

Diagnosis and management of female urinary incontinence in general practice

JACQUELINE V. JOLLEYS

SUMMARY. *In response to an invitation sent to women who had complained previously of regular incontinence, 65 women with regular incontinence were seen by their general practitioner. A diagnosis was made using a personally administered questionnaire and appropriate examination. Patients were placed in one of three diagnostic/management categories — stress, urge or stress/urge incontinence — and were given an appropriate treatment programme. Fifty six women were recruited as matched controls from non-responders while attending the surgery for other reasons. They underwent identical entry procedures but were not offered a treatment programme. All the patients were reassessed after 12 weeks at which time significant improvement in incontinence was reported by the treated women in the stress and urge categories compared with the controls. There was no significant difference in reported efficacy of treatment between age groups and treatment was shown to be effective irrespective of the duration of incontinence.*

This study shows that for the majority of women reporting incontinence the condition can be diagnosed by a general practitioner and significantly improved by appropriate intervention.

Introduction

HAVING established that 41% of the women patients in the author's practice suffered from regular urinary incontinence (two or more episodes per month),¹ a response to the demand for treatment was needed. Currently a range of hospital based services are available for the incontinent. There are continence clinics staffed by consultants and nurses with a special interest in incontinence but appointments are limited and demand means there is a long waiting list. Gynaecologists see female patients complaining of incontinence and assess them by urodynamics. Treatment consists mainly of pelvic floor faradism with surgery reserved for the more severely affected. Physiotherapists work in conjunction with both gynaecologists and continence clinics but their services are not always directly available to patients referred by general practitioners.

Because of these constraints and the high prevalence of urinary incontinence it was decided to treat all patients in the setting of general practice, at least initially. A literature search revealed no studies assessing the treatment of incontinence in general practice although a number of hospital studies have been reported.²⁻⁷ Bhatia and Ostergard² reported clinical cure of stress incontinence by retropubic urethropexy and Kegel³ and Jones⁴ reported studies assessing the efficacy of pelvic floor exercises in stress incontinence.

This study aimed to determine whether a general practitioner could successfully diagnose and treat incontinent female patients without the need for special training or resources. Subjective

outcome criteria were adopted since more objective urodynamic measures are not readily available to general practitioners.

Method

All 343 women patients who had reported regular incontinence of urine in a rural general practice¹ were sent an invitation to discuss their incontinence problem. Of the 78 who replied, 67 kept their appointments. Since the remaining 11 respondents were unable to attend during the study period they were not included in the study. All patients were interviewed by the author using a personally administered questionnaire. This was designed to confirm urine leakage, provide information on the type and severity of the incontinence and determine when episodes of incontinence had started. Abdominal and vaginal examination was performed and a diagnosis of the type of incontinence made. Uristix examination of the urine was carried out and a mid-stream urine sample sent for microscopy and culture. Confirmed urinary tract infection was treated and the patient reassessed using the same questionnaire.

Classification of incontinence

Patients were placed in one of three diagnostic/management categories:

1. Stress incontinence — loss of urine on exertion, without active bladder contraction. It may imply that urethral sphincter incompetence is present.
2. Urge incontinence — involuntary loss of urine associated with a strong desire to void. This may be accompanied by a detrusor contraction.
3. Stress/urge incontinence — a combination of (1) and (2).

Exclusion criteria

Patients with any of the following were offered consultant referral and excluded from the study: vesico-vaginal fistula; palpable bladder after micturition; disease of the central nervous system — multiple sclerosis, neurogenic bladder; certain gynaecological conditions — procidentia, rectocele, cystocele or fibroids of a severity requiring surgery; no diagnosis.

Management of stress incontinence

Patients with stress incontinence were taught pelvic floor exercises. They were instructed to breathe normally while actively contracting the levator anus muscles ensuring that no simultaneous contraction of the abdominal, gluteal or adductor muscles occurred. Active contraction was confirmed by vaginal examination. The patients were given a regular exercise programme. Patients were given dietary advice if they were overweight (body mass index >23.9⁸). Advice on reducing the amount of lifting and the correct way to lift was also given.

Management of urge incontinence

Patients with urge incontinence kept a urinary output diary for two days. Habit retraining was initiated and fluid intake regulated. After two weeks the patient was reassessed. If nocturia was reported to occur at intervals of less than two hours or frequency was less than hourly treatment with terodiline hydrochloride 12.5 mg (one or two tablets twice daily) was

J.V. Jolleys, MRCP, lecturer in general practice, University of Leicester.

© *Journal of the Royal College of General Practitioners*, 1989, 39, 277-279.

started. Habit retraining was continued and at reassessment the need for medication was reconsidered. Marked atrophic vaginitis at pelvic examination was treated with oestriol 0.5 mg pessaries, one daily for 15 days. At review patients with severe atrophic vaginitis were considered for hormone replacement therapy. Weight reduction advice was given if the patient was overweight.

Management of stress/urge incontinence

These women were treated as for both stress and urge incontinence.

All patients were reassessed at 12 weeks using the questionnaire and their opinion was sought of change in their condition. The assessment was conducted by the practice manager to minimize bias. Patients dissatisfied with lack of improvement were offered further help or consultant referral.

A control group of women with reported incontinence was recruited from surgery attenders who had not replied to the initial letter. The control group were interviewed and a diagnosis of the type of incontinence made but they received no treatment. Study patients and controls were matched for age, parity, type of incontinence, duration of symptoms, body mass index and range of body mass index. The control group was also reassessed at 12 weeks.

Results

Of the 67 women attending for appointments two were offered referral since they had one of the exclusion conditions. All 56 women approached to be controls consented to be in the study. The incidence of the three categories of incontinence is shown in Table 1 and indicates a close match between subjects and controls. A total of 10 women had undergone hysterectomy. One subject had a confirmed urinary tract infection on analysis of a mid-stream urine sample and on reassessment still had stress incontinence. Five subjects were treated for atrophic vaginitis and had subsequent improvement of urge incontinence.

Table 1. Incidence of the three categories of incontinence for subjects and controls.

	Number (%) of women	
	Subjects (n = 65)	Controls (n = 56)
Stress incontinence	41 (63)	41 (73)
Urge incontinence	16 (25)	10 (18)
Stress/urge incontinence	8 (12)	5 (9)

n = total number of women.

Twelve of the 121 women (10%) reported being incontinent since childhood and 10 of these women had stress incontinence. Onset of incontinence was reported as during the first pregnancy by 33 women (27%), during the second by 18 (15%) and during the third by eight (7%). Seven women (6%) attributed their incontinence to hysterectomy (five suffered urge incontinence) and one to another gynaecological operation. The remaining 42 women could not recall the onset of incontinence — 20 of the 82 reporting stress incontinence (24%), 19 of the 26 reporting urge incontinence (73%) and three of the 13 reporting stress/urge (23%). The onset was not directly related to patients' parity. There was no significant difference in the reported time of onset of incontinence between the subject and control groups.

At the 12 week follow up statistically significant cure or improvement was reported by women treated for stress and urge incontinence but not for stress/urge incontinence when com-

Table 2. Reported outcome at 12 weeks for patients with stress, urge or stress/urge incontinence.

	Number of patients			
	Cured	Improved	Not improved	Deteriorated
Stress incontinence				
Subjects	17	19	5	0
Controls	0	1	33	7
$\chi^2 = 64, df = 1, P < 0.01$				
Urge incontinence				
Subjects	12	4	0	0
Controls	0	0	9	1
$\chi^2 = 26, df = 1, P < 0.01$				
Stress/urge incontinence				
Subjects	2	4	2	0
Controls	0	0	4	1
Not significant				

pared with the controls (Table 2). Although not statistically significant the outcome of treatment of the stress/urge incontinence group indicated a trend towards success. There was no significant difference in the efficacy of treatment by age group (less than 35 years, 35–54 years and 55 years or over) or by the duration of incontinence.

Of the 82 women reporting stress incontinence only 40% demonstrated it by cough voiding. All these women had some control of pelvic floor muscles on vaginal examination.

Habit retraining alone was not adequate in 10 out of the 16 subjects with urge incontinence and terodiline hydrochloride was prescribed to assist bladder control. In all but two patients the dose was reduced and stopped after four to eight weeks when total bladder control was regained.

Seven subjects were offered referral to a consultant but none accepted. The majority of the subjects (94%) expressed satisfaction at having a diagnostic label and treatment plan and this was not related to whether or not a cure was achieved.

Discussion

This study found that 36 of the 41 patients with stress incontinence receiving treatment (88%) had improved after 12 weeks of pelvic floor exercises and 17 (41%) reported total cure. Kegel³ found that 75% of women who had partial control of the pelvic floor muscles experienced complete relief of symptoms after seven to eight weeks of pelvic floor exercises, confirmed by objective assessment with a perineometer. Kegel also reported that older people could be successfully treated by pelvic floor exercises. This was borne out by this study which showed that pelvic floor exercises taught in general practice can cure or ameliorate stress incontinence in a well motivated population irrespective of age, achieving comparable results to those obtained by hospital departments. Twelve of the women in the study (10%) reported inappropriate urine leakage since childhood and 10 of these had stress incontinence indicating primary urethral sphincter incompetence or pelvic floor weakness. The biased selection may have spuriously raised the prevalence of primary enuretics who have never obtained total bladder control. Nevertheless the true prevalence of primary enuresis may be higher than previously suspected.

Although parity is a factor in stress incontinence^{1,9} the reported onset of incontinence in this study was not directly

related to parity. Ten patients who had undergone hysterectomy were included in the study and seven of these attributed the onset of incontinence to the operation, five reporting urge incontinence. Although the numbers are too small for conclusions to be drawn, further study of post-hysterectomy patients should be carried out. More women could not recall the onset of urge incontinence (73%) than stress incontinence (24%), perhaps indicating a more insidious onset to the former complaint.

Although adjuvant drug therapy may assist the patient to regain bladder control initially for 80% of the patients with urge incontinence who received drug therapy it was unnecessary for the maintenance of continence.

None of the patients receiving treatment requested referral to a consultant when this was offered. Satisfaction at having a diagnostic label and treatment plan was expressed by the majority of women irrespective of whether or not a cure was achieved.

This study shows that the majority of women reporting incontinence can be diagnosed and treated to their satisfaction by a general practitioner with no specialized resources and only minimal training in incontinence management. Effective and readily available treatment for incontinence in the setting of general practice is essential in view of the high prevalence of this common, embarrassing and inconvenient condition. Furthermore, successful community based treatment reduces consultant referral, is convenient for patients and increases job satisfaction for the general practitioner.

References

1. Jolleys JV. Reported prevalence of urinary incontinence in women in a general practice. *Br Med J* 1988; **296**: 1300-1302.
2. Bhatia NN, Ostergard DR. Urodynamics in women with stress incontinence. *Obstet Gynaecol* 1982; **60**: 552-559.
3. Kegel AH. Physiologic therapy for urinary stress incontinence. *JAMA* 1951; **146**: 915-917.
4. Jones EG. Non-operative treatment of stress incontinence. *Obstet Gynaecol* 1965; **6**: 220-235.
5. Moore T, Schofield PF. Treatment of stress incontinence by maximum perineal electrical stimulation. *Br Med J* 1967; **3**: 150-151.
6. Fliegner JR, Glenning PP. Seven years experience in the evaluation and management of patients with urge incontinence of urine. *Aust NZ J Obstet Gynaecol* 1979; **19**: 42-44.
7. Glenning PP, Fliegner JR. A stress incontinence clinic: review of 5 years experience. *Aust NZ J Obstet Gynaecol* 1976; **16**: 177-181.
8. Royal College of Physicians. Obesity report. *J R Coll Physicians Lond* 1983; **17**: 5-63.
9. Yarnell JWG, Voyle GJ, Sweetnum PM, et al. Factors associated with urinary incontinence in women. *J Epidemiol Community Health* 1982; **36**: 58-63.

Acknowledgements

I thank Miss A. Highton, the practice manager, my partner Dr J.C.W. Jolleys and my surgery staff; Dr C. Jagger for statistical assistance, Richard Wakeford and Professor R.C. Fraser for advice and help.

Address for correspondence

Dr J.V. Jolleys, The Surgery, Mill Lane, Belton, Nr Loughborough, Leics LE12 9UJ.

RCGP

Courses
and
Conferences



**ANNUAL
SYMPOSIUM 1989**

**AGAINST THE TIDE:
PROACTIVE CARE IN A
REACTIVE SOCIETY**

This year's Annual Symposium is being held on Friday 17 November, at Kensington Town Hall, and will focus on the problem of sustained anticipatory care of whole groups at high risk, at a time when State policy favours demand-led choice by individual consumers. Speakers have been chosen with experience of planned and verified approaches to hospital referral, shared care of diabetes, and anticipatory and preventive approaches to coronary heart disease, in the difficult social conditions of North-East and East London.

It is hoped that the Symposium will be of interest to practice teams and to community and hospital physicians interested in the interface between primary and secondary care.

Conference fees for the Symposium are: £45 for doctors and £25 for non-doctors. Section 63 zero-rated approval has been granted for the Symposium.

Further details and application forms are available from Projects Office, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU. Telephone: 01-823 9703.

**INTERNATIONAL SCIENTIFIC MEETING
OF GENERAL PRACTICE**

The Beijing Society of General Practice, founded on 23 January 1989, is holding its first International Scientific Meeting of General Practice on 1-7 November 1989 in Beijing, China.

The venue is the luxurious Kunlun Hotel.

Topics to be discussed include:

- The role of Family Physicians in achieving Health for All by the Year 2000.
- Recent development in General/Family Practice.
- New approaches and ideas in Vocational Training.
- Training in Clinical, Community and Emergency Medicine.
- Evaluation of competency.
- New Technology.
- Study tours to Chinese medical institutions.

The excursion programme includes visits to the Great Wall, Ming Tombs, Forbidden City, Temple of Heaven and Tian An Men Square, etc.

The official languages are Chinese and English.

For further details write to: The Secretariat, First International Scientific Meeting of General Practice, c/o Beijing Society of General Practice, Chinese Medical Association, 42 Dongsi Xidajie, Beijing 100710, China.