease	1 (0.01%)	0 (0.00%)	1.000
Adhesion	2 (0.02%)	0 (0.00%)	0.500
Pelvic pain	2 (0.02%)	2 (0.02%)	1.000

Hazard ratio of IC/BPS

C/S (yes/no)	C/S cohort vs. vaginal delivery cohort HR* (95%CI)
Model 1† (n=62372)	1.370 (0.903-2.079)
Model 2‡ (n=16736)	0.725 (0.358-1.471)

IC/BPS interstitial cystitis/bladder pain syndrome; C/S Cesarean section; HR Hazard ratio, CI confidence interval

* Adjusted confounders: age, insurance amount, fibromyalgia, depressive disorder, anxiety state, stress incontinence, pelvic organ prolapse, irritable bowel syndrome, pelvic inflammation disease, adenomyosis, leiomyomata, urolithiasis, auto-immune disease, adhesion, pelvic pain.

† compared unmatched C/S cohort with vaginal delivery cohort

‡compared matched C/S cohort with vaginal delivery cohort

Incidence density

	n	Event	Person-year	Incidence density*
C/S cohort	8368	23	93680.83	0.246
Vaginal delivery cohort	8368	21	93205.80	0.225
Female population	486545	1533	5255336.25	0.292

*per 1,000 person-years.

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Conclusion

- Risk of IC/BPS was not different between caesarean and vaginal delivery cohorts after controlling the confounding factors.
- Cesarean section has no causal effect on IC/BPS.
- The incidence density of IC/BPS among the two cohorts and the general female population were similar.
- There was no causal effect of IC/BPS by delivery.

心得及建議

研究過程中出更多數據讓我們可以得到結論，讓我們了解如何給予病患更適合的治療，當現下單一的治療方式有限，整合的概念讓我們可以從多方面去了解病患的需求。此行接收到更多元的資訊也將研究分享各國，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，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。

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DISCLOSURES
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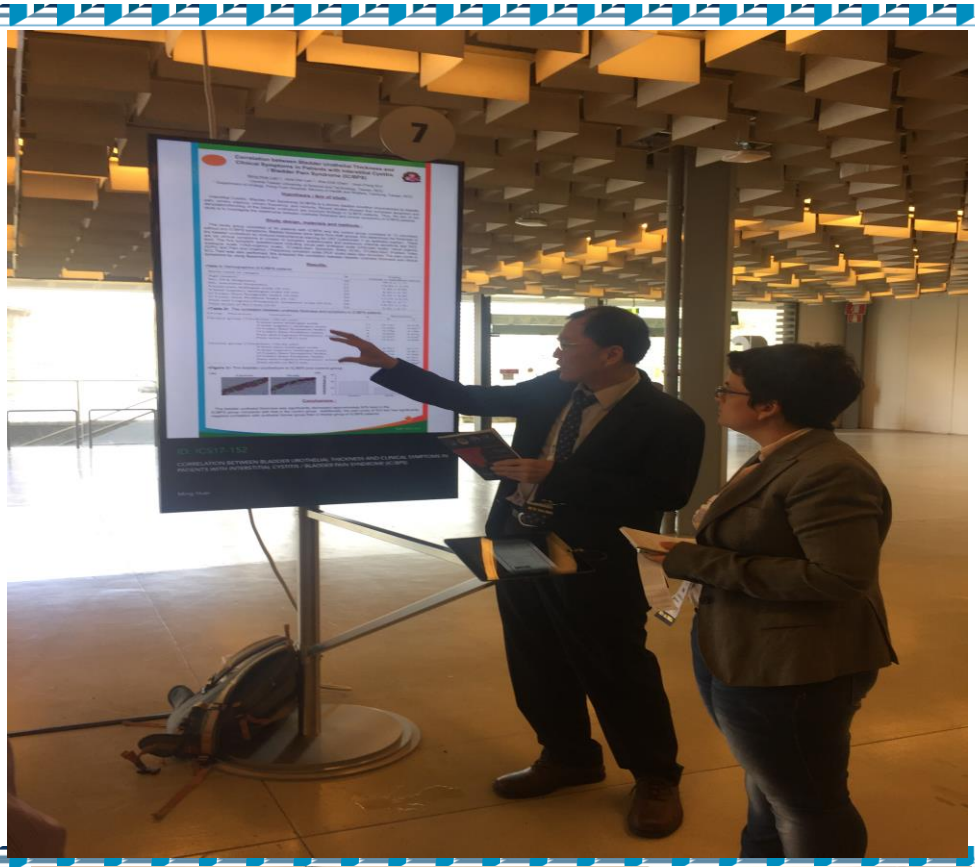
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