

Asthma and Women

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Abstract

The aim of this study was to examine associated psychosocial factors and other medical conditions influencing asthma control in asthmatic women.

One hundred ninety seven asthmatic female patients (mean age: 39±9.49 years; mean duration of illness: 11.58±8.76 years) and 52 healthy married female controls (mean age: 41.67±9.81 years) were included in the study. The data were collected through questionnaires given to patients and controls which included questions on issues relating to social life, menstruation, sexual life, pregnancy and menopause.

Over half (53.3%) of the asthmatic patients were found to be passive smokers, as compared to 28.8% of the controls. However, 25% of the controls were active smokers while only 3.5% of the patients smoked. Eleven women (6.6%) reported violent behaviour from their partners and this rate was similar to that of controls. Ninety-nine (59.6%) patients had associated sexual disorders; eighty three

(42.1%) patients had stress urinary incontinence. In the control group these rates were 15.5% and 11.5%, respectively ($p<0.05$). 128 patients (64.9%) had psychosocial disorders due to asthma. 58 (38.6%) patients experienced increase in asthma symptoms during premenstrual or menstrual periods. Out of 99 episodes of pregnancy, 32 (32.3%) had worsened asthma symptoms during pregnancy. Twenty-two (51.1%) cases experienced worsening of symptoms in the menopausal period.

The results of this study indicate that asthma may have a negative influence on a woman's social and sexual life. In addition to routine therapy, it is important to give a special place to women in patient education and to encourage them to have a healthy social/sexual life.

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Introduction

Bronchial asthma is more frequent in women of reproductive age. It is known that asthma negatively affects the social and sexual life of women, that it causes stress and urinary incontinence. Alternatively, pregnancy and menstrual disorders may lead to difficulties in asthma control (1,2). Although symptom scores, pulmonary function tests and quality of life questionnaires help to evaluate the symptomatic control of asthma, these tests fail to reflect the problems related with pregnancy, menstruation and/or menopause, and the problems related with social and sexual life. The dimensions of problems associated with these conditions, their causality and solutions can be different according to the community perception of the disease.

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This study was planned to investigate the coexistence of these special situations with asthma in female asthmatic patients followed in the asthma and allergy clinic of our Centre.

Material and Methods

Selection of patients

Of the 200 female asthmatic patients who had been followed for at least one year in the asthma-allergy clinic of the Süreyyapaşa Hospital, 197 who accepted to answer the questionnaire were included in the study. The control group consisted of 52 healthy married women with no pulmonary symptoms; this group was selected from amongst the companions of the patients or from amongst visitors of the inpatients.

For patients who were unable to do it independently, the questionnaire was filled out with the help of a female physician (D.G.), in our health education room. In addition, patient files were reviewed to obtain information on the demographic characteristics of the patients and about the progression of their disease.

Grading of asthma

The severity of the asthma and the progression of the condition were assessed according to the International Asthma Consensus Report (3).

Questionnaire

The questionnaires consisted of 40 questions covering the following issues:

1. Demographic data (10) and disease history (14);
2. Risk factors (4);
3. Social life related (social activities such as going out, going to the theatre, to school meetings, shopping, etc) (5);
4. Questions related with gender and sexuality (menstrual or pregnancy problems, sexual life, oral contraceptive use, stress urinary incontinence, menopausal complaints, husband's violent behaviour) (7)

The women in the control group were given a questionnaire which included questions related to only items 1 and 4.

Statistical analysis

Data on demography, smoking habits, urinary incontinence, sexual life, violence from husband were compared between the patients and the controls, using the Chi-square (χ^2) test.

Results

The mean age of the patients was 39.00 ± 9.49 years and the average duration of the disease was 11.58 ± 8.76 years. As Table I shows, there were no significant differences between patient and control groups regarding the demographic characteristics. The majority (71.6%) of the asthmatic patients had mild persistent asthma.

Although active cigarette smoking is prominent mainly in

Table 1. Demographic characteristics in asthma patients and in the controls

	Patients (n=197)	Controls (n=52)
Mean age (years)*	39±9.49	41.67±9.81
Duration of asthma (years)	11,58±8.76	-
Educational level*		
Illiterate		
Barely literate	20 (10.2%)	10 (19.2%)
Primary school	6 (3.0%)	-
High school	142 (72.0%)	33 (63.5%)
University	29 (14.8%)	6 (11.5%)
	-	3 (5.8%)
Occupation*		
Housewife	149 (75.6%)	41 (78.9%)
Blue-collar	16 (8.1%)	5 (9.6%)
White-collar	13 (6.6%)	2 (3.8%)
Other	19 (9.7%)	4 (7.7%)
Civil status		
Married	166 (84.2%)	52 (100%)
Single	13 (6.6%)	-
Widow	18 (9.2%)	-
Asthma classification		
Mild intermittent	6 (3.0%)	-
Mild persistent	141 (71.6%)	-
Moderate	49 (24.9%)	-
Severe	1 (0.5%)	-
*p>0.05		

the control group, passive cigarette smoking is common in the asthmatic group. (Table 2).

Data showing the negative effects of asthma in female patients are given in Tables 3 and 4.

Sixty five percent (n=128) of the asthmatic patients stated that they had social problem (Table 3). Forty two percent (n=83) reported stress urinary incontinence with a negative

Table 2. Exposure to tobacco in the patients and controls

	Smoker*		Ex-smoker		Passive smoker*		No exposure	
	n	%	n	%	n	%	n	%
Patients (n=197)	7	3.5	9	4.5	105	53.3	76	38.7
Controls (n=52)	13	25.0	8	15.4	15	28.8	16	30.8
*p<0.01								

	Cases		Controls	
	n	%	n	%
Social problems	128	65.0	-	
Stress incontinence*	83	42.0	6	11.5
Sexual problems*	99	59.6	8	15.3
Violent acts from husband**	11	6.6	6	11.5

*p<0.001, **p>0.05

effect on their social life and this was significantly higher than the control group (p<0.001). Of the 166 married patients, 59.6% had loss of libido and had fears of a new asthma attack during or after the sexual intercourse. This also was a significantly higher ratio compared to the control group (p<0.001). Women in both groups reported violent acts from their husbands (6.6% in the patients and 11.5% in the controls) The difference was not significant (p>0.05). In the patients group, the high cost of the treatment, inability to work and lack of economic contribution due to disease were stated as reasons leading to violence.

The interactions between the asthmatic state and gynecologic problems are shown in Table 4. An increase in asthmatic complaints and increased need for short-term β -agonist during pre-menstrual days was reported by 26.6% of the patients. A worsening of asthma during menstrual periods was reported by 12% of the women. During pregnancy, 32.3% (n=32) reported a worsening of asthma, 41.4% (n=41) had no change and 26.3% (n=26) reported decrease in complaints related with asthma. Menopause did not affect the asthmatic state in 44.2% (n=19) of the cases, however 51.1% (n=22) of the women felt worse. Seven patients in this group had undergone total abdominal hysterectomy (TAH) and

	n	%
Increase in pre-menstrual complaints (n=150)	40	26.6
Increase in menstrual complaints (n=150)	18	12.0
Effects during pregnancy (n=99)		
Worsening of asthma	32	32.3
No change	41	41.4
Improvement of asthma	26	26.3
Menopause (n=47)		
*Worsening of asthma	22	51.1
**No change	19	44.2
Improvement of asthma	2	4.7

* 5 of these cases had TAH and BSO and were on HRT.
** 2 of these cases had TAH and BSO and were on HRT.

bilateral salpingo-oophorectomy (BSO). All of 5 patients in this group who were on hormonal replacement therapy (HRT) reported a worsening in their asthmatic complaints.

Discussion

There is ample evidence from several studies that the course of asthma differs by age and sex (1,4,5). According to hospital admission figures on asthma, the proportion of male patients is higher in pre-pubertal ages; however, after puberty this ratio reverses in the direction of females (4,5).

The fact that the majority of our patients were housewives may suggest that women may have a higher exposure to risks related with house mites and in-house wastes. An important proportion (53.3%) of our patients were exposed to cigarette smoke at home and this finding possibly had an impact on development of asthma. It was reported that exposure to cigarette smoke doubles the risk of an acute asthmatic attack (6,7). This finding indicates once again the necessity of health education of the patient along with the family members. Osborne et al (4) showed that female asthmatics had a poorer life quality compared to male patients although they had similar disease intensity and pulmonary function test values. This study included mainly severe asthma patients, but we also had parallel findings which indicated that social life was considerably restricted, although the majority of our patients (71.5%) had mild asthma with symptoms under control.

Stress urinary incontinence was more frequent in our asthma cases compared to controls. Kalyoncu et al reported a rapid improvement in stress urinary incontinence following an adequate control of the asthmatic state (8). However, some patients may continue to have incontinence despite improvement in asthma. These patients should be evaluated together with urology or gynaecology departments and the benefit of pelvic muscle contraction exercises should be stressed in the treatment regimen in order to relieve the women of this condition which interferes with the carrying on of normal daily life activities (9).

In several studies, sexual activity was reported to provoke asthma attacks and this effect was attributed to exertion during sexual intercourse or to allergy to sperm antigens or to condoms (10-13). These attacks are a cause of stress for both the patient and the husband and eventually result in family distress. An astonishing part (59.6%) of our patients reported dyspnea during or after the intercourse, and stated that they had been reluctant to take a bath after the intercourse (which they practiced for religious beliefs or hygienic considerations) for fear of precipitating an attack. Most of them stated a need for using a bronchodilating inhaler after sexual intercourse. This finding suggests that it might be useful to recommend the use of short-acting beta-agonists before the sexual relationship in such patients.

About seven per cent of our patients suffered violent behaviour from their husbands. However, this finding probably ref-

lected a general social problem since there was no difference regarding the violence issue between the groups.

An important proportion (38.6%) of the patients reported an exacerbation of their asthma symptoms and a need to use short-acting beta-agonist inhaler in their premenstrual days or during their menstrual period. However, their symptoms were not too severe, since they did not feel they needed to go to emergency. Previous studies indicate that bronchial hyperreactivity and acute attacks can be provoked during these periods due to effects such as hormonal changes, increased sensitivity to stress and decreased resistance to infections (14-16). One or several of these causes may have had a role also in our patients.

Asthma in a pregnant woman may affect both the mother and the baby, particularly if the condition is severe and uncontrolled (15-18). In our study the rates of exacerbation, alleviation or no change were of about equal magnitude in asthmatic women during pregnancy and no complications were reported in neither women nor their babies. Nevertheless, many patients believed and feared that the medicines they were taking might harm the baby. This finding indicates a need to stress during patient education sessions that asthma and pregnancy will not have a negative interaction as long as the treatment is adhered to and the medicines are taken regularly.

According to the small number of studies which examined the effect of menopause on the severity of asthma, the risk of asthma onset does not seem to increase in the post-menopausal period; however, the risk is higher in women who are on HRT (15,19). It has been reported that existing asthma may worsen in the peri or post-menopausal period (1). More than half (51.1%) of our menopausal patients reported a worsening in their asthmatic state with menopause. None of the menopausal women in this series had used HRT except those who had undergone total abdominal hysterectomy and bilateral oophorectomy. Our findings therefore do not allow us to reach any conclusions in this respect.

The results of this study show that asthma has negative effects on the social, sexual and family life of women. In addition to routine therapy, it is important to give a special place to women in patient education and to encourage them to have a healthy social/sexual life.

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