

出國報告（出國類別：口頭發表）

參加第四十三屆國際尿控協會年度
會議(43rd ICS)心得報告
43rd Annual Meeting Of The International
Continence Society

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：西班牙巴塞隆納

出國期間：8/26-8/30

報告日期：9/3

摘 要

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，這樣的切入點是否可為 IC 患者帶來幸福的起點？從不同的研究觀點也可帶入自己的研究中，引起我們深切的思考。口頭報告發表中，讓各國了解台灣對 IC 付出的心力及現況，與其他國家是否有雷同的特性在裡頭，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。

(第四十三屆國際尿控協會年度會議)

目 次

	頁 碼
壹、封面.....	1
貳、摘要.....	2
參、目次.....	3
肆、本文(目的、過程及心得建議).....	4-17
伍、照片.....	18-20
陸、附錄.....	21-22

本 文

目的

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，並讓各國了解 IC 在台灣的現況、研究及未來方向。

過程

從101年蒐集資料、實驗、整理、分析到結論，一整個年度的成果最後能在國際會議上發表並與其他國做交流實屬不易。以下報告發表一至發表三。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。

發表一：間質性膀胱炎病人的遠距系統發展與評估

Abstract

Development and Evaluation of E-health System for Caring Patients with Interstitial Cystitis / Bladder Pain Syndrome (IC/BPS)

Hypothesis / Aims of Study

IC/BPS is a chronic bladder disease without definite treatment

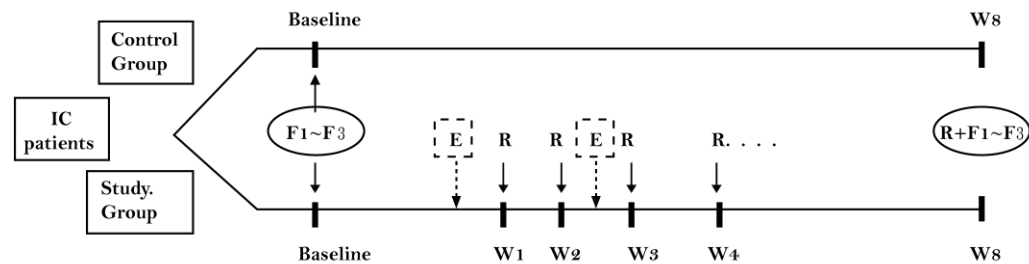
*Currently, multimodal management, including patient communication, is mandatory to the care of IC patients

*ICT (Information and Communication Technology) is proved to be one of the communication methods

*It was demonstrated to be effective in early identification of adverse events to avoid hospital readmission or to reduce length of stay in hospital

The aim of our study is to apply information and communication technology (ICT) to improve the quality of life for IC/BPS patients.

Materials and Methods



E : Emergency intervention R : Weekly Health Education

F : Questionnaires

F1 : SF-36

F2 : O' Leary-Sant Symptom Index and Problem Index Scale

F3 : VAS scale of pain & urgency

- Primary endpoint—SF36
- Secondary endpoint—ICSI, ICPI, VAS pain score

Results

SMS for management of emergent outbreaks

Event	Q	A
1	Pain or urgency after eating specific food	Drink a great amount of water to dilute urine concentration. If the symptom is severe and cannot be relieved, visit the physician.
2	Feeling of bladder pain is gradually deteriorating	Bath the whole lower abdomen with warm water (40°C) more than once every day, each time lasting for 15 minutes. You can also place a heat pad over the abdomen to keep it warm. If the symptom cannot be relieved, visit your physician.
3	Pain or uncomfortable feeling caused by allergy induced by, for example, weather change or drugs	Take anti-allergic medication for alleviation of the symptom. If the symptom has lasted for a few days without any improvements, visit your physician.
	.	.
	.	.
	.	.

Weekly Health Education (Diets, Life style)

YES	NO		Description
		1	Do you follow the suggested diets?
		2	Do you drink 1500 c.c. of water or so daily?
		3	Do you eat banana, pine apple, citrus fruit, or other food containing a great amount of potassium?
		.	.
		.	.
		.	.

Demographic information of study and control groups

		Control (N=32)		Study (N = 33)		p
		Mean	SD	Mean	SD	P-valve
Age		49.5	8.7	46.6	9.7	0.21
Education	High School	53.1%		60.6%		0.54
	University	46.9%		39.4%		
Marry	Marry	93.8%		81.8%		0.14
	Un-Marry	6.3%		18.2%		
Capacity		649.5	152.7	607.5	210.3	0.17

SF-36 Health Survey of Control and Study Groups Before and After ICT Intervention

	Control (N = 32)			Study (N = 33)			Control vs Study	
	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	p-value	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	p-value	t	p-value
Physical function	81.88±18.17	83.91±17.21	0.01*	72.12±33.19	81.67±19.15	0.01*	-2.14	0.04*
Role physical	63.28±38.62	72.66±30.69	0.00**	48.48±44.61	74.24±37.23	0.00**	1.81	0.08
Bodily pain	63.78±26.31	68.53±21.87	0.00**	52.24±24.05	69.15±17.92	0.00**	-2.87	0.01*
General health	54.38±22.69	57.59±18.64	0.02*	38.61±23.81	52.48±23.28	0.00**	-2.58	0.01*
Vitality	48.28±13.95	51.41±13.45	0.00**	42.73±21.25	60.76±20.35	0.00**	-3.61	0.00**
Social function	66.02±18.58	68.75±17.39	0.15	62.88±25.67	75.00±17.68	0.00**	-2.40	0.02*
Role emotional	59.38±43.78	75.00±38.80	0.00**	45.45±47.01	77.78±34.02	0.00**	-1.85	0.07
Mental health	53.38±18.81	55.00±18.32	0.05*	47.15±19.99	58.18±17.95	0.00**	-2.66	0.01*

* Student' s t-test with *p<.05 and **p<.01

Disease Severity of Control and Study Groups Before and After ICT Intervention

Disease Severity	Control(N= 32)			Study(N= 33)			Control vs Study	
	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	p-value	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	p-value	t	p-value
Symptom	11.34±4.78	9.19±4.19	0.01*	11.33±4.14	7.76±4.22	0.00	1.16	0.25
Problem	10.47±4.71	5.81±3.80	0.00**	11.55±5.03	9.24±5.43	0.04	-1.71	0.09
pain	5.16±2.58	5.13±2.42	0.84	4.91±2.78	3.03±1.90	0.00	3.21	0.00**
Urgency	5.06±2.97	4.94±2.66	0.35	5.12±2.60	3.27±2.17	0.00	3.12	0.00**

* Student' s t-test with *p<.05 and **p<.01

Conclusion

The E-health system was demonstrated to be effective in improving QOL and symptoms, measured by SF-36 and VAS scale (pain,urgency) of IC/PBS patients, through intervention of Internet healthcare education for the consolidation of healthy dieting habit and life style, as well as self-management their out break symptoms.

發表二：利用膀胱鏡與腹腔鏡發現K他命對於膀胱的影響

ABSTRACT

Combination with Cystoscopic Hydrodistension and Diagnostic Laparoscopy can Give More Clues about Outer and Inner Bladder Condition in Patients with Ketamine Induced Cystitis.

HYPOTHESIS/AIMS OF STUDY

The symptoms of ketamine-induced cystitis (KIC) include a range of lower urinary tract symptoms (LUTS) mainly irritative in nature and the patients will complain of intense urgency, extreme frequency and intractable dysuria.

Studies suggested that cystoscopy showed ketamine-induced cystitis with ulcerative bladder mucosa and was similar to cystoscopic findings in patients with interstitial cystitis(IC). However, we did not find any publications that reported laparoscopic findings and correlations with cystoscopic hydrodistension in patients with KIC.

The aim of this study is to investigate the inner and outer findings of bladder using hydrodistension and laparoscopy

MATERIALS AND METHODS

Six patients compatible with chronic pelvic pain and irritative were included with ketamine abuse history. These patients were assessed by validated questionnaire including

*O'Leary-Sant Symptom (ICSI) and Problem Index (ICPI)

*Pelvic Pain and Urgency/Frequency (PUF) questionnaire. We practiced the standardized consecutive filling cystometry and we recorded volume at

*first desire to void (FDV)

*normal desire to void (NDV)

*strong desire to void (SDV)

*maximum cystometric capacity (MCC)

Cystoscopic hydrodistension with laparoscopy was performed in all patients. The ovarian, uterine, bladder and pelvic inflammatory condition were also recorded by laparoscopy.

	Sex	Pain score	Urgent score	ICSI	ICPI	PUF	Bladder diary Void times / bladder capacity
Case 1	F	9	9	20	16	18	19 / 42.8 ml
Case 2	F	7	7	15	16	29	17 / 57.5 ml
Case 3	M	8	8	18	15	30	12 / 49.9 ml
Case 4	F	9	8	15	12	22	17 / 31.6 ml
Case 5	F	10	10	18	14	28	27 / 26.3 ml
Case 6	F	9	9	10	8	23	19 / 28.4 ml

TABLE 1. Patient demographics, symptom score and bladder diary (Void times and function bladder capacity)

RESULTS

The demographics of the six patients with KIC were a mean age of 25.5 ± 5.3 years.

Urodynamic exam / Hydrodistension	KIC group
first desire to void (FDV)	49.60 \pm 40.1 ml
normal desire to void (NDV)	60.42 \pm 51.1 ml
strong desire to void (SDV)	72.33 \pm 56.1 ml
maximum cystometric capacity (MCC)	93.27 \pm 68.9 ml
Anesthetic maximal bladder capacity (MBC)	268.70 \pm 168.2 ml
Maximal urethral closure pressure (MUCP)	133.25 \pm 39.7 mmHg
Detrusor overactivity percentage	(6/6)100%

TABLE 2. Urodynamic report & anesthetic bladder capacity

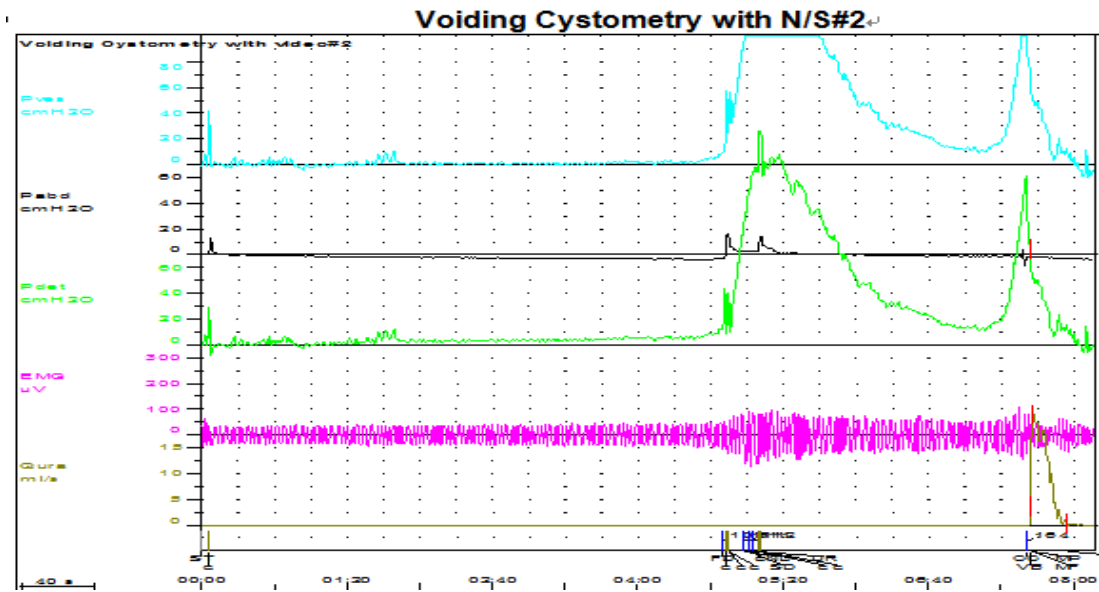


FIG. 1. Detrusor overactivity with sphincter hyperactivity

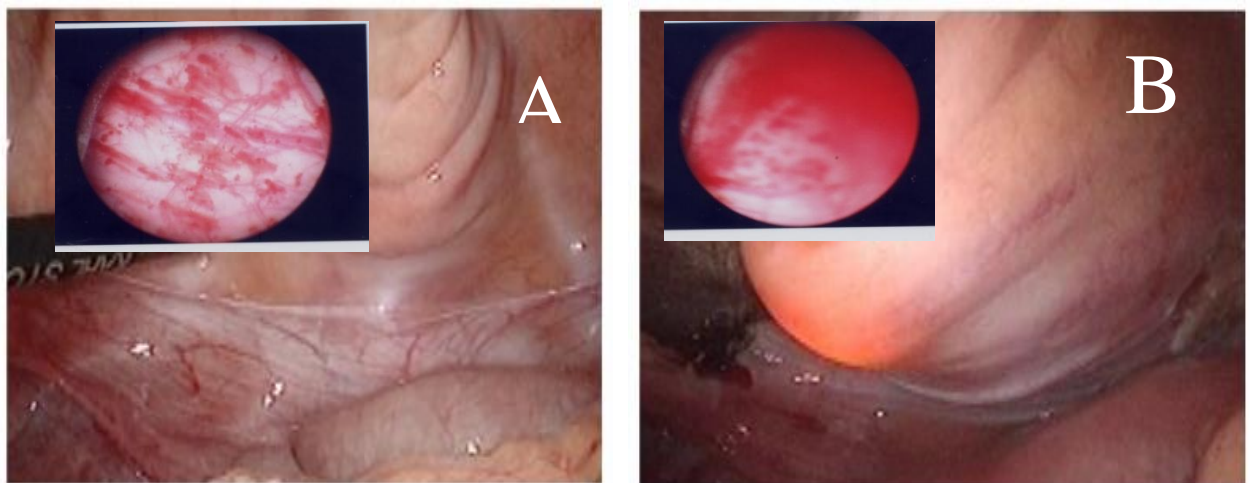


FIG. 2. (A)(B) Constrictive bladder was observed via laparoscopy

CONCLUSION

The patients with ketamine-induced cystitis have not only denuded bladder mucosa but also constrictive bladder. These findings may explain why poor therapeutic effect of intravesical therapy was noted.

發表三：從患者的年齡、膀胱壁及重量去比較IC與無IC的差異性，研究成果顯示實驗組膀胱壁的厚度和重量大於正常對照組，但無明確的統計學。

Abstract

Can Ultrasound Estimated Bladder Weight Predict the Severity of Glomerulation, and Bladder Capacity in Women with Interstitial Cystitis / Bladder Pain Syndrome (IC/BPS)

Purpose

The aim of our study is to investigate the connection between IC/BPS groups and non-IC/BPS groups and the relativity of IC/PBS patients, their bladder muscle thickness, bladder weight and the severity of glomerulation to evaluate a simple, reliable, safe and economical approach by using non-invasive, highly accurate and highly consistent three-dimensional (3D) ultrasound imaging.

Materials and Methods

The three-dimensional (3D) ultrasound imaging is measured on 30 IC and 30 non-IC female subjects to estimate patient's bladder wall thickness and bladder weight. Anesthetized cystoscopy was made on IC patients to record the severity of glomerulation and bladder capacity.

Results

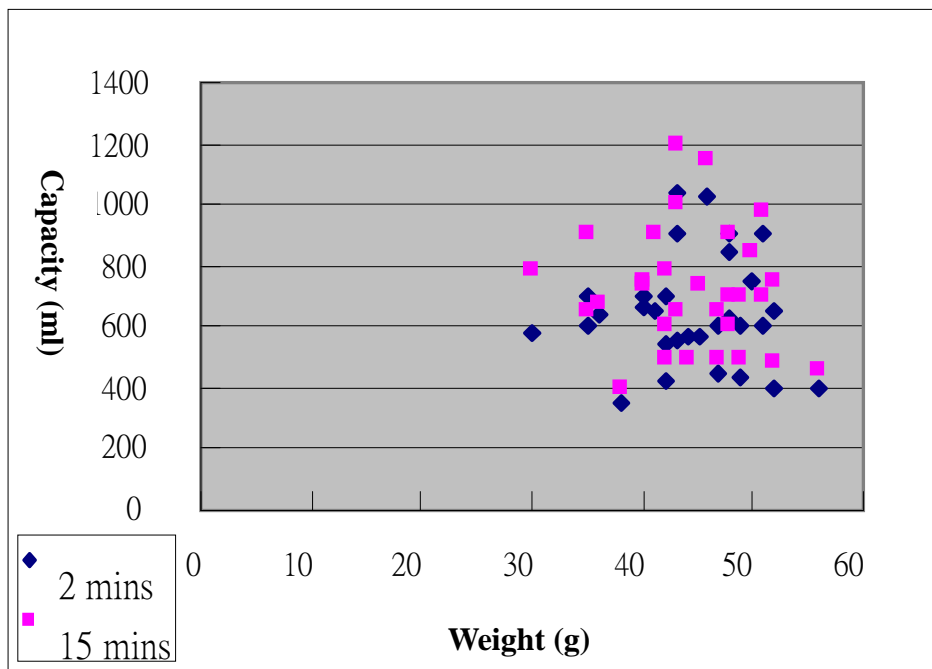
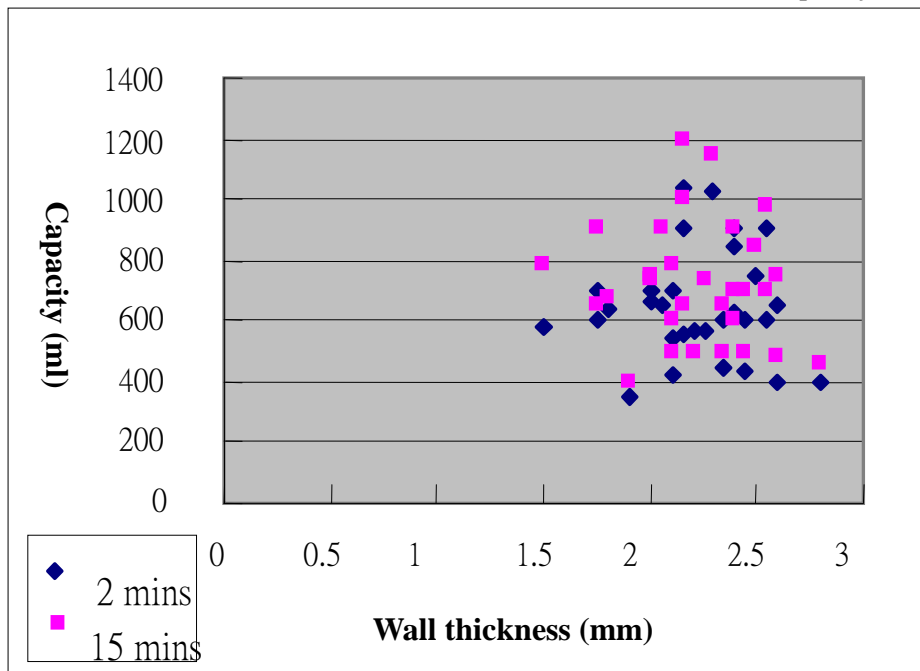
Age, bladder wall thickness, and weight in female IC & Non IC

IC bladder	Groups	IC (N=30)	Non IC(N=30)	
		Mean \pm SD	Mean \pm SD	p-value
Age (yrs)		42.27 \pm 10.12	43.90 \pm 10.86	0.549
Bladder wall Thickness (mm)		2.17 \pm 0.39	2.02 \pm 0.39	0.141
Bladder Weight (g)		44.43 \pm 5.98	40.56 \pm 9.83	0.071

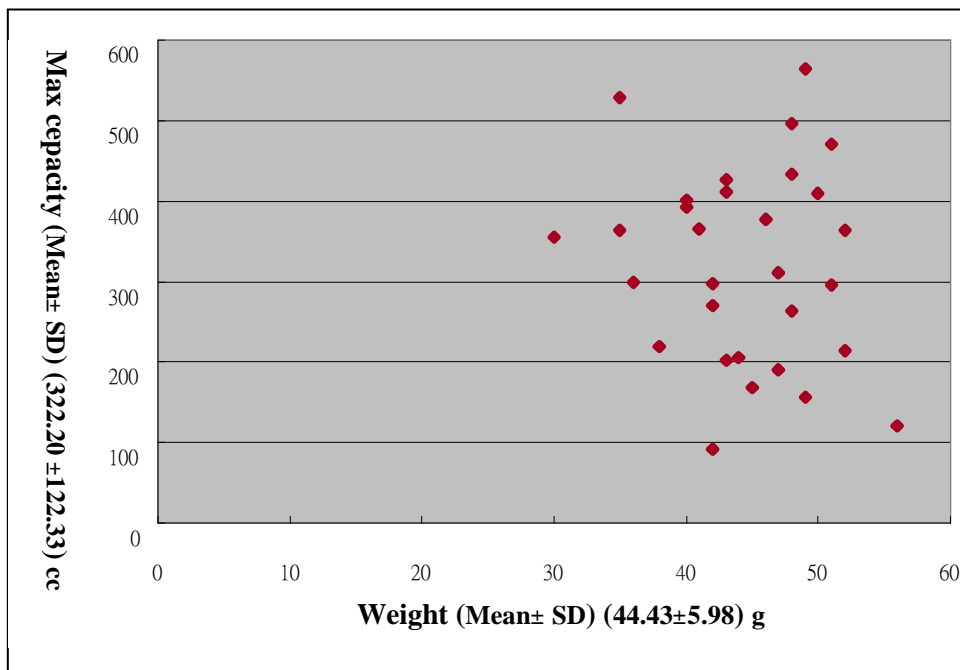
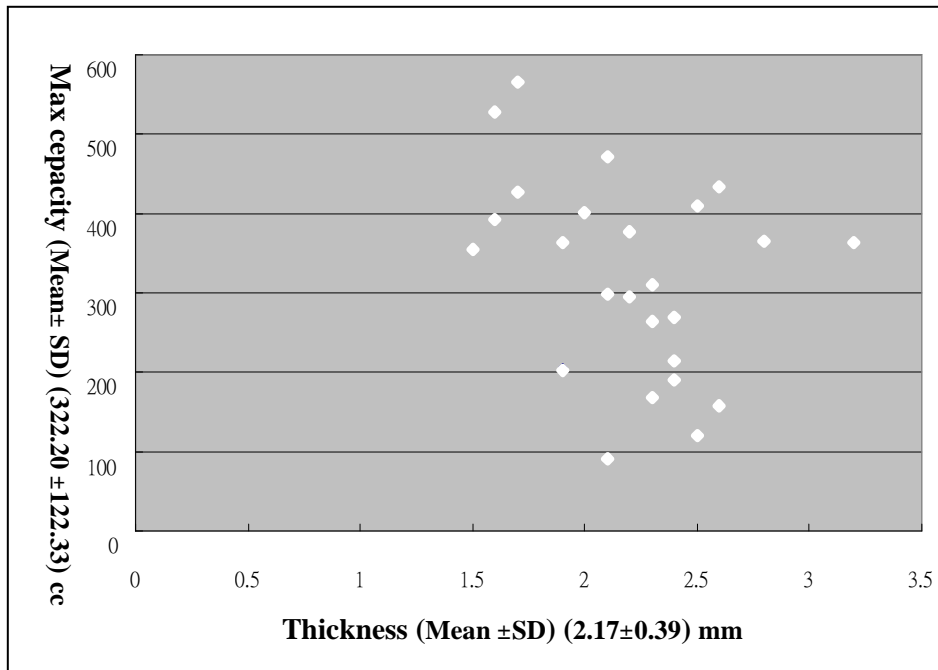
Correlation of bladder wall thickness weight and glomerulation in female IC

IC bladder	Glomerulation	Severe	Mild	
		Mean \pm SD	Mean \pm SD	p-value
Thickness (mm)		2.21 \pm 0.37	2.06 \pm 0.43	0.353
Weight (g)		44.77 \pm 5.05	43.50 \pm 8.37	0.615

Correlation of bladder wall thickness and anesthetized bladder capacity in female IC



Correlation of bladder wall thickness, weight and cystometric maximal capacity in female IC



Conclusions

1. The urinary bladder wall thickness, and weight are mild thicker than normal control, however no statistically significant.
2. The severity of glomerulation correlate with bladder wall thickness and weight , although no statistically significant.
3. No linear correlation of bladder wall thickness and weight between anesthetized and cystometric bladder capacity.

心得及建議

在這研究過程中累積出更多數據讓我們可以得到結論，這些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，了解下一步的方向。

照 片

