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## Dyspepsia in Chronic Psychiatric Patients

**Introduction:** We report on dyspeptic complaints among patients hospitalized in the long-stay ward of a general psychiatric hospital. **Methods:** A representative sample of the patients was interviewed using a structured questionnaire. **Results:** Eighty percent of the patients reported one or more symptoms of dys-

pepsia, and 68% reported symptoms of reflux-like dyspepsia. **Conclusion:** Significant positive associations were found for dyspepsia complaints and clozapine (OR = 3.4), laxatives (OR = 4.4), and heavy smoking (OR = 2.3).

### Introduction

Dyspepsia is a common problem in the general population. In the literature the prevalence of dyspepsia ranges from 11% to 40% [1,9]. Although previous studies found that dyspepsia complaints were related to depression, anxiety disorders, and psychological stress, little data are available on the prevalence of dyspepsia in a psychiatric population [2,5,8]. Since gastrointestinal problems and medication for dyspepsia could have an effect on the resorption or metabolism of psychiatric drugs, we found it of great interest to examine the prevalence of dyspepsia in a population of chronic psychiatric patients [3,7].

### Patients and methods

The source population comprised 356 patients who were all hospitalized for more than one year in the long-stay ward of a large general psychiatric hospital. A randomized selection of 110 patients was interviewed using a structured questionnaire of limited size. The questionnaire inquired about the presence and seriousness of a number of symptoms of dyspepsia during the pre-

vious month. As described by other authors, dyspepsia was classified into three groups: nonspecific, ulcer-like, and reflux-like dyspepsia complaints [11]. In order to identify possible determinants of dyspepsia, we compared patients having ample expression with patients having little or no expression of one or more symptoms. We categorized antipsychotic drugs (APDs) into low- and high-potency APDs according to their affinity for the postsynaptic D2-receptors.

### Results

Seventy-nine patients (72%) completed the interview. The other patients refused (23) or were not able (8) to complete the questionnaire. The study population included 45 men with an average age of 55 (SD 16.8) years and 34 women with an average age of 66 (SD 15.4) years. The most frequent psychiatric diagnoses were psychotic disorders (61%) and affective disorders (24%). There were 63 patients (80%) who reported one or more symptoms of dyspepsia. Fifty-four patients (68%) reported symptoms of reflux-like dyspepsia, 23 patients (29%) reported symptoms of ulcer-like dyspepsia, and 8 patients (10%) reported symptoms of

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nonspecific dyspepsia. A total of 22 patients reported symptoms of both ulcer- and reflux-like dyspepsia. Eighty percent of the patients used antipsychotic drugs (APDs) and 33% used antidepressants. Only three patients used no psychiatric medication at all. Regular use of tobacco, coffee, and alcohol was reported by 48 (61%), 74 (94%), and 8 (10%) patients, respectively. Both major eating disorders and alcohol abuse were not present in our study population. The mean age of patients with complaints was lower than that of patients without dyspepsia complaints, 58 versus 68 years ( $P = 0.03$ ). There was a difference between men and women with respect to the type of dyspepsia complaints reported. The prevalence of ulcer-like dyspepsia was significantly higher among females than among males (OR = 1.9; 95% CI: 1.2–3.1). Use of clozapine was associated with an increased probability of ample expression of dyspeptic complaints (OR = 3.4; 95% CI: 1.02–11.3) (see Table 1). Use of risperidone was associated with a decreased probability of ample expression of dyspeptic complaints (OR = 0.3; 95% CI: 0.04–0.7). A significant negative association was found for use of high-potency APDs and ample expression of dyspeptic complaints (OR = 0.3; 95% CI: 0.1–0.7). Use of anti-Parkinson medication was negatively associated with ample dyspeptic complaints (OR = 0.3; 95% CI: 0.1–0.9). For laxative use and complaints of constipation, however, significant positive associations were found: OR = 4.4; 95% CI: 1.5–12.8 and OR = 4.8; 95% CI: 1.7–13.2. Compared with nonsmoking, we found that smoking more than 15 cigarettes a day resulted in a significant positive association with ample expression of dyspeptic complaints (OR = 2.3; 95% CI: 1.2–4.4).

## Discussion

To our knowledge, this is the first study to investigate the prevalence of dyspepsia complaints within a population of chronic ad-

mitted psychiatric patients. Other studies recruited mostly psychiatric patients in the general population [2,4,8]. Considering the nature of the population, a response rate of 72% was higher than expected. Due to the heterogeneous characteristics of the population, the results have to be looked at with some restriction. Also, because of methodological differences, comparisons with other studies are possible only to a certain extent. Nevertheless, the frequency of dyspepsia complaints seemed to be higher in our population. In addition, the nature of those complaints seemed to be different: most of our patients reported reflux-like dyspepsia complaints (68%), whereas studies conducted in the general population report 5–10% of dyspepsia complaints to be reflux-like [10]. In a previous study we found that 53% of the patients taking medicines for dyspepsia used these medicines for gastroesophageal reflux disease [6]. This is in accordance with the high prevalence of reflux-like dyspepsia complaints found in this study. In accordance with other studies, we also found an overlap between ulcer-like and reflux-like dyspepsia complaints [11].

Patients using clozapine were almost three times more likely to have ample dyspeptic complaints. Because of the anti-muscarinic effect of clozapine, this is an unexpected finding. Nearly all APDs increase the risk of developing reflux-like dyspepsia [4]. However, in our study patients using high-potency APDs were three times less likely to have ample dyspeptic complaints. Patients using low-potency APDs were two times more likely to have ample dyspeptic complaints, although this difference was not significant. These findings may be explained partly by the effect of risperidone versus clozapine. It is tempting to speculate that the difference between high- and low-potency APDs is caused by their antagonism of gastrointestinal D2 receptors. Potent D2 antagonists such as domperidone are known to decrease dyspeptic complaints.

Table 1 Prescribed medication, smoking, coffee, and alcohol versus dyspeptic complaints

Characteristic	Patients with ample dyspepsia (n = 45)	Patients with no/minor dyspepsia (n = 34)	Odds ratio (95% CI) adjusted for age and gender
<b>Medication</b>			
Antipsychotics	36 (80%)	27 (79%)	0.7 (0.2–2.3)
Low-potency antipsychotics*	17 (38%)	6 (18%)	1.3 (0.3–5.2)
High-potency antipsychotics*	4 (9%)	12 (35%)	0.3 (0.1–0.7)
Clozapine	19 (42%)	5 (15%)	3.4 (1.02–11.3)
Risperidone	3 (7%)	9 (26%)	0.2 (0.04–0.7)
Anti-Parkinson medication	5 (11%)	11 (32%)	0.3 (0.1–0.9)
Antidepressants	18 (40%)	8 (24%)	2.6 (0.9–7.9)
Lithium	9 (20%)	7 (21%)	0.7 (0.2–2.2)
Benzodiazepines	21 (47%)	17 (50%)	0.8 (0.3–2.1)
Laxatives	23 (51%)	7 (21%)	4.4 (1.5–12.8)
<b>Lifestyle factors</b>			
Smoking ≤ 15 cigarettes/day**	5 (11%)	7 (22%)	1.0 (0.3–4.1)
Smoking > 15 cigarettes/day**	26 (58%)	8 (24%)	2.3 (1.2–4.4)
Any use of alcohol	5 (11%)	3 (9%)	1.3 (0.3–4.9)
Use of coffee >3 cups a day***	23 (51%)	18 (53%)	0.9 (0.6–1.4)

\* Patients using both low- and high-potency antipsychotic drugs were excluded from these groups.

\*\* In two patients the exact amount they smoked was not established.

\*\*\* In one patient the exact amount of coffee was not established.

Furthermore, we found that use of anti-Parkinson drugs was associated with a decreased risk of ample dyspeptic complaints. Anti-Parkinson drugs in this population were prescribed mainly to patients with extrapyramidal side effects of the high-potency APDs. Therefore, it seems most likely that this finding is caused by the relation we found between dyspepsia and high-potency APDs. Regarding the lifestyle factors investigated in this study, we found that patients smoking more than 15 cigarettes a day were more than two times as likely to have ample dyspeptic complaints. This is in line with the findings of most studies [1,11]. The significant positive odds ratios for laxatives and constipation with ample expression of dyspepsia complaints suggest that there is probably a problem not only in the upper gastrointestinal system but also in the gastrointestinal system as a whole.

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