

URINARY INCONTINENCE IN THE ELDERLY

K S Lee, R E Owen, P W J Choo, F J Jayaratnam

ABSTRACT

Urinary incontinence is a problem affecting a significant proportion of the elderly population. It has substantial medical, psychological, social and economic implications.

It is to be regarded as a symptom with multifactorial causes.

A useful clinical classification of urinary incontinence is by its pathophysiology. A summary of clinical approach, specified investigations and management principles for the condition is outlined.

Keywords : Urinary incontinence, incontinence chart, management of urinary incontinence, incontinence clinic.

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Urinary incontinence refers to the involuntary passing of urine. Clinically significant urinary incontinence affects about 5% to 10% of the elderly in the community and up to 50% of the elderly in the institutions.

A local prevalence study (the results are yet to be published) has found the incidence to be about 4.8%. In this study, regular incontinence was defined as leakage of urine of any amount occurring at least two times in the last one month.

Urinary incontinence should be considered as a symptom resulting from a number of different disorders of micturition. When it becomes a problem vary between people and circumstance.

Because of the social stigma involved, it is not surprising that is often a "hidden" symptom. Not uncommonly when presented to the doctor, the symptom may be dismissed as a sign of ageing.

A study on "Incontinence in Elderly cared for by Family" shows that urinary incontinence was related to perceived negative affect in family relations and to considering an alternative care arrangement. Study findings suggest that interventions to alleviate elderly incontinence or to educate family members about more effective ways to manage the care of an incontinent elderly can help to sustain family care^[1].

A known risk factor for medical complications (eg. infection, skin breakdown), urinary incontinence may impair social activities and can add substantially to personal health

care costs.

Much incontinence in the community is invisible to health care providers because few old people report their bladder control problems to physicians or other health professionals. This is partly because of the belief that it is a normal part of old age and irreversible and partly because elderly people are already managing the problem relatively well. The social costs of the reticence can be significant. For most people, the management of urinary incontinence entails increasing social isolation in order to keep the incontinence a secret. In the short run, this strategy may be relatively successful. In the long term, however, such a management strategy can lead to other problems such as depression, that may have devastating consequences^[2].

Urinary incontinence was also found in one study to be associated with an increased risk of death, reflecting again that the condition is closely related to other medical illnesses and is not a diagnosis by itself^[3].

A useful clinical classification of urinary incontinence would be by its pathophysiology and this can be classified into 5 basic categories :

1 Detrusor instability

This the commonest type of incontinence in the elderly.

The uninhibited bladder contractions can be secondary to underlying conditions. Common conditions are cerebrovascular accidents, Parkinson's disease and local pelvic or bladder problems such as infection, inflammation, faecal impaction and prostatic hypertrophy.

Deconditioned voiding reflexes (chronic low volume voiding) which may be self-induced or due to iatrogenic circumstances can also increase detrusor tone.

2 Overflow Incontinence

This occurs when intravesicular pressure exceeds intra urethral pressure only at high bladder volume.

This could result from a mechanical obstruction, the most common cause being prostatomegaly in the elderly male; or detrusor inadequacy secondary to a lower motor neuron disease or peripheral neuropathy. A common cause of the latter is diabetic autonomic neuropathy.

3 Stress Incontinence

This refers to urethral sphincter weakness resulting in transient loss of small urine volume when intra-abdominal pressure abruptly increases.

Department of Geriatric Medicine
Tan Tock Seng Hospital
Moulmein Road
Singapore 1130

K S Lee, M Med (Int Med) (S'pore)
(currently Senior Registrar, NUH)

R E Owen, MRCP (UK)
(formerly Senior Physician, TTSH)

P W J Choo, MRCP(UK), DGM
Senior Registrar

F J Jayaratnam, AM, FRACP
Senior Physician and Head

Correspondence to : Dr P W J Choo

It can result from two basic problems :

- (a) anatomic changes with obliteration of the critical posterior urethrovesical angle (eg. decrease of striated muscle tone secondary to normal ageing, multiparity or surgical manipulation).
- (b) local urethral inflammation (eg. infection, or decreased estrogen effect).

4 *Functional Incontinence*

This implies the inability of a normally continent person to reach the toilet in time to avoid an accident. A not uncommon situation is the occurrence of incontinence in an elderly person admitted to hospital.

An unfamiliar surrounding, lack of convenient toilet facilities, together with an acute medical illness that limits mobility are sufficient factors to precipitate incontinence.

5 *Iatrogenic Incontinence*

This may aggravate or unmask any of the above problems.

Potent, fast-acting diuretics or the use of physical restraints may create difficulties for the normally continent elderly to use toilet facilities. Psychiatric medication such as sedatives, hypnotics and neuroleptics may diminish normal attention to bladder cues.

Drugs may also cause urinary retention or sphincter weakness.

MANAGEMENT OF URINARY INCONTINENCE

A good management principle is that all factors contributing to and causing urinary incontinence should be identified.

Thus a good history and a thorough examination are prerequisite to an accurate diagnosis. For a summary of the clinical approach see Fig 1.

A continence chart (see Fig 2) has two main uses - as a part of baseline assessment of the individual's incontinence, and later as a record of progress during treatment, to monitor the effectiveness of therapy. The chart should be accurately recorded, usually by the staff nurse in the hospital, by the

patient at home if mentally alert or by the carer.

Specified investigations include :

- 1 Urine microscopy and culture to exclude a urinary tract infection.
- 2 Measurement of residual urinary volume where there is a suspicion of urinary retention. In the older population, up to 100 ml is considered to be within the normal volume.
- 3 Cystoscopy may be indicated in patients with suspected local problems.
- 4 Intravenous pyelography may be necessary to exclude back-pressure effect in patients with urinary retention.
- 5 Urodynamic Studies. Urodynamics is the study of pressure and flow relationships in the lower urinary tract.

Three investigations form the basis of urodynamic studies : measurement of urinary flow rate, cystometry, and urethral pressure profile.

Where the clinical diagnosis is in doubt and where there is possibility of more than one pathophysiologic mechanism causing incontinence, urodynamic studies often helps in establishing the diagnosis.

Once diagnosis has been established, treatment includes:

1 *Treating treatable conditions*

Examples would be prostatectomy for overflow incontinence in prostatomegaly, estrogen therapy in atrophic vaginitis associated with stress incontinence.

2 *Correct precipitating factors*

This would include such measures as ensuring toilet access and cessation of inappropriate drug therapy aggravating incontinence.

3 *Bladder re-training*

A variety of regimens has been tried. In one approach, the patient progressively extends the intervoiding intervals typically to three or four hours.

Fig 1 - Urinary Incontinence - A Clinical Approach

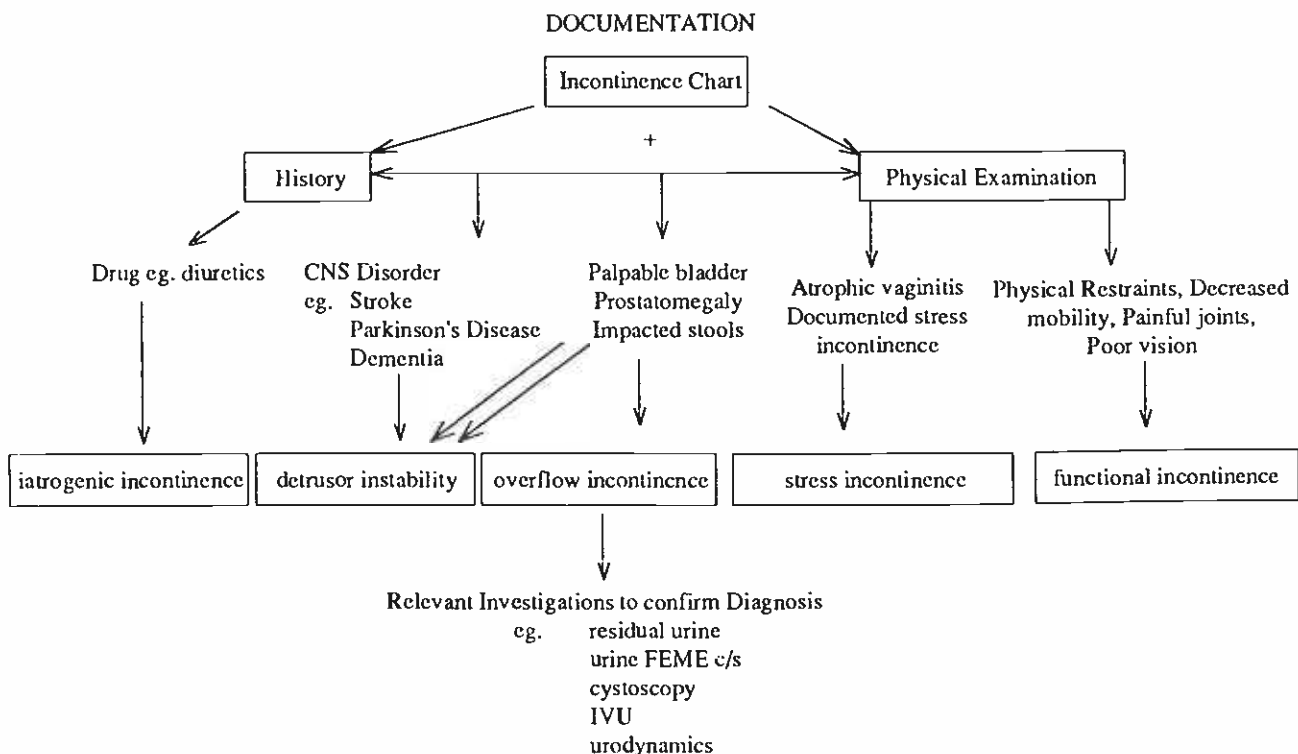


Fig 2 - Continence Chart : Weekly Analysis

Name : _____

Week Commencing : _____

	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	12am	1am	2am	3am	4am	5am	Totals
MON																									
TUE																									
WED																									
THU																									
FRI																									
SAT																									
SUN																									

Average daily fluid intake

Date of next appointment

Special instructions and comments

PLEASE TICK UPPER BOX
EACH TIME URINE IS PASSED

PLEASE TICK LOWER BOX
EVERY TIME YOU ARE WET

A review of the studies employing bladder training and related techniques showed cure rate ranging from 44% to 97%^[5].

Bladder training had markedly better results than drug therapy with flavoxate hydrochloride and imipramine in a randomized trial^[6].

A study on the use of behavioural training with or without bladder sphincter biofeedback in the treatment of elderly, non-demented, ambulatory community dwelling patients, show it to be highly effective when these treatments are provided by a nurse practitioner working with an internist or geriatrician^[7].

4 Drug Treatment

When non-drug treatment has failed to control incontinence, drug treatment can be considered keeping in mind the side effects involved. The most commonly used group are the anticholinergics. Drugs commonly used include emepromium biomide, flavoxate hydrochloride, probantheline, oxybutynin and imipramine.

In the patients with overflow incontinence due to neuropathic bladder, sphincter tone may be decreased by an adrenoceptor blocker such as phenoxybenzamine.

In the absence of obvious outlet obstruction, cholinergic agents eg. bethanecol may increase bladder contraction but are frequently ineffective.

5 Aids for incontinent patients

Not to be forgotten is advice to carers on available aids for

patients with incontinence. The use of suitable pads and incontinence aids such as a bedside urinal or commode may improve the quality of life for both carers and patients. Catheterization is usually to be regarded as a last resort and never should be employed as a long term measure until an accurate assessment has been made.

Lastly, the setting up of an incontinence clinic, with a multidisciplinary approach (including geriatrician, gynaecologist, urologist, nurse incontinence advisor, psychologist, physiotherapist and occupational therapist) will provide a specialist referral centre for patients with management or diagnostic difficulty.

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