CORRESPONDENCE

Psychopharmacological Treatment in Older People

Avoiding Drug Interactions and Polypharmacy

by Prof. Dr. med. Torsten Kratz and Prof. Dr. med. Albert Diefenbacher in issue 29–30/2019

Avoiding Polypharmacy

I would like to thank the authors for addressing this important topic (1). The focus of the article is on drug interactions. Numerous potential interactions are listed suggesting to avoid the drugs involved. It is known from international literature that polypharmacy (of up to five or more long-term medications) entails an enormous number of potential interactions. The category of clinically relevant interactions refers to cases for which the combination must be avoided, a dose adjustment is required, or additional monitoring is necessary—for example, by measuring the drug concentrations. Interactions that lead to manifest damage in the form of adverse drug events, or to an absence of the expected therapeutic effects, are of particular interest. Out of a large volume of data from spontaneous adverse event reports Leone et al. (2) have filtered and quantified those that can be traced back to drug interactions. An empirically supported overview of clinically relevant drug interactions focusing on psychotropic drugs would be helpful.

Avoiding interactions is not straightforward. Accordingly, various checklists and tools are recommended for support. However, their use for making day-to-day prescriptions is only practical if they are integrated into an electronic clinical decision support system. In addition to alerts to interactions (which are graded according to relevance), this system should include for instance indications of dosage errors and necessary dose adjustments in the case of renal insufficiency (3).

In Reply:

We would like to thank Dr. Burkhardt for his important suggestions for polypharmacy. In particular, the information on the problem of combining several antidepressants or antipsychotics shows that pharmacotherapy in older adults requires a critical benefit-risk assessment. In our article (1), we therefore also refer to the Beers Criteria. The Beers list recommends that no more than three CNS-active drugs be used concurrently in older adults (2).

Nonetheless, psychopharmacological treatment for older adults is still important and necessary. Knowledge of specific pharmacodynamics and kinetics in older adults can help to avoid drug interactions and polypharmacy. Older patients are particularly at risk of

The goal of avoiding polypharmacy is briefly mentioned. Due to the specialty of the authors, I had hoped for an appraisal of polypharmacological treatment of older patients, which is often used: in addition to concurrent use of antipsychotics, antidepressants, and / or sedatives, combinations of several antidepressants (such as venlafaxine in the morning, mirtazapine in the evening) or antipsychotics (for example, classic and atypical) are often prescribed in practices. The 2019 version of the Beers Criteria reinforces and accentuates the warning about concurrent use of three or more drugs that act on the CNS in older adults (4). DOI: 10.3238/arztebl.2020.0039a

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Dr. med. Rainer Burkhardt
Oldenburg, Germany
rainer.burkhardt@ewetel.net

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Dr. Burkhardt has received honoraria for authorship of publications related to the subject from MedLearning AG, Munich.

polypharmacy. This can be due to not only multimorbidity but also to an uncritical use of all guidelines for various underlying diseases (3). With an increasing number of drugs comes an increased risk of drug interactions and adverse drug reactions (ADRs). The pharmacokinetics and pharmacodynamics that change with age contribute to an additional increase in risk (4).

We would like to point out that there are numerous tools and instruments available for clinical practice that allow practical and sensible drug monitoring and that can identify the risks for possible interactions and ADRs at an early stage, to allow these to be avoided. In addition to drug monitoring (which should include blood level monitoring as well as dose adjustment for renal insufficiency and QTc prolongation), interaction

platforms that used full-time in daily clinical practice can help to avoid interactions and polypharmacy. Knowledge of pharmacological specifics for old age can be obtained quickly and is less complicated than expected to apply in routine clinical practice, and this can not only improve the quality of life of the affected elderly patients but also help to avoid polypharmacy and its risks.

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On behalf of the authors

Prof. Dr. med. Torsten Kratz

Abteilung für Psychiatrie,
Psychotherapie und Psychosomatik
Funktionsbereich Gerontopsychiatrie und -psychotherapie
Königin-Elisabeth-Herzberge Krankenhaus, Berlin
T.Kratz@keh-berlin.de

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CLINICAL SNAPSHOT

Swiss Cheese Defect of the Ventricular Septum

- a) Contrast-enhanced computed tomography:** transverse four-chamber view of the heart at the level of the mitral valve cusps. Tubular defects in the ventricular septum (arrow). Faint enhancement of contrast at the apex of the right ventricle as sign of left–right shunt.
- b) Secondary reconstruction:** short-axis section with demarcated passage of contrast medium (asterisk) from left to right ventricle (arrow).

A 14-year-old boy presented to our hospital with intermittent angina pectoris symptoms on exercise. Echocardiography had already been performed. We carried out cardiac computed tomography (CT) to exclude anomalies of the heart and coronary vessels. This examination showed multiple small, tubular defects in the ventricular septum (arrows) with passage of contrast medium from the left to the right ventricle, corresponding to a ventriculo-septal defect (VSD) with functional left–right shunt (asterisk).

VSDs can be divided into membranous defects near the tricuspid and aortic valves, perimembranous defects, and muscular defects. Muscular defects may be single or multiple, are typically of midventricu-

lar to apical location, and are also referred to as “Swiss cheese defects” owing to their appearance. The same term is used, albeit rarely, for multifocal atrial defects. The principal differential diagnosis, septal diverticula, was ruled out in this case by the presence of the left–right shunt (asterisk). In accordance with the prevailing clinical practice guidelines, we imposed no measures to prevent endocarditis. Because of the high likelihood of spontaneous closure at this young age, we restricted ourselves to clinical and cardiological follow-up.

Dr. med. Christopher Kloth, MD, Dr. med. Florian Sagmeister, MD, Dr. med. Horst Brunner, MD, Klinik für Diagnostische und interventionelle Radiologie, Uniklinikum Ulm, christopher.kloth@uniklinik-ulm.de

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