

ANTICHOLINERGIC DRUG USE IN CLINICAL SETTINGS IN THE SECOND-GENERATION ANTIPSYCHOTIC ERA

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INTRODUCTION

The introduction of second generation antipsychotics (SGAs) to clinical practice have resulted in changes in the pattern of prescription in psychotic conditions. There is a lower risk of extrapyramidal symptoms (EPS) with SGAs as compared to conventional antipsychotics. As such, there has been a lesser need for adjunctive anticholinergic prescription with this newer class of agents in controlled SGA treatment trials. Since anticholinergic medication is associated with many adverse effects on its own (e.g. cognitive compromise, parasympathetic effects)

and EPS and anticholinergics have been associated with poorer outcome, SGAs have been considered a major advance in reducing anticholinergic prescription and its associated morbidity. However, only limited data exist about the pattern of use of anticholinergic medication in psychiatric patients *naturalistically* prescribed SGAs. This issue is relevant, since some recent studies have shown that the proportion of treated SGA patients manifesting extrapyramidal symptoms is not negligible.

AIM

To study the frequency of anticholinergic medication prescription in patients being naturalistically treated with second generation antipsychotics in diverse ambulatory clinical settings of the Zucker-Hillside Hospital, North Shore - Long Island Jewish Health System.

HYPOTHESES

1. Anticholinergic medication is rarely used in second generation antipsychotic-treated patients.
2. Patients with a diagnosis of schizophrenia are at higher risk of anticholinergic prescription.

METHODS

Data were obtained from the computerized analysis of the electronic health records of all patients who were cross-sectionally registered (September 2008) in eight ambulatory programs of Zucker Hillside Hospital.

We identified 5114 patients (Table I) and characterized according to age, gender, antipsychotic medication (conventional, second generation or both), anticholinergic prescription (yes/no) and psychiatric diagnosis and studied in those patients treated with antipsychotics (table II). Young and adult (13-60y) patients under SGA treatment diagnosed of DSM 295. and 296. were compared in terms of their anticholinergic use (Table III).

Table I. Characteristics of the sample.

N	Gender male/female	Age \bar{x} (sd)	N (%) under Antipsychotic	N (%) under Anticholinergic
5114	2375/2739	45,8 (22,72)	2348 (45.9)	320 (6.25)

Table III. Anticholinergic use among young and adult (13-60y) patients under SGA treatment diagnosed of Schizophrenia spectrum disorders DSM 295. or Affective disorders 296. and anticholinergic use comparison (n= 1206).

	No Anticholinergic	Anticholinergic	P value
295.			
male/female	361/229	59/36	ns
age \bar{x}	41.41	41.19	ns
296.			
male/female	223/278	10/10	ns
age \bar{x}	41.30	36.90	ns (0.054)
Diagnostic			
295.	590	95	
296.	501	20	.000

Table II. Anticholinergic use among patients under antipsychotic treatment (n= 2348).

	No Anticholinergic	Anticholinergic	p value
Age group %			
13	69 (98.6%)	1 (1.4%)	
13-60	1371 (90.6%)	143 (9.4%)	.000
60	417 (98.6%)	6 (1.4%)	
Sex			
male	990 (84.4%)	183 (15.6%)	
female	1042 (88.7%)	133 (11.3%)	.002
Antipsychotic			
conventional	97 (53.9%)	83 (46.1%)	
SGA	1857 (92.5%)	150 (7.5%)	.000
both	78 (48.4%)	83 (51.6%)	
Diagnostic DSM			
290-294	138 (100%)	0 (0%)	
295-298	1452 (91.2%)	140 (8.8%)	.000
299+V	234 (97.1%)	7 (2.9%)	

SGA: Second generation antipsychotic.

RESULTS

1. Seven percent of SGA-treated patients and 46% of conventional agent-treated patients received adjunctive anticholinergic medication.
2. Amongst patients treated with *both* a SGA *and* a conventional antipsychotic, 51% received adjunctive anticholinergic medication.
3. Amongst patients treated with SGAs, patients with a schizophrenia or schizophrenia-spectrum diagnosis are prescribed anticholinergics more frequently than bipolar patients of similar ages.
4. Age and gender distribution were not significantly different in any group (conventional antipsychotic with or without anticholinergic; SGA with or without anticholinergic; combined SGA and convention with or without anticholinergic).
5. Few patients in either the pre-adolescent or older age groups are prescribed anticholinergics.

CONCLUSIONS

1. Anticholinergic medication is regularly prescribed in patients treated with SGAs, albeit at a much lower frequency rate than in patients treated with conventional antipsychotics. These data validate the lower EPS burden associated with SGAs.
2. Bipolar patients treated with SGAs require adjunctive anticholinergics less frequently than schizophrenia-spectrum patients. Further data analysis will ascertain whether this represents a SGA dose/diagnosis relationship or allows speculation about a neurobiological distinction (e.g. greater susceptibility of schizophrenia than bipolar patients to EPS).
3. That prescription of anticholinergic medication is restricted to the young adult-adult group appears to reflect psychotropic prescribing conservatism in the much younger (preadolescent) and older (geriatric) age groups.

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