European Neuropsychopharmacology (2017) 27, 1064–1076

www.elsevier.com/locate/euroneuro

International trends in antipsychotic use: A study in 16 countries, 2005-2014

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http://dx.doi.org/10.1016/j.euroneuro.2017.07.001

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Received 19 May 2017; accepted 5 July 2017

KEYWORDS
Adult;
Aged;
Antipsychotic agents;
Internationality;
Minors;
Pharmacoepidemiology

Abstract
The objective of this study was to assess international trends in antipsychotic use, using a standardised methodology. A repeated cross-sectional design was applied to data extracts from the years 2005 to 2014 from 16 countries worldwide. During the study period, the overall prevalence of antipsychotic use increased in 10 of the 16 studied countries. In 2014, the overall prevalence of antipsychotic use was highest in Taiwan (78.2/1000 persons), and lowest in Colombia (3.2/1000). In children and adolescents (0–19 years), antipsychotic use ranged from 0.5/1000 (Lithuania) to 30.8/1000 (Taiwan). In adults (20–64 years), the range was 2.8/1000 (Colombia) to 78.9/1000 (publicly insured US population), and in older adults (65+ years), antipsychotic use ranged from 19.0/1000 (Colombia) to 149.0/1000 (Taiwan). Atypical antipsychotic use increased in all populations (range of atypical/typical ratio: 0.7 (Taiwan) to 6.1 (New Zealand, Australia)). Quetiapine, risperidone, and olanzapine were most frequently prescribed. Prevalence and patterns of antipsychotic use varied markedly between countries. In the majority of populations, antipsychotic utilisation and especially the use of atypical antipsychotics increased over time. The high rates of antipsychotic prescriptions in older adults and in youths in some countries merit further investigation and systematic pharmacoepidemiologic monitoring.

1. Introduction

The term “antipsychotics” denotes a heterogeneous group of pharmaceutical substances with antipsychotic and tranquilising properties. Traditionally, antipsychotics have been classified into typical antipsychotics (syn. “first generation antipsychotics”) versus atypical antipsychotics (syn. “second generation antipsychotics”), according to the extent of perceived extrapyramidal adverse effects (Leucht et al., 2013).

The indications for treatment with antipsychotics are numerous, including e.g. schizophrenia spectrum disorder, bipolar disorder, tic disorder, agitation, and sleeping problems. In recent years, antipsychotics have also been increasingly used in the treatment of patients with anxiety disorders, attention-deficit/hyperactivity disorder (ADHD), major depression, personality disorders, disruptive disorders, and dementia (Bachmann et al., 2014; Comer et al., 2011; Reus et al., 2016; Toteja et al., 2014).

Adverse effect profiles of typical and atypical antipsychotics differ, with atypical antipsychotics regularly having more pronounced metabolic adverse effects, and typical antipsychotics often carrying more extrapyramidal adverse effects (e.g. dyskinesia) (Correll et al., 2015; Leucht et al., 2013; Vancampfort et al., 2015). Despite only some atypical antipsychotics being more effective for the treatment of psychosis than typical antipsychotics (Leucht et al., 2013, 2009), atypical antipsychotics are often accredited with higher efficacy than typical antipsychotics (Jauhar et al., 2012).

In addition to potential adverse effects, several other issues may arise with the use of antipsychotics. Firstly, long-term safety and/or effectiveness data are lacking, especially for children and elderly people (Nesvag et al., 2016; Persico et al., 2015; Schröder et al., 2017; Seida et al., 2012). Secondly, antipsychotics are often prescribed for other disorders than their licensed indication, leading to off-label use rates of sometimes up to 93% (Carton et al., 2015). Thirdly, a significant portion of patients of all ages is treated with antipsychotic polypharmacy (≥ 2 concurrent antipsychotic substances), which can lead to increased rates of adverse effects (Campos Mendes et al., 2016; Fontanella