香港理遺學會

會訊

主編：阮鳳姿
編輯：李偉娟　陳秀娟
顧問：梁萬福醫生

第五期：一九九八年七月

理遺醫學廣場之
EVALUATION AND MANAGEMENT OF MALE INCONTINENCE

By Dr. John Fenn, Consultant, Dept of Surgery, QEH

編者的話

不經不覺，香港理遺學會會訊已出版第五期，透過此份會訊，我們除了提供一些有關失禁的資訊外，會訊亦扮演一道促進本會和會員間的溝通橋樑，在此我們多麼盼望收到各會員的投稿藉以分享你們的寶貴經驗，亦可豐富我們的資訊交流。

今期會訊的主題是男性失禁，向來失禁問題都較為集中在女性身上，要令理遺服務更全面化，我們希望可在女性，男性及兒科的失禁問題上提供更多資訊，除此，我們亦開始聯絡一些提供理遺服務的醫院，分享他們在理遺服務的心德及特色，今期我們有律敦治醫院的分享。此外，我們亦刊載多個理遺科的研討會或課程的資料，有興趣參加的會員，學成回來又可贊稿與我們分享，分享。

Patients with incontinence are predisposed to perineal rashes, pressure ulcers, urinary tract infections, and urosepsis. Psychosocially, they are embarrassed, isolated stigmatised, depressed and regressed. The causes are multifactorial. Some of them are amenable to treatment.

The lower urinary tract is innervated by the parasympathetic (S2-S4), sympathetic (T10-L2) and somatic (S2-S4). The parasympathetic nervous system innervates the detrusor, resulting in detrusor contraction. The sympathetic nervous system innervates the bladder and the urethra resulting in relaxation of the bladder and contraction of the internal sphincter. The somatic nervous system innervates both the urogenital diaphragm and the external sphincter and is responsible for the voluntary control of the external sphincter.

The central nervous system integrates control of the urinary tract. The pontine micturition centre mediates synchronous sphincter relaxation and detrusor contraction. Higher centres in the frontal lobe, basal ganglia and cerebellum exert inhibitory and facilitatory effects on micturition.

It is apparent that detrusor relaxation and closure of the sphincters facilitate urinary storage while detrusor contraction and relaxation of sphincter initiate voiding.

Urinary incontinence can be classified into transient and established incontinence.

Transient incontinence

This is common in the elderly and caused by reversible causes. These include delirium, symptomatic treatment, drugs, psychologic problems, medical problems, restricted mobility and stool impaction.

The treatment should be directed to the underlying causes and not to the bladder.

1. Symptomatic urinary tract infection leads to transient incontinence because the urgency and dysuria are so severe that the elderly has to void before reaching the toilet. Asymptomatic urinary tract infection will not cause the problem.

2. Drugs like long-acting sedative hypnotics enhance the chance of confusion and incontinence. Diuretics, anticholinergic agents, adrenalgic agents, calcium channel blockers and vincristine can cause transient incontinence.

3. Psychologic causes of incontinence inflict the younger age group. Depression and lifelong neurosis are known examples.

4. Increased urine output as a result of congestive heart failure and hyperglycemia can cause geriatric incontinence especially in the night time.

5. Other medical conditions that restrict mobility contribute to incontinence in the elderly. These conditions include musculoskeletal diseases, physical conditions, claudication, heart failure and stroke.

6. Stool impaction is known to be a cause of urinary incontinence in up to 10 percent of patients referred to incontinence clinics. Incontinence resolves after proper management.

It is important to be aware of these treatable causes of incontinence because they are reversible when properly addressed.

Established incontinence

When the reversible causes have been ruled out, other causes should be considered. This can be best approached by looking into the pathophysiology of the bladder and its outlet. The bladder either contracts when it should not (detrusor overactivity) or fails to contract when it should (detrusor underactivity). The outlet resistance remains high when it should be low (obstruction) or low when it should be high (outlet incompetence).

1. Detrusor overactivity, second commonest cause of incontinence in middle-age adults and the leading cause in older individuals can be due to detrusor hyperreflexia or detrusor instability.

Detrusor hyperreflexia refers to contractions due to damage to the CNS inhibitory centres.

Detrusor instability refers to contractions not due to upper motor neuron lesion. Known causes are cystitis, bladder tumor, stone, outlet obstruction and incompetence. Clinically there is frequent and precipitant voiding. The urge to void comes on abruptly. The leakage can be moderate. Nocturnal frequency and incontinence are common. The sacral sensation, reflexes and voluntary control of anal sphincter are normal.

2. Detruser underactivity, accounting for 5 to 10 percent of cases, may be due to injury to the nerves supplying the bladder or from autonomic neuropathy of diabetes, Parkinson' s disease, alcoholism or tabes dorsalis. Chronic outlet obstruction may lead to fibrosis of the detrusor and then detrusor weakness.

Clinically, this condition is associated with a large post-void residue volume and overflow incontinence. Urinary frequency is common because the functional bladder capacity is small. Urinary leakage is small and frequent. There is also hesitancy, poor stream and sense of incomplete emptying. The integrity of perineal sensation, sacral reflexes and control of anal sphincter depends on an intact neurological pathway.

3. Outlet incompetence is uncommon in men unless the sphincter has been damage by surgery. Surgery in the proximity of the sphincter e.g. radical prostatectomy and transurethral resection of prostate, may cause sphincter damage leading to incontinence.

Continuous leakage of small amounts of urine continuously throughout the day and night suggests total incontinence. This is more apparent when the patient in the erect posture.

4. Outlet obstruction is a common cause of incontinence in men of any age. Most obstructed men are continent. The common causes for outlet obstruction in men are prostatic

enlargement and urethral struiture. A spinal cord lesion may lead to incoordination of the detrusor and sphincter, a condition called detrusor-sphincter dyssynergia.

Clinically, there is post-void dribbling. If secondary detrusor overactivity develops, there is urge incontinence. If there is detrusor decompensation, overflow incontinence may occur.

Evaluation

A detailed history of the type of incontinence, associated urinary symptoms, sexual history, lower urinary tract surgery, trauma, neurologic disease, medical disease and medications should be elicited. It is important to note the effect of straining on the force of the stream. Straining decreases the stream in detrusor-sphincter dyssynergia. Straining will not improve the stream in the presence of obstruction. However, straining increases the stream in unobstructed patients with detrusor weakness.

A complete physical examination on the mental status, the cardiovascular system, the bladder, rectum, voluntary control of anal sphincter, sacral reflexes and perineal sensation in mandatory.

Voiding record may help in defining the cause of the incontinence. Uroflowmetry and checking the post-void residue may uncover the presence of outlet obstruction and a decompensated detrusor. Urinalysis, blood urea nitrogen and serum creatinine measurements are essential.

Urine cytology and cystoscopy are mandatory for patients with hematuria and recent onset of urge incontinence. Urodynamic evaluation is mandatory particularly when diagnosis is uncertain or prior to invasive therapy.

Therapy

The therapy must be individualised.

Adequate toilet access should be ensured and all contributory conditions managed.

Patients with detrusor hyperactivity with normal contractility may be managed with bladder retraining regimens. Appropriate anticholinergic, and smooth muscle relaxant may be used if not contraindicated. Condom catheters are helpful for men but skin breakdown may occur. In selected cases, drug induced urinary retention with addition of intermittent or indwelling catheterisation may be effective.

Patient who presents with urge incontinence and is diagnosed to have detrusor hyperactivity with impaired contractility can be initially managed with prompted voiding regimens if bladder empties adequately. Intermittent catheterisation may help if residue urine is high. Undergarment or indwelling catheter may be used if the above not feasible.

Patient with outlet obstruction causing urge or overflow incontinence is best managed with surgery. Those who are not fit for surgery may be treated with α adrenergic antagonists.

Patients with overflow incontinence due to underactive detrusor should have the bladder decompressed for several weeks before performing a voiding trial. If the above fails and obstruction has been excluded, one may try augmented voiding techniques. If the detrusor remains acontractile after decompression, intermittent self catheterisation may help. Indwelling catheter is the last resort.

Outlet incompetence due to surgery should be managed conservatively initially. Time should be allowed for the sphincter to recover and the scar to stabilize. Patient who complains of persistent incontinence weeks after surgery should be investigated with cystometrogram to exclude detrusor hyperreflexia and cystoscopy to exclude obstructing adenoma at the apex. Patient is instructed to do pelvic floor exercise and be reassessed in one year's time. If further tests confirm sphincter injury, definitive surgery can be planned, and done at least one year after the trauma.

理遺服務剪影

Combined Continence Clinic in Ruttonjee Hospital

Dr. T.K.K. Yu, Dr. C. Kng, Dr. C.P. Wong

Urinary incontinence has been a neglected health problem causing much disability, distress and institutionalization. The Combined Continence Clinic (CCC) was first opened in April '96 in Ruttonjee Hospital. Cases are jointly seen by geriatrician, surgeon, continence nurse and physiotherapist. The Clinic operates an open referral policy, welcomes referral from all disciplines (doctors, nurses, physiotherapist, occupational therapist, home helpers .... etc.) and even self referral by patients.

This is a retrospective case review of 69 cases referred to CCC during April '96 to January '97, 55 of them were able to be followed up. The mean age was 72.4 and majority were female (78%). Doctors still referred most of cases (87%) and initially most cases were from geriatrics and surgical department but we are now receiving more medical and community cases.

The most frequent presenting complain was urge incontinence (38%), followed by stress incontinence (20%), voiding difficulty (15%) and mixed symptoms (13%). We performed urodynamics in 85% of the cases, majority of the urodynamic diagnosis correlate well with the presenting complain - detrusor instability (43%), genuine stress incontinence (23%), hypocontractile detrusor (15%), outflow obstruction (8%) and detrusor - sphincter dysynergia (2%).

Concerning treatment, oxybutynin was used for detrusor instability with good response, only 1 out of 16 cases experienced side-effect of the drug. Pelvic floor exercise, electric stimulation, bio-feedback and vaginal cones taught by nurses and physiotherapist had been proven very helpful in the treatment of stress incontinence patient. Two cases of periurethral collagen injection and 2 cases of Stamey's operation were performed with satisfactory results. One case of urethrotomy for detrusor sphincter dysynergia was also performed but patient's symptoms persist despite the operation. Two cases were also referred for prostatic surgery.

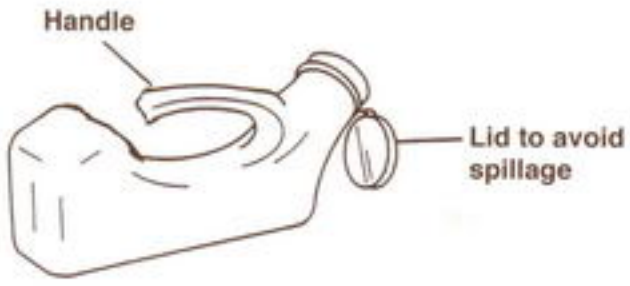
The Combined Continence Clinic has been successful in terms of short term outcome, of the 19 cases discharged 13 (68%) were improved. Also the combined nature of the Clinic encourage change of ideas between disciplines and more appropriate treatment plan can be formulated.

專題：男性用的失禁輔助物

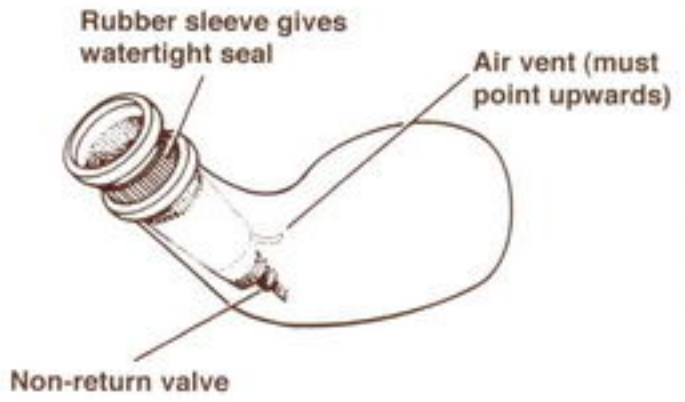
李偉娟姑娘

1. 尿壺 (Male Urinal)

大部份需要用尿壺的男仕多是年紀較大，行動不便.他們的手部活動可能不穩定,故所用尿壺的設計是以不容易翻側及傾瀉為原則.若尿壺底部平坦及有扶手，易於掛在床邊或椅邊的欄旁，便不易蹤跌.如圖一. 另一些則有防倒流瓣的設計，尿液不易由開口處倒瀉.如圖二.



Bottle with flat bottom for stability



Non-spill adaptor in the neck of a male bottle

2. 小型尿墊 (Drip Collector)

小型尿墊是適合只有輕度失禁的男仕們.這些尿墊外面是防水設計，內部是吸水物料，如圖三. 所收的水份容量視乎尿墊的大小而定，約由50-100毫升.尿墊的外面有自動黏貼的設計，貼於內褲的內側，陰莖則放進尿墊內.

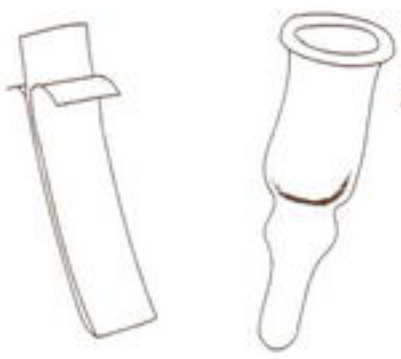
MALE DRIP COLLECTOR

3. 外用尿套 (Penile Sheath)

此等尿套適用於小便失禁較嚴重的男仕,有些有自動黏貼，有些則需加膠貼固定,如圖四.但現時大部份尿套未端均有防扭曲的設計，使尿液能暢順地流進尿袋.外用尿套有不同尺碼，使用前要先量度陰莖大小，選選擇適合的尿套尺碼.

由於使用外用尿套要有技巧，故使用者需要手部活動比較靈巧，否則需要指導家人使用.

使用前要先將陰莖清洗乾淨及抹乾，用一紙圈將陰莖附近的毛髮隔開，如圖五.再用護膚膜塗於陰莖一周，貼上有少許彈性的護膚膠後，再將有自動黏貼的外用尿套套上.外用尿套的未端可接駁足部尿袋.



CONDOM CATHETER-ADHERING STRIPS

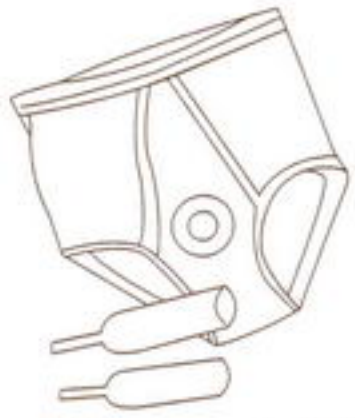
4. 陰莖回縮用的外用尿套(Retracted Penile Pouch)

此等尿套用於較小或回縮的陰莖.附有護膚膠用於保護皮膚，如圖六.使用前要先將陰莖附近的毛髮剪去,陰莖及周圍皮膚要清洗乾淨及抹乾,塗上護膚膜保護皮膚，再量度陰莖大小,在尿套的護膚膠上剪出適合的尺碼,再在護膚膠的周邊塗上防漏膏,後貼上陰莖周圍的皮膚上.尿套的未端也可接駁足部尿袋.

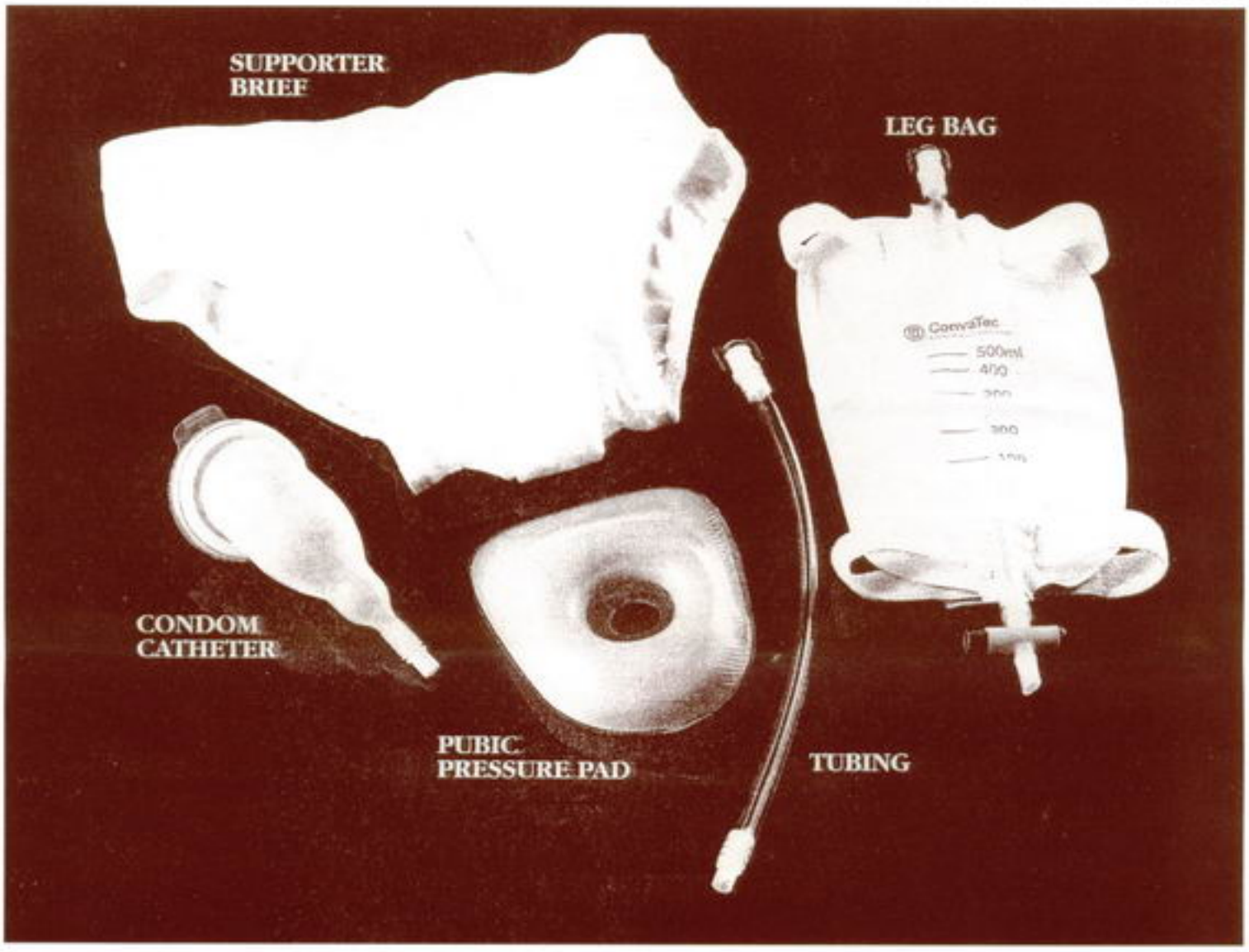
Retracted Penis Pouch

5. Male Continence System

此套用品包括有一條特別設計的男內褲，一個用彈性軟膠造成的壓力墊，及一透明的外用尿套，如圖七.這套設計專為陰莖回縮的男性而設.它利用這條特別設計的內褲將壓力墊固定，使陰莖稍為突出少許，故尿液不易滲漏.外用尿套的未端也可接駁足部尿袋.

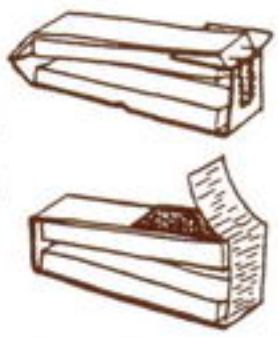


Male Urinal With Supporter/Brief



6. 陰莖夾(Penile Clamp)

此夾外面用金屬或塑膠造成，內部則是海綿質地.用以夾於陰莖，防止尿液滲漏(圖八).但需要在醫護人員指導下才可使用，否則過鬆則尿液會流出，過緊則影響陰莖的血液循環.



活動預告

International Continence Society
28th Annual Meeting

Date: 14 - 17 September 1998
Venue: Jerusalem International Convention Center
(Please contact Dr. M F Leung,
COS (Med & Geri) UCH, for details)

Urology Update: 1998

"Voiding Dysfunction and Urinary Incontinence in Men and Women"

Date: 11 -12 September 1998
Venue: The Somerset Inn, Troy, Michigan
Enquiries: Department of Urology,
William Beaumont Hospital

7th National Conference on Incontinence

Date: 26th - 28th November 1998
Venue: Rydges Canberra Hotel,
Canberra, ACT, Australia
Equiries: Shan Fleming
Event Solutions
PO Box 165 ARANA HILLS Q 4054
1/65 Gilston Street KEPERRA Q 4054

British Council
International Seminars

"Urogynaecology: principles & practice now"

Date: November 1998
Venue: Seminar Center in UK
Remarks: Call for abstracts
(http://www.britcoun.org/seminars/)

Hong Kong Continence Society
Annual General Meeting and Scientific Meeting

Date: 26th September,1998 (Saturday), pm
Venue: Lecture Theatre, M Block,Queen Elizabeth Hospital
Enquiries: Dr. M.F. Leung UCH

International Symposium on Urogynaecology And Pelvic Floor Dysfunction

Date: 6 - 8 November 1998
Enquiries: Department of Obstetrics & Gynecology
Lin-Kow Medical Center, Chang Gung Memorial Hospital
5, Fu-Hsing St., Kwei-Shan, Tao-Yuan 333, Taiwan

23rd Annual Meeting of the IUGA

Date: 18 - 21 November, 1998
Venue: Libertador Hotel, Buenos Aires, Argentina
Enquires: MC Congresos y Exposiciones
Av. Pte. Roque Saenz Pena 7202 "B"
(1035) - Buenos Aires, Argentina