Cigarettes Smoking Among Patients with Schizophrenia

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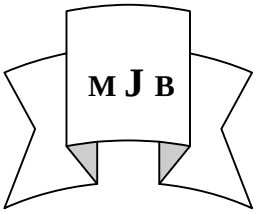

Abstract

Background: previous studies have found high prevalence of cigarettes smoking in schizophrenia. The increased prevalence persists even after adjustment for gender, marital status, alcohol use and socioeconomic status.

Objectives: To determine the prevalence of cigarette smoking among schizophrenic out patients .Gender distribution and its relation to the onset of schizophrenia.

Method: Smoking habit was assessed in 204schizophrenic patients attending outpatients department in Al Hussein General Hospital, Karbal governorate, Iraq.

All patients had fulfilled the ICD10 diagnostic criteria for schizophrenia.

Smoking rate was compared with general population control subjects.

Results: Current schizophrenic smokers were 92 (45%) while 68(33%) of the controls were current smokers (X^2= 5.92, p= 0.01), (table-1-)

Schizophrenic Males smoked more than non schizophrenic males 74 (65%) vs. 49 (43%) X^2=11.15 p = <0.001, and no females to females difference.

More male patients smoked than female patients (65%) versus (20%) X^2= 10.83 p= <0.001.

Schizophrenic patients were heavier smokers (smoked 20 cigarettes per day) than controls X^2 = 15.49 p=<0.001. The mean of cigarettes smoked per day for a patient was 30.6 and for control 17.8 (table-2-)

Two third of patients claimed to start their smoking before the onset of schizophrenia, 72% of males, and 44% of females. (X^2= 19.56, p=<0.001 (table-3-)

More controls were former smokers (6%) than patients (2%)

Conclusion: There is a gender difference in the prevalence of smoking in schizophrenic patients, and its relation to the onset of disease. High prevalence was found only in males. Smoking may be a risk factor for developing schizophrenia in males only.

Introduction

Schizophrenia is associated worldwide with a higher rate of cigarettes smoking than that observed among general population [1]. The increased prevalence persists even after adjustment for marital status, alcohol use and socioeconomic status [2,3]. Numerous studies across inpatients, outpatients, and community setting- have reported the prevalence of cigarette smoking among persons with schizophrenia to be 40-100% higher than those with other psychiatric diagnoses and as much as three times higher than the prevalence in the general population. [4,5].There is many possible explanations for the association between cigarette smoking and schizophrenia

First; Smoking reduce or alleviate the symptoms of schizophrenia in some way [6] (the self medication hypothesis) ,and reduce the side effects of antipsychotic medications [5,7,8].

Second; Smoking act as an etiological risk factor for schizophrenia [9,10] and a number of studies have found that 85-90% of people with schizophrenia

had started smoking before the onset of illness [9,11,12],

Third; Genetic and / or environmental factors might predispose individuals to develop both schizophrenia and nicotine addiction [13].

Fourth; Schizophrenia makes patients more vulnerable to the effect of nicotine and they may be more likely to be addicted and / or less likely to quit than others without schizophrenia. [8]

Patients with schizophrenia may smoke heavily as a result of antipsychotic medications, which produces marked dopamine receptor blockade [6,7] , possibly a very high level of smoking is necessary to overcome this blockade and produce the reward effect.[9]

Zammits etal [6], found that smoking in men during late adolescence was associated with a lower risk of subsequently developing schizophrenia over a 27- year follow-up period. After adjustment, the heaviest smokers had the least risk of developing schizophrenia, suggesting that cigarette smoking may be an independent protective factor for developing schizophrenia.

Objectives

To determine the prevalence of cigarette smoking among schizophrenic out patients. Gender distribution and its relation to the onset of schizophrenia.

Method

This study was conducted in Iraq, Kerbala governorate, Al Hussein General Hospital which was described in a former study [14] between 2/1/2002 and 31/12/2003.

All psychotic patients attended the psychiatric outpatient department were subjected to semi- structured questionnaire based on ICD10 diagnostic criteria for schizophrenia [15] .

All patients who fulfilled the diagnostic criteria of schizophrenia were included in the study.

The study subjects consist of 204 consecutive patients, 103(55.4%) males and 91 females (44.6%). The age of males ranged between 16 to 68 years, the mean was37.5 [SD=12.4] and that of females ranged from17to 70, the mean was 37.95[SD=12.8].

General population control subjects consist of 204 apparently normal persons, matched for gender, and age. They were chosen from the relatives of patients in primary health care centers and general hospitals.

Smoking habit was assessed by the following questions.

1. Have you ever smoked during your life?
2. Do you smoke nowadays (the last month)?
3. How many cigarettes do you smoke daily?

If the answer for the first and second question was yes, the individual considered current smoker. If the answer was yes for the first question and no for the second, the individual considered a former smoker. If the answer was no for both first and second question, the individual considered non –smoker.

Smoking status was recorded as one of four categories according to the number of cigarettes smoked per day [6]

Non smokers, light smokers (below 10 cigarettes per day), medium smokers (11-20 cigarettes per day) and heavy smokers (more than 20 cigarettes per day).

All patients and /or their relatives and control subjects gave an oral consent to participate in the study.

For comparison between cases and controls, chi square test for the differences was used and *P* value of less than 0.05was considered statistically significant.

Results

Current schizophrenic smokers were 92 (45%) while 68(33%) of the controls were current smokers (X^2= 5.92, p= 0.01), (table-1-)

Schizophrenic males smoked more than non schizophrenic males 74 (65%) versus 49 (43%) X^2=11.15 p = <0.001, and no females to females difference.

More male patients smoked than female patients (65%) versus (20%) X^2= 10.83 p= <0.001.

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More controls were former smokers (6%) than patients (2%)

Table 1 Cigarettes smoking in schizophrenic patients and controls

Smoking status	Patients			Controls		
	Male	Female	Total	Male	Female	Total
Current smoker	74(65.5%)	18 (20%)	92(45%)	49(43.5%)	19(21%)	68(33%)
Former smokers	2(1.5%)	2(2%)	4(2%)	7(6%)	5 (5.5%)	12(6%)
Never smokers	37(33%)	71(78%)	108(53%)	57(50.5%)	67 (73.5%)	124(61%)
Total	113 (100%)	91(100%)	204(100%)	113(100%)	91(100%)	204(100%)

X^2 5.92 P=0.01

Table 2 Number of cigarettes smoked per day in schizophrenic patients and controls

Number of cigarettes per day	n= 92	%	n=68	%
Less 5	2	2	13	19
5--10	20	21.5	19	28
11--20	21	22.5	13	19
21--30	12	13	10	15
31--40	19	21	7	10
More 40	18	20	6	9
Mean	30.6	100%	17.8	100%

X^2, 15.49 p=<0.001. (For heavy smoking; more than 20 cigarette /day)

Table 3 Onset of cigarettes smoking in relation to the onset of schizophrenia

Onset of smoking	Total	%	Male smokers	%	Female smokers	%
Before illness	61	66	53	72	8	44
After illness	31	34	21	28	10	56
Total	92	100%	74	100%	18	100%

Discussion

In this study, the prevalence of smoking in schizophrenic outpatients is higher than that in general population and, this is consistent with other studies [1, 2, 3]

The rate of smoking in our schizophrenic patients was similar to smoking rate of schizophrenic patients in China (45%) [16] and higher than that of Indian schizophrenic patients , (38%) [17]. It is lower than smoking rate of English (60%) [18] and Spanish schizophrenic patients (69%) [19]. cultural factors may play a role in this difference [20].

Male schizophrenic patients had higher frequency of smoking than female schizophrenic patients and this is consistent with other findings [1, 2, 12].

Female schizophrenic patients had higher frequency of smoking than non schizophrenic female patients [2] but in our study; schizophrenic females smoke less than control subjects.

The low prevalence of smoking in female schizophrenic patients may be due to, first, that our female schizophrenic patients refuse to disclose their smoking habit due to socio- cultural factors. It is well-known that female schizophrenic patients attend psychiatric clinics with their relatives and they feel difficulty to talk about smoking in front of them.

Second, it may be genuinely that Iraqi female schizophrenic patients have low tendency for smoking.

We found that schizophrenic patients were heavier smokers than controls and this is consistent with most studies.[4,5]

Iraqi schizophrenic patients seem to be heavier smokers than American schizophrenic patients [12] , (mean of cigarettes /day is 19) and Scottish schizophrenic patients[21] (mean of cigarettes /day is 26).

This may be due to un availability of community based services for schizophrenic patients, absence of rehabilitation programs and continuing stress since many years,. Smoking may be the only pleasurable activity available for schizophrenic patients in Iraq.

Two third (66%) of schizophrenic patients in our study claimed to start their smoking habit before the onset of illness. This finding is similar to other studies [9 11, 12, 21]. But more than half (56%) of female schizophrenic patients started their smoking after the onset of schizophrenia.

This gender difference, if supported by further studies may lead to review the etiological association between smoking and schizophrenia in female patients.

Fewer schizophrenic patients were former smokers than controls. Heavy smoking and severity of nicotine addiction [22] may prevent schizophrenic smokers from quitting smoking.

Limitations of the study

1. Smoking habit assessment was based on patient self reporting. No structured instrument or laboratory tests for nicotine dependence were available.

2. Iraqi people describe their smoking by packets per day , the exact number of cigarettes per day may be roughly estimated despite the efforts made by researcher

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