

The reported prevalence of urinary symptoms in women in one rural general practice

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SUMMARY. In May 1989 a questionnaire to determine the prevalence of urinary symptoms and vaginal discharge in the community was sent to all women patients born before May 1962 who had been registered with one rural practice for the previous two years. The response rate was 97%. The patients' clinical records were used to validate the replies of those who claimed to have consulted the doctor with these symptoms together with a sample of those who claimed not to have consulted. The reported prevalence of dysuria among the women over the previous two years was 27% and the prevalence of frequency was 34%. However, only 8% of women had received treatment for vaginal infections and 15% treatment for urinary symptoms (10% had confirmed bacteruria). Thirty four per cent of women said they would treat themselves prior to consulting a doctor and 17% would buy proprietary medicines. When asked how long they would wait between the onset of symptoms and seeking medical advice the responses ranged from one to 20 days, with 36% of women reporting that they would wait five days or longer before consulting. Fifty eight per cent of the women patients did not believe that urinary tract infections could have serious consequences and this figure increased to 76% among women who had consulted previously for a urinary tract infection. Patients with recurrent urinary symptoms did not consult any earlier than other women or treat themselves any less often. It can be concluded that there is a need for increased patient education in this area.

Introduction

SYMPTOMS suggesting urinary tract infection occur commonly in women and many episodes result in consultations with general practitioners. In the UK approximately four in 100 new consultations with all patients in general practice are for symptoms suggesting urinary tract infection.¹ In the 1981–82 national study of morbidity statistics from general practice² the consultation rate for cystitis and urinary infection among female patients was 62.5 per 1000 women at risk. This rate is similar to that found in a study in the Netherlands which reported that six out of every 100 women seen in general practice complained of frequency and dysuria.³ The majority of these episodes respond satisfactorily to treatment with antibiotics although 50% of women presenting with these symptoms do not have a bacterial infection.^{4,5} Despite evidence to the contrary,⁶ many doctors do not believe that it is possible to distinguish clinically between urinary tract infection and urethral syndrome, even using uristix and labstix, without the results of the mid-stream urine analysis.

Lower urinary tract disorders in women fall into three categories: asymptomatic bacteruria, symptomatic urinary tract infection and urethral syndrome (frequency and dysuria, no bacteruria). The prevalence of frequency and dysuria in women in the community has rarely been studied,^{5,7} even though urinary tract infection is the commonest condition in adults for

which general practitioners prescribe antibiotics.⁸

This paper reports a study of the pattern and prevalence of dysuria and frequency in women in a general practice community, with special reference to the use of self care and primary medical care.

Method

The study subjects were women born before 1 May 1962 who were registered with a rural Leicestershire general practice on 1 May 1987 and remained registered for the next two years.

A pilot questionnaire was sent to 100 randomly selected women registered with the practice and modified in the light of the results. The validated postal questionnaire sought information about occupation and whether the respondent had experienced 'stinging of urine' and/or 'need to pass urine more frequently than usual' (excluding frequency owing to diuretics) for more than a few days in the previous two years. The respondents were also asked whether they had consulted the doctor for these symptoms, whether they had received treatment for urinary tract infections and vaginal infections, how long they would suffer the symptoms before seeking a medical opinion, whether they would use self medication and whether they believed that urinary symptoms could have serious consequences. A reminder was sent after one month and those not wishing to take part were asked to confirm this by returning a blank form.

The patients' clinical records were used to validate all the replies of those who claimed to have consulted the doctor or to have been treated by the doctor for urinary tract infection or vaginal discharge/infection in the previous two years. In addition, the replies of 20% of those who did not claim to have consulted or received treatment were checked. Confirmation of the patients' claims was found in 98% of cases.

Patients were allocated a study number and data from the questionnaire were coded using a prepared coding manual. The data were analysed using a standard SPSS-X package. Results were analysed using the chi-squared and Mann-Whitney tests. Patients were grouped in 10 year age bands for the purposes of analysis. Details of occupation were used to allocate the patients to social class groupings according to the registrar general's classification.

Results

Of the 684 questionnaires sent out, 661 were completed and returned (response rate 97%), while 20 questionnaires (3%) were returned blank.

Episodes of frequency were reported by 234 of the 661 women (35%) and episodes of dysuria by 179 (27%) (Table 1). Thirty seven women (6%) reported that episodes of frequency lasting several days had occurred on more than 12 occasions in the two year period while eight women (1%) reported a similar incidence of dysuria. However, on most occasions these symptoms had

Table 1. Reported prevalence of urinary symptoms among 661 women during a two year period.

Number of episodes in 2 years	Number (%) of women with:	
	Frequency	Dysuria
>12	37 (6)	8 (1)
7–12	57 (9)	29 (4)
1–6	140 (21)	142 (21)
0	427 (65)	482 (73)

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not resulted in a consultation. The 38 women reporting frequency or dysuria on more than 12 occasions consulted between one and three times over the two year period for symptoms suggesting urinary tract infection (total 59 occasions, mean 1.6 consultations per woman). The infection was confirmed in 51 of the 59 cases (86%).

Younger age groups reported significantly more episodes of frequency and dysuria and they also suffered significantly more episodes of urinary tract infection and vaginal infections than older age groups, the prevalences bearing an inverse relationship to increasing age (Table 2). The younger age groups (25–34 and 35–44 years) did not report any association between urinary symptoms and the menses or recent intercourse.

Over the two year period 100 women had been treated for urinary tract infection (15%) and 64 (10%) had confirmed bacteruria on laboratory testing of a mid-stream urine sample. Forty eight women had been treated for vaginal infection (7%), diagnosed by the clinical presentation of unpleasant vaginal discharge and soreness or itching of the vagina. In 37 cases a high vaginal swab confirmed infection with either candida (34 cases) or trichomonas (three cases).

Four hundred and ninety four women replied to the question 'How long would you wait between the onset of symptoms and seeking medical advice?' The range of responses was one to 20 days. Sixty one patients (12%) said that they would seek immediate attention, 99 (20%) would consult by the second day, 101 (20%) by the third, 49 (10%) by the fourth, 52 (11%) by the fifth and 107 (22%) one week after the onset of symptoms. Only 15 women (3%) said that they would wait longer than two weeks before seeking medical advice. There was no statistically significant difference in the delay in consultation between social classes or between women who had received treatment for a urinary tract infection in the past and those who had not.

When asked about self medication 225 of the 661 women (34%) said that they would treat themselves with fluids and/or proprietary medicines before seeking medical advice. One hundred and fifty nine women (24%) said that they would increase their fluid intake and 109 (16%) stated specifically that they would drink lemon barley water. A total of 113 patients (17%) would buy proprietary medicine. Significantly more 25–34 year olds would purchase over-the-counter medicines than 55–64 year olds and those aged 65 years and over (47% versus 16% and 8% respectively; $\chi^2=26.1$, $df=4$, $P<0.001$). Those aged 45–54 years were more likely to drink lemon barley water than the older (55–64 and 65+ years) and younger (25–34 and 35–44 years) age groups (37% versus 16%, 14% and 13%, 20% respectively; $\chi^2=14.1$, $df=4$, $P<0.01$). The proportion of women who would treat their symptoms by increasing their fluid intake bore an inverse relationship to their age (38%, 42%, 39%, 18% and 16%; $\chi^2=21.9$, $df=4$, $P<0.001$). More women in social classes 1 and 2 combined (40%) would treat themselves than those in social classes 3 and 4 (33%) and social class 5 (21%) (Table 3). Similarly more women in social classes 1 and 2 combined (23%) would purchase medicines than those in social classes 3 and 4 (16%) and social class 5 (11%) (Table 3). No significant association was found between the level of self medication and previous treatment by a general practitioner for a urinary tract infection.

Six hundred and one women replied to the question 'Do you believe that urinary tract infections could have serious consequences?' —381 women (63%) said 'no' and 220 (37%) said 'yes'. This pattern of response was repeated in all age bands. Surprisingly, a significantly lower proportion of women who had previously consulted for a urinary tract infection (24%, 23/96) believed that urinary infections could have possible serious sequelae than women who had not (39%, 197/505) ($\chi^2=7.2$, $df=1$, $P<0.01$).

Table 2. Reported prevalence of urinary symptoms, urinary tract infections (UTI) and vaginal infections by age group.

Age group (years)	Number of women	% of women with:			
		Frequency	Dysuria	UTI	Vaginal infections
25–34	88	43	37	26	19
35–44	186	37	30	15	10
45–54	131	39	31	13	5
55–64	101	31	20	15	2
65+	155	29	20	12	2
		$\chi^2=24.8$ $P<0.001$	$\chi^2=11.3$ $P<0.05$	$\chi^2=10.3$ $P<0.05$	$\chi^2=46.6$ $P<0.001$

Table 3. Reported use of self-treatment and purchased medicines by social class.

Social class	Number of women	% who would self-treat	% who would purchase medicines
1	23	30	13
2	139	42	25
3	282	36	18
4	151	28	12
5	66	21	11
Total	661	34	17

Discussion

In the two year study period 35% of women reported that they had experienced episodes of frequency lasting several days, and 27% reported dysuria. Walker and colleagues⁵ found that 22% of women aged 20–54 years had suffered dysuria in the previous year. The difference between this figure and that found in this study may be explained by the difference in length of the study period and in the age range studied.

This study confirms the already documented² trend for younger, sexually active women to suffer more urinary symptoms and infections than their older and less sexually active counterparts. However, the true morbidity and mortality resulting from these infections is difficult to assess. Urinary tract infection is an important cause of days lost from work by women employees; an American survey conducted by the Department of Health and Education and Science in 1970 found that 45 days were lost per 100 female employees per year. Urinary tract infection encompasses a wide variety of clinical conditions with microbial invasion of any tissues of the urinary tract. Even though the infection may be limited to a single site initially (the bladder (cystitis) or the urethra (urethritis)) the entire urinary tract is at risk of bacterial invasion.

The European dialysis transplant registry⁹ showed that chronic pyelonephritis, the possible end result of recurrent urinary tract infection, accounted for 12% of cases of end-stage kidney failure. The American Medical Association also reported that 13% of renal transplants were due to pyelonephritis.¹⁰ However, for the most part infection is superimposed on a major underlying abnormality which predisposes the kidney to infection. Although a causal association has been demonstrated between bacteruria in early pregnancy and the development of acute pyelonephritis later in pregnancy,¹¹ prospective studies in non-pregnant women have failed to show that bacteria leads to chronic pyelonephritis which progresses to renal impairment.

This study has demonstrated a lack of knowledge about urinary tract infections among women; only 37% believed that

these infections could have serious consequences. The use of self-medication including over-the-counter medicines is widespread among the women studied, resulting in a delay in seeking medical advice. Furthermore, the study showed that the majority of women who had presented with a urinary tract infection in the past remained unaware of the possible serious sequelae of the condition. This suggests that the opportunity to assess the patient's knowledge of the condition and educate accordingly is not being taken by general practitioners in the consultation.

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