# CORRESPONDENCE

## Adverse Drug Reactions (ADR) and Emergencies

The Prevalence of Suspected ADR in Four Emergency Departments in Germany

by Dr. med. A. Marlen Schurig, Miriam Böhme, Dr. med. Katja S. Just, Dr. rer. nat. Catharina Scholl, Prof. Dr. med. Harald Dormann, Bettina Plank-Kiegele, Prof. Dr. med. Thomas Seufferlein, PD Dr. med. Ingo Gräff, Prof. Dr. med. Matthias Schwab, and Prof. Dr. med. Julia C. Stingl in issue 15/2018

### Increase in Risk of Acute Confusional State in Dementia Patients

The article (1) successfully links the topic of adverse drug reactions (ADR) with that of emergency hospital admissions. The authors point out that ADR are avoidable, that pertinent knowledge is mostly lacking, and the ADR do not only lead to presentations in emergency departments but also to hospital admissions.

The authors deserve particular thanks for explicitly mentioning that older persons—who are exposed to the risk of polypharmacy to a greater degree—are affected by ADR and that one of the risk factors is treatment for disorders of the nervous system. There are indications in the literature that the risk of ADR is increased when treating patients with cognitive impairments (2). In this context, the development of an acute confusional state in this risk group (3) should be emphasized. Often it is not recognized that the confusional state developed as a result of ADR, and patients are then given additional medication, rather than remedying the ADR.

Our working group has gathered experiences in this setting. As members of the project Drug Safety in Psychiatry (*Arzneimittelsicherheit in der Psychiatrie*, AMSP), we evaluate all ADR that occur every day. A systematic capture of the complete medication and its assessment by means of an interaction check should become the standard approach in patients with a high risk of ADR. In our own work (4) we showed that stringent optimization of medication in this risk group helps avoid an acute confusional state triggered by ADR. A stronger focus on preventing polypharmacy and ADR in patients with cognitive impairments should be given greater importance in routine clinical practice. The present article provides encouragement in that direction.

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### In Reply:

Many thanks for the important discussion point that Professor Kratz emphasizes in his correspondence. From the authors' perspective as well as that of the German Society Interdisciplinary Emergency and Acute Medicine (*Deutsche Gesellschaft interdisziplinäre Notfall- und Akutmedizin*, DGINA) and the geriatric specialty societies (the German Society of Geriatrics, German Society of Gerontology and Geriatrics, Austrian Society for Geriatrics and Gerontology, and Swiss Geriatric Society), this risk constellation is also the focus in emergency departments, and a demand for action has been issued (1). In the setting of a DGINA study of quality indicators for geriatric emergency patients (GeriQ), researchers requested in addition to many other indicators in particular that screening for acute confusional states and structured medication analysis for the above-mentioned vulnerable group of patients become firmly established as early as in the emergency department (1).

Meier et al. showed that psychopharmaceuticals constitute a particular risk and often result in emergency admissions because of ADR (2). As Kratz points out, acute confusional states, but also general deteriorations in health status, electrolyte imbalances, and hemorrhagic complications are among the adverse reactions that have been observed (2). The data held in the database on adverse reactions by the Federal Institute for Drugs and Medical Devices (*Bundesinstitut für Arzneimittel und Medizinprodukte*, BfArM) as part of the rapid notification system support this (3). The measures and educational work that Kratz describes in his publication, and the demand from the GeriQ working group and the named position paper by the geriatric specialty societies should urgently be supported from our working group's perspective. In order to investigate this risk constellation in greater detail, for the purpose of the ongoing collection of cases, the ADRED study (*Studie zur Ursachenanalyse unerwünschter Arzneimittelwirkungen*,

Adverse drug reactions [ADR] leading to emergency department [ED] visits), which analyses the causes of adverse drug effects, has received ethics approval to document even severe suspected cases of ADR in patients who are unable to consent, as is obviously the case in cognitively impaired patients in (acute) confusional states. However, the data will have to be anonymized, and no biological specimens must be obtained in such cases.

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The authors of both contributions declare that no conflict of interest exists.

## CLINICAL SNAPSHOT

### Tendon Swelling After Kidney Transplantation

A 64-year-old man with IgA nephropathy who had received a donor kidney a long time ago complained of intermittent swelling of the right Achilles tendon and both wrists since 2011. The extremely painful swellings responded to prednisolone pulse therapy and persisted for 3 to 4 days. The episodes were sporadic at first but had become frequent in the past year, and recently prednisolone had brought about only slight improvement. The patient was known to have gout. Immune suppression was achieved with belatacept/mycophenolate and low-dose prednisolone. Uric acid, AP, Ca/phosphate, and CRP were normal, ANA and anti-CCP were negative. Parathormone was slightly elevated at 97 pg/ml (reference range: 15.6 to 65 ng/ml) with eGFR of 45 ml/min. Sonography revealed demarcated echodense structures, which projection radiography then identified as ectopic calcifications with a distinct depot around the Achilles tendon *(Figure)*. The episodic swelling was therefore most likely an inflammatory soft-tissue reaction to these depots. The calcifications can be explained by hyperparathyroidism against the background of long-term chronic kidney disease and calcium pyrophosphate deposition. PTD-lowering treatment with vitamin D and cinacalcet was initiated.

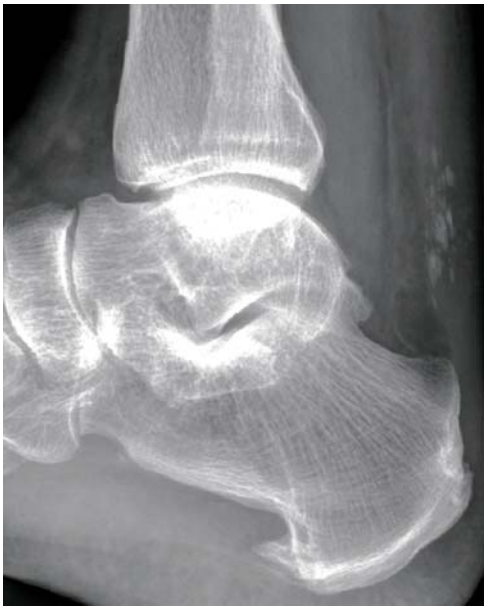

**Figure:** Lateral projection radiography shows the ectopic calcification depot on the Achilles tendon and a plantar heel spur. Diagnostic sonography and nuclear medicine found a hyperplastic parathyroid body (compatible with an adenoma) in the area of the right inferior pole of the thyroid gland.

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