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BRIEF REPORT: Antipsychotic Prescription Patterns in Adults with Developmental Disability with and without Psychotic Disorder

Authors

Mohamad Abbass,[1]
Yona Lunsky[2,3]

[1] Department of Human Biology, University of Toronto, Toronto, ON

[2] Centre for Addiction and Mental Health, Toronto, ON

[3] Department of Psychiatry, University of Toronto, Toronto, ON

Correspondence

yona_lunsky@camh.net

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Abstract

Individuals with developmental disabilities are commonly overprescribed antipsychotic medication. Although it is advised that antipsychotics should be prescribed primarily for psychotic disorders, they are commonly prescribed for other reasons, including behavioural issues. This study aimed to characterize individuals prescribed antipsychotics with no psychosis by comparing them to individuals prescribed antipsychotics with psychosis, presumably medicated for that reason. Overall, the two groups were similar demographically and clinically. However, individuals with no psychosis were more likely to be diagnosed with a mood disorder, and were reported to have higher ratings of hyperactivity and noncompliance and lower ratings of psychosis.

Individuals with developmental disabilities (DD) are frequently overprescribed psychotropic medication, particularly antipsychotics (Matson & Neal, 2009). The recently published Canadian primary care guidelines recognize this, and advise that antipsychotics should only be prescribed for psychotic disorders, and should not be considered a routine treatment for behavioural issues (Sullivan et al., 2011). These guidelines were influenced by a recent randomized controlled trial, which showed that antipsychotics (typical or atypical) were no more effective than a placebo at combating aggression (Tyrer et al., 2008). Despite these findings, a number of studies have described the practice of prescribing antipsychotics to adults with DD in the absence of psychotic disorder diagnoses (see Matson & Neal, 2009 for review). Unnecessary prescription of antipsychotics is problematic due to common side effects such as dyskinesia, akathisia, weight gain, and cardiovascular issues (Matson, Tessa, & Jill, 2010). This practice may be due in part to physicians having limited knowledge about the DD population (Phillips, Morrison, & Davis, 2004). Alternatively, this practice may be because physicians are treating other psychiatric disorders for which antipsychotics have been recommended. Off label use of antipsychotics has been suggested for certain mood disorders (Schwartz & Stahl, 2011), as well as autism (Posey, Stigler, Erickson, & McDougle, 2008).

It is important to understand more about the individuals prescribed antipsychotics in the absence of a psychotic disorder diagnosis. Two studies found that individuals prescribed antipsychotics were more likely to have challenging behaviours, mental health diagnoses, among other factors (Molyneux, Emerson, & Caine, 1999; Robertson et al., 2000). However, neither study focussed on people without psychot-

ic disorders specifically. This exploratory study aims to describe these individuals demographically and clinically, by comparing them to individuals prescribed antipsychotics who have a psychotic disorder diagnosis. Differences between the two groups may provide some insights into what leads to this prescribing practice.

Method

Participants

The sample consisted of 192 outpatients (119 males and 73 females) admitted to a specialized outpatient service for individuals with DD and mental health concerns between 2005 and 2010. Only those individuals who were prescribed antipsychotic medication at the time of referral were included in this sample. Of the 192 people, 71 had a diagnosis of psychotic disorder, and 121 did not have a psychotic disorder diagnosis.

Measures

The Aberrant Behaviour Checklist (ABC; Aman, Singh, Steward, & Felid, 1985) is an informant based measure of behaviour used with adults with DD, originally developed to assess treatment effects on behaviour. It consists of 58 items, organized into five subscales: Irritability, Agitation and Crying; Lethargy and Social Withdrawal; Stereotypic Behaviour; Hyperactivity and Noncompliance; Inappropriate Speech. Ratings for each item range from 0 (not a problem at all) to 3 (the problem is severe in degree).

The Reiss Screen for Maladaptive Behavior (RSMB; Reiss, 1988) is also an informant based measure used to identify mental health symptoms in individuals with DD. It consists of 38 items, with eight sub-scales and a 26 item total score. The subscales are: Aggressive Behaviour; Autism; Psychosis; Paranoia; Depression-Behavioural Signs; Depression-Physical Signs; Dependent Personality Disorder; and Avoidant Disorder. Each item is rated on a three point scale (i.e., no problem, problem or major problem). Depression-Physical Signs, Dependent Personality Disorder, and Avoidant Disorder subscales were not investigated in this study.

Procedure

A retrospective chart review of 192 outpatients prescribed antipsychotics was conducted to obtain demographic and clinical information, including scores on the ABC and RSMB. Medications and any relevant diagnoses were recorded in the patients' clinical charts at the time of intake. ABC and RSMB were also completed at the time of intake by the patients' caregivers. When multiple caregivers completed the RSMB or ABC, the mean score was computed and used for further analysis. Outpatients were sorted into two groups based on the presence of a psychotic disorder diagnosis, and were compared in terms of age, gender, additional psychiatric disorder diagnoses, and symptom profiles (based on the ABC and RSMB). ABC data was available for 80 individuals, while RSMB data was available for 82 individuals. Individuals with and without RSMB or ABC information available did not differ from each other with regards to gender or age.

Chi-square tests, or two-sample two-tailed *t* tests assuming unequal variances were conducted where appropriate. P-values lower than 0.05 were considered to be significant. This study received ethics approval from the hospital's Research Ethics Board.

Results

Table 1 shows the demographic and clinical profiles of patients with DD prescribed antipsychotics with and without psychosis.

Of the 192 outpatients prescribed antipsychotics, 121 (63%) did not have a diagnosis of psychotic disorder. The mean age for these individuals was 33.5 (*SD* = 13.2). Seventy-six (63%) of these individuals were male. The two groups did not differ from one another with respect to demographics.

In terms of additional psychiatric diagnoses, 34 (28%) individuals without a psychotic disorder diagnosis had a mood disorder diagnosis, 25 (21%) had a diagnosis of autism spectrum disorder (ASD), and 20 (17%) had an anxiety disorder diagnosis. The remaining 46 people (38%) did not have any psychiatric diagnoses recorded. Rates of other diagnoses were similar between

the two groups, with one exception: individuals with no psychosis were significantly more likely to have a mood disorder diagnosis than those with psychosis $\chi^2(1, n = 192) = 6.12, p < 0.05$.

In terms of presenting symptoms, a clinical cut-off of 9 was used with the RMSB 26-item total score to indicate that further screening for mental health issues is warranted. Of the 57 individuals with no psychotic disorder diagnosis who had RMSB data available, 55 (96%) had scores which exceeded this clinical cut-off. In comparison, of the 25 individuals with a psychotic disorder diagnosis and RMSB data available, 21 (85%) met the cut-off. The 26-item total scores did not differ significantly between the two groups.

Table 1. Demographic and Clinical Profiles of Individuals Prescribed Antipsychotics with and without Psychosis

	Psychosis	*No Psychosis*	*Test*	*P-Value*
Gender: n (%)			$\chi^2 = 0.10$	0.76
Male	43 (60.6)	76 (62.8)		
Female	28 (39.4)	45 (37.2)		
Age Group: n (%)			$\chi^2 = 4.36$	0.23
16–25	20 (28.2)	48 (39.7)		
26–35	21 (29.6)	22 (18.2)		
36–49	21 (29.6)	34 (28.1)		
50–66	9 (12.7)	17 (14.0)		
Diagnoses: n (%)				
Anxiety Disorder	9 (12.7)	20 (16.5)	$\chi^2 = 0.52$	0.47
Autism Spectrum Disorder	13 (18.3)	25 (20.7)	$\chi^2 = 0.16$	0.69
Mood Disorder	9 (12.7)	34 (28.1)	$\chi^2 = 6.12$	0.01
Personality Disorder	5 (7.0)	9 (7.4)	$\chi^2 = 0.01$	0.92
Other Axis I Disorders	10 (14.1)	16 (13.2)	$\chi^2 = 0.03$	0.87
No psychiatric diagnosis	–	46 (38.0)	–	–
ABC Subscales: mean (SD)				
Irritability, Agitation and Crying	15.2 (9.4)	19.3 (10.0)	$t = 1.76$	0.09
Lethargy and Social Withdrawal	10.8 (8.9)	13.3 (7.9)	$t = 1.22$	0.23
Stereotypic Behavior	3.3 (4.0)	5.1 (4.9)	$t = 1.73$	0.09
Hyperactivity and Noncompliance	13.4 (7.9)	18 (10.5)	$t = 2.17$	0.03
Inappropriate Speech	3.6 (2.7)	3.8 (3.5)	$t = 0.38$	0.70
RSMB Subscales: mean (SD)				
Aggressive Behaviour	5.2 (3.1)	5.5 (2.6)	$t = 0.36$	0.72
Autism	2.0 (2.2)	2.7 (1.8)	$t = 1.45$	0.16
Psychosis	4.4 (2.8)	3.0 (2.0)	$t = 2.20$	0.03
Paranoia	3.9 (2.3)	3.0 (2.2)	$t = 1.77$	0.08
Depression (Behavioural Signs)	3.2 (2.1)	3.2 (2.2)	$t = 0.01$	0.92
26-Item Total Score	20.1 (9.6)	19.3 (7.7)	$t = 0.37$	0.71

In comparing individuals prescribed antipsychotics with and without a psychotic disorder diagnosis, only two significant differences were observed. On the ABC, individuals without psychosis had significantly higher "Hyperactivity and Noncompliance" subscores when compared to those with psychosis $t(80) = 2.17$, $p < 0.05$. On the RSMB, patients with a psychotic disorder diagnosis upon intake had significantly higher "Psychosis" sub-scale scores when compared to those with no psychotic disorder diagnosis upon intake $t(82) = 2.20$, $p < 0.05$.

Discussion

This study examined the demographic and clinical profiles of individuals with DD prescribed antipsychotics without a psychotic disorder diagnosis in contrast to those with a psychotic disorder, and found that overall there were few differences between them. Demographically, similar rates of men to women were found in the two groups, and their mean age was similar. Mood disorder diagnoses were more common in those without psychotic disorder diagnoses, but otherwise the two groups had similar rates of other disorders. Given that many atypical antipsychotics are approved for the treatment of depression and bipolar disorder (Schwartz & Stahl, 2011), it is possible that individuals without a psychotic disorder are being medicated with antipsychotics for these conditions. This would also concur with a study by Molyneux and colleagues (1999), which demonstrated that documentation of a mental health disorder was a predictor for antipsychotic use.

With regards to symptom severity, perhaps the most important finding was the lack of difference in overall severity of psychopathology between the two groups. This suggests that individuals prescribed antipsychotics without a psychotic disorder have as many mental health concerns as those with a psychotic disorder diagnosis, but no additional concerns. Individuals without a psychotic disorder diagnosis did not exhibit as much psychotic behaviour on the RSMB as those with a psychotic disorder, consistent with their diagnosis.

ABC scores were also similar between the two groups with one exception: those prescribed antipsychotic medication in the absence of a psychotic disorder had higher scores on Hyperactivity and Non-compliance scales. This begs the question of whether some individuals are treated with antipsychotic medication because of the challenges their behaviours pose to others. If so, this would agree with the finding of Molyneux et al. (1999) and Robertson et al. (2000) that challenging behaviour is a predictor for antipsychotic use. However, since mood disorders are more likely in individuals with no psychosis, this higher score may reflect certain symptoms of mood disorder symptoms, namely manic or hypomanic behaviour.

This study is limited in that it cannot determine whether individuals were prescribed their medications from general practitioners, or community psychiatrists via consultations. Given that this is a chart review study, it is possible that certain information, such as prescribed medications or psychiatric diagnoses, may be incomplete or missing.

Conclusion

A disconnect is found between prescription practices and studies regarding antipsychotic use in individuals with DD. This study attempted to investigate individuals prescribed antipsychotics with no psychosis, by comparing them to individuals with psychosis, presumably medicated for that reason. However, the two populations were found to be very similar to each other. The few significant differences hint towards antipsychotic use for managing mood disorders, and perhaps challenging behaviour when not intended for treating psychosis. Further research is warranted into the decision making process of prescribing antipsychotics to this vulnerable population in the absence of a psychotic disorder diagnosis. In addition, it would be worthwhile to examine whether prescribing practices change in the future with the new Canadian primary care guidelines (Sullivan et al., 2011).

Key Messages from This Article

People with disabilities: You should ask your doctor about the medication you are being given, and why you are given that medication.

Professionals: Individuals with DD who do not have psychosis and are medicated with antipsychotics are more often also diagnosed with a mood disorder and are reported to have higher hyperactivity and noncompliance. It is important to follow guidelines set for antipsychotic medication in this population.

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