

CIGARETTE SMOKING AND SUICIDE ATTEMPTS IN PSYCHIATRIC OUTPATIENTS IN HUNGARY

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ADOHÁNYZÁS ÉS AZ ÖNGYILKOSSÁGI KÍSÉRLETEK ÖSSZEFÜGGÉSE AMBULÁNS PSZICHÁTRIAI BETEGEKNÉL MAGYARORSZÁGON

Háttér. Epidemiológiai és klinikai vizsgálatok során szignifikáns összefüggést találtak a dohányzás és az öngyilkos magatartás között.

Módszer. 334 ambuláns, unipoláris major depresszióban, bipoláris I és bipoláris II zavarban, szkizofréniában, szkizoaffektív zavarban és pánikzavarban szenvedő beteget kérdeztünk ki dohányzási szokásaikkal és korábbi öngyilkossági kísérleteikkel kapcsolatban.

Eredmények. A pánikzavarban szenvedő betegek kivételével a korábbi öngyilkossági kísérlet(ek) aránya magasabb volt a jelenleg dohányzó és valaha dohányzó, mint a sosem dohányzó betegek esetében valamennyi diagnosztikus csoportban, azonban az eredmény csak a valaha dohányzó unipoláris depressziósok, és a jelenleg és valaha dohányzó szkizofrének esetében volt szignifikáns.

Korlátok. A kort, társadalmi osztályt és alkohol / koffein fogyasztást nem kontrolláltuk, valamint nem tettünk különbséget a dependens és nem-dependens dohányosok között.

Konklúzió. Eredményeink alátámasztják a pszichiátriai betegek (különösen major depressziós és szkizofrén betegek) esetében a dohányzás és az öngyilkos viselkedés összefüggésével kapcsolatos korábbi eredményeket.

KULCSSZAVAK: affektív zavarok, dohányzás, öngyilkossági kísérlet, pánikzavar, szkizofrénia

SUMMARY

Background. Epidemiological and clinical studies have found a significant association between smoking and suicidal behaviour.

Method. 334 outpatients with DSM-IV diagnosis of unipolar major depression, bipolar (I+II) disorder, schizophrenia, schizoaffective disorder and pure panic disorder were interviewed regarding to their smoking habits and previous suicide attempts.

Results. With the exception of panic disorder patients, the rate of prior suicide attempt(s) was much higher among current and lifetime smokers than among never smokers in all diagnostic groups, but the difference was statistically significant only for lifetime smoker unipolar depressives and for current and lifetime smoker schizophrenics.

Limitations. Age, social class and alcohol/coffee consumption was not controlled and dependent vs nondependent smokers were not distinguished.

Conclusions. The findings support previous results on the strong relationship between smoking and suicidal behaviour in psychiatric (particularly major depressive and schizophrenic) patients.

KEYWORDS: affective disorders, cigarette smoking, suicide attempt, panic disorder, schizophrenia

Introduction

Epidemiological studies have reported on a significant association between cigarette smoking and suicidal behaviour, including a dose dependent relationship between smoking and increased risk for committed suicide (Tverdal et al. 1993; Angst and Clayton, 1998; Miller et al. 2000a; 2000b; Tanskanen et al. 2000). The significant association between smoking and suicidal behaviour has also been reported for psychiatric patients. Investigating more than 1000 Finnish inpatients with various diagnoses (schizophrenia, affective disorders, anxiety and personality disorders) Tanskanen et al. (1998) have found that the rate of prior suicide attempts was significantly higher for current smokers than for nonsmokers (males: 29% vs 16%, females: 35% vs 20%, respectively), and the probability of prior suicide attempts was 100% higher in current smokers than in nonsmokers. On the other hand, a recent study from New York on 337, mainly schizophrenic and depressive inpatients have found that the current cigarette smoking was significantly more common among the 181 suicide attempters (69%) than among the 156 non-attempters (44%) (Malone et al. 2003). The aim of our present study was to investigate the relationship between current and lifetime smoking and suicidal behaviour among various psychiatric outpatients in Hungary, in a country where both suicide rate and frequency of smoking in the general population is relatively high (Rihmer 2004; Boros 2000).

Patients and Methods

To minimize the social influence of hospitalization on current smoking, only outpatients were studied. More than 360 consecutively screened outpatients, with the DSM-IV diagnosis (APA 1994) of unipolar major depression, bipolar (I+II) disorder, schizophrenia, schizoaffective disorder and pure panic disorder, who received treatment at three different outpatient departments at the National Institute for Psychiatry and Neurology, Budapest, were interviewed regarding their current and previous smoking habits. Only patients with pure panic disorder were included, (i.e. panic disorder patients with current and/or past major depression were excluded). Patients with comorbid substance-use/dependence disorders were also excluded. All patients were systematically asked about their previous suicide attempts, but only the medically documented suicide attempts were con-

sidered. More than two-thirds of the unipolar, bipolar, schizoaffective and schizophrenic patients, but only 5 percent (N=3) of the pure panic disorder patients were previously inpatients at the same institute. All patients were diagnosed by experienced clinical and research psychiatrists according to the DSM-IV criteria (APA, 1994). Only patients with complete data on both smoking and prior suicide attempts were included in the final sample. For statistical comparisons, chi-square test was used.

Results

The final sample (N=334) consisted of 92 unipolar major depressive, 60 bipolar (32 bipolar I and 28 bipolar II), 80 schizophrenic, 42 schizoaffective and 60 pure panic disorder patients. Because of the small number of bipolar I and II patients, these subgroups were not analysed separately. All patients, who were classified as regular (everyday) smokers smoked cigarettes, (minimum: 5, maximum: 45 cigarettes daily), and interestingly, no patient smoked only pipe or cigar on a regular basis, and none of the patients reported a smokeless use of tobacco (i.e. tobacco chewing, snuff etc). The rates of prior suicide attempts in current smokers, lifetime smokers and never smokers according to the five diagnostic groups are shown in Table 1. The rate of current and lifetime smoking in the whole sample is 53% (177/334) and 68% (226/334) respectively, and 37% of the total sample (30% of males and 41% of females) have made at least one (medically documented) suicide attempt. As for different diagnostic groups, patients with unipolar major depression, bipolar disorder, schizophrenia and schizoaffective disorder show high lifetime rate (32-53%) of suicide attempts. In contrast, pure panic disorder patients reported relatively low frequency (5%) of prior suicide attempts.

Looking at the relationship between smoking and suicidal behaviour in the whole sample, the rate of prior suicide attempt(s) was numerically much higher among current and lifetime smokers than for never smokers in the total sample and in both genders, but the difference is statistically significant only for the total sample and for females (Table 1). As for specific diagnostic groups, - with the exception of panic disorder patients, - the rate of previous suicide attempts are numerically higher among current and lifetime smokers than among never smokers in all diagnostic groups, but

Table 1. Rate (%) of previous suicide attempt(s) in different diagnostic groups and in the whole sample

Diagnosis	Total	Current smokers	Lifetime smokers	Never smokers
Unipolar major depr.	48/92 (53)	29/49 (59)	36/64 (56)	12/28 (43)
Bipolar (I+II) disorder	19/60 (32)	13/36 (36)	14/42 (33)	5/18 (28)
Schizophrenia	32/80 (40)	25/43 (58)	27/56 (48)	5/24 (21)
Schizoaffective disord.	21/42 (50)	16/29 (55)	19/35 (54)	2/7 (29)
Pure panic disorder	3/60 (5)	2/20 (10)	2/29 (7)	1/31 (3)
All patients	123/334 (37)	85/177 (48)	98/226 (43)	25/108 (25)
Males	41/136 (30)	31/79 (39)	33/101 (33)	8/35 (23)
Females	82/198 (41)	54/98 (55)	65/125 (52)	17/73 (23)
Comparisons	Unipolar major depression Lifetime smokers vs never smokers: $\chi^2=4,39$, $df=1$, $p=0,0380$ Schizophrenia Current smokers vs never smokers: $\chi^2= 8,67$, $df.= 1$, $p=0,0032$ Lifetime smokers vs never smokers: $\chi^2= 5,25$, $df.=1$, $p=0,0220$ All patients Current smokers vs never smokers: $\chi^2= 17,51$, $df.=1$, $p=0,0000$ Lifetime smokers vs never smokers: $\chi^2= 12,64$, $df.=1$, $p=0,0003$ Females only Current smokers vs never smokers: $\chi^2= 17,44$, $df.=1$, $p=0,0000$ Lifetime smokers vs never smokers: $\chi^2= 15,66$, $df.=1$, $p = 0,001$			

All other comparisons are not significant.

this difference is statistically significant only for lifetime smoker unipolar depressives and for current and lifetime smoker schizophrenics (Table 1).

Table 2 displays the frequency of current and lifetime smokers among patients with and without suicide attempts. The current and lifetime smoking is significantly more common among the suicide attempters than among nonattempters both in the total sample and in females. However, as for males, this difference is significant only for current smokers.

Discussion

The high frequency (32-53%) of prior suicide attempts in our patients with major mood and schizophrenic-spectrum disorders is in the well-known range, reported for this patient-population. The relatively low rate (5%) of prior suicide attempts in our pure panic disorder patients is very close to the 3,2% lifetime history of suicide attempts in the general population of Hungary (Szádóczy et al. 2000), and this is consistent with previous findings, i.e. panic disorder patients show an elevated

Table 2. Number (%) of smokers among patients with and without lifetime suicide attempts

Sample/smoking status	With suicide attempt	Without suicide attempt	Chi-square (df=1)	p
Total sample	123 (37)	211 (63)		
Current smokers, n (%)	85 (69)	92 (44)	20,289	0,001
Lifetime smokers, n (%)	98 (80)	128 (61)	12,835	0,001
Males	41 (30)	95 (70)		
Current smokers, n (%)	31 (76)	48 (51)	7,401	0,02
Lifetime smokers, n (%)	33 (81)	68 (72)	1,189	NS
Females	82 (41)	116 (59)		
Current smokers, n (%)	54 (66)	44 (38)	14,984	0,001
Lifetime smokers, n (%)	65 (79)	60 (52)	15,660	0,001

risk for suicide attempts only in the case of comorbid major depression (Warshaw et al. 1995).

In agreement with the results of Tanskanen et al. (1998) we have also found that in patients with major mood and schizophrenic/schizoaffective disorder, the lifetime history of suicide attempts was substantially higher for smokers than for non-smokers. Our findings also support the results of Malone et al. (2003), i.e. cigarette smoking is significantly more common among suicidal than non-suicidal depressive and schizophrenic patients.

The cause of the strong association of smoking with suicidal behaviour is not exactly known. It has been suggested that lifetime smoking and lifetime depression are genetically related (Kendler et al. 1993), and another study have found that smoking, aggressive-impulsive personality features, and psychiatric disorders were significantly associated with subsequent committed suicide in young males (Angst and Clayton, 1998). The findings of Malone et al. (2003) indicate that cigarette smoking, impulsive-aggressive personality traits and suicidal behaviour might be related to lower brain serotonin function, at least in patients with major depression. In addition to decreased central serotonin function, low platelet MAO activity and some personality traits such as high impulsivity, sensation seeking, extroversion (and perhaps „orality” in the Freudian sense) has been also reported to be related both with smoking and with suicidal

behaviour (Buchsbaum et al. 1977; Gattaz and Beckman, 1981; Orelan et al. 1981; Harro et al. 2004). Since the rates of lifetime/current smokers in the general population highly exceed the rates of persons with lifetime/current psychiatric disorders (Boros, 2000; Szádóczy et al. 2000), (i.e. the majority of smokers never will become mentally ill), future research should also focus on the relationship between smoking, specific affective temperament types (Akiskal et al. 1998) and suicidal behavior both in nonpatient populations and in persons with minor and major mood disorders. However, regardless of any explanation, our present results support the statistical association between cigarette smoking and suicidal behaviour in patients with major mood and schizophrenic spectrum disorders. Finally, it should be noted that the fact that age, social class, and alcohol/caffeine consumption of our patients were not controlled, and dependent vs nondependent smokers were not distinguished, should be considered as limiting factors.

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