EDITORIAL

Psychotropic Medication in Children and Adolescents

Gerd Lehmkuhl, Ingrid Schubert

Editorial to accompany the article "Antipsychotic Prescription in Children and Adolescents" by Christian Bachmann et al. in this issue of *Deutsches Ärzteblatt International*

The volume of treatment for mental disorders in children and adolescents has risen markedly in Germany in recent years. This places additional demands not only on child and adolescent psychiatrists, but also on pediatricians and general practitioners, particularly when treatment with psychotropic drugs is at issue (1).

Thanks to the German Health Interview and Examination Survey for Children and Adolescents (KiGGS), which was carried out from 2003 to 2006, we have relatively up-to-date information on mental health, medication use, and utilization of medical services in this age group (2). Only about half of all children and adolescents with a mental disorder of some kind receive treatment, even though such disorders markedly impair quality of life. Moreover, even when they do find their way to a doctor's office or hospital, appropriate treatment is by no means assured: only about 30% of children and adolescents who consult a physician because of a mental disorder receive child-psychiatric and psychotherapeutic help, as an insurance-based epidemiologic study has revealed (3). The KiGGS data on current medication use document the major therapeutic importance of this topic: drugs affecting the nervous system were taken by 7.2% of survey participants, landing in fourth place overall among all classes of drugs (4).

Atypical neuroleptic drugs in child and adolescent psychiatry

In their article, Bachmann and coauthors (5) point out the general problems that are associated with antipsychotic prescriptions. Only a small number of atypical neuroleptics have been approved for use in children and adolescents, and, therefore, drugs in this class are often given off label. Furthermore, the spectrum of approved indications is restricted to schizophrenic, delusional, and bipolar disorders in adolescents and to aggressive, impulsive behavioral reactions and self-injury in the context of mental disability and/or autism spectrum disorders in children (6).

There is no clear answer to the question why the frequency of neuroleptic prescriptions, perhaps surprisingly, continues to increase. Bachmann and coauthors name a few possible reasons: an altered care situation, the intense marketing of atypical neuroleptic drugs, and an increasing preference for drug treatment over psychotherapy. The authors point to a meta-analysis to

document their view that the real prevalence of mental disorders children and adolescents is not, in fact, rising. Nor do they find an explanation in changing recommendations by the medical specialty societies in their pertinent guidelines.

Although the available data on the matter are not yet definitive, it does seem to be the case that, surprisingly, antipsychotic drugs are being prescribed more frequently than before not just in Germany, but in many other Western countries as well. For example, in England, Rani et al. (7) found a doubling of antipsychotic prescriptions from 1992 to 2005, with the greatest rise among children aged 7 to 12. They attributed this to a widening of the spectrum of indications, changes in diagnostic criteria, and a general trend favoring more treatment with drugs. Moreover, they documented an increasing replacement of the classic neuroleptic drugs by atypical ones.

In our own German study (8), we found a considerable increase in neuroleptic prescriptions from 2000 to 2006; the rise was, however, somewhat less marked than in England. Over this period, prescriptions of atypical antipsychotic drugs increased, while those of classical antipsychotic drugs decreased. In particular, 15- to 19-year-olds, and mainly the boys among them, were given more neuroleptic drugs in 2006 than in 2000. As there was no interval increase in the prevalence of schizophrenic spectrum disorders, other indications must have become more common to account for this rise. Aggressive and impulsive behavioral disturbances seem to have been the major factors here (8).

Tyrer et al., in a study of the effects of neuroleptic drugs on aggressive behavior in patients with mental disability, concluded critically that antipsychotic drugs should no longer be routinely given to such patients (9). No significant improvement was seen in comparison to placebo treatment, while there were many adverse effects. As Matson and Wilkins point out (10), the importance of this study is that it casts doubt on what had been a generally accepted indication for neuroleptic agents in the treatment of oppositional-aggressive and impulsive behavior, instead restricting the indication to a few special and particularly severe types.

A trend in the opposite direction can now be observed, however, in which the field of application of neuroleptic drugs precisely for the treatment of aggressive disorders is being expanded, rather than

Department of Child and Adolescent Psychiatry and Psychotherapy, University of Cologne: Prof. Dr. med. Lehmkuhl, Dr. rer. soc. Schubert

contracted, while behavioral therapeutic interventions that have been empirically shown to be superior (but require more work to implement) are being neglected. This fact underscores yet again the point made by Bachmann et al. (5) that, in view of the discrepancy between the scientific evidence on the one hand and current prescribing practices on the other, there is a pressing need for further studies on the effects of antipsychotic drugs in children and adolescents.

The importance of routine insurance data for the health-care system

In their longitudinal study, Bachmann et al. (5) analyze data from a German statutory health-insurance company concerning the treatment of children and adolescents with antipsychotic drugs all across Germany over a period of eight years. The advantages of this method of investigation, such as the large, unselected study population, must be weighed against certain disadvantages, such as the lack of any opportunity to check on the diagnoses and the absence of important information on the duration and severity of illness and on social stress. Yet, despite these disadvantages, studies based on data from a single statutory health insurance carrier are extraordinarily valuable: they can readily make developments and trends in diagnosis and treatment clear to us that would otherwise be much more difficult to detect. Changes in prescription frequencies over time can be registered, as can changes in the frequency of off-label treatment. Routine insurance data enable studies to be performed without such selection biases as can occur in practice- or hospital-based studies, and without recollection bias or subtotal response rates. Sex- and age-specific effects related to drugs become evident, as do potential systematic differences in care from one region (city, federal state) to another, or changes over time in the average number of daily doses prescribed per recipient (11).

The article by Bachmann et al. (5) yields important conclusions and spurs us on to a critical re-evaluation of the current pattern of treatment with antipsychotic drugs: over a study period of eight years, it was found that atypical antipsychotic drugs above all are being increasingly used off label to treat aggressive-impulsive disorders, despite the lack of persuasive scientific evidence for this practice. This indication is not found in the relevant guidelines, and most of the prescriptions were not written by child and adolescent psychiatrists. (It remains unclear whether antipsychotic drugs were used as one component of a multimodal approach). The most commonly prescribed antipsychotic drug, risperidone, was given in 61.5% of cases to patients with attention-deficit/hyperactivity disorder (ADHD), and in 35.5% of cases to patients with social conduct disorders. These findings underscore the importance of

the discussion that has now been initiated by Bachmann et al. on the appropriate treatment of children and adolescents with aggressive-impulsive disorders.

Conflict of interest statement

Prof. Lehmkuhl has served as a paid consultant for Lilly (Strattera advisory board).

Dr. Schubert declares that she has no conflict of interest.

Translated from the original German by Ethan Taub, M.D.

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Corresponding author

Prof. Dr. med. Gerd Lehmkuhl
Klinik und Poliklinik für Psychiatrie und Psychotherapie
des Kindes- und Jugendalters
Uniklinik Köln
Robert-Koch-Str. 10
50931 Cologne, Germany
gerd.lehmkuhl@uk-koeln.de

Cite this as:

Lehmkuhl G, Schubert I: Psychotropic medication in children and adolescents. Dtsch Arztebl Int 2014; 111(3): 23–24. DOI: 10.3238/arztebl.2014.0023