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BMC GERIATRICS

Quality of life and paracetamol in advanced dementia (Q-PID): protocol of a randomised double-blind placebo-controlled crossover trial

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Abstract

Background

No proven effective interventions on quality of life (QoL) are available for persons with dementia in a long-term care facility (LTCF). However, several interventions are effective in diminishing mediators of QoL (i.e. challenging behaviour, depressed mood, sleeping disorders), including pain treatment. Un(der)diagnosed and un(der)treated pain is a serious and frequent problem in persons with dementia. Also, although pain is difficult to assess in this group, the impact on QoL is probably considerable. There is evidence that pain has a negative impact on behaviour, mood, functioning and social participation, and benefit may be derived from use of paracetamol. Therefore, in LTCF residents with advanced dementia, this study aims to evaluate the effect of scheduled pain treatment with paracetamol on QoL, neuropsychiatric symptoms, ADL function, pain, care dependency, and (change in) use of psychotropic and pain medication.

Methods

This randomised, double-blind, placebo-controlled crossover trial will include 95 patients with: 1) age ≥ 65 years, 2) advanced dementia (Reisberg Global Deterioration Scale 5–7), and 3) QUALIDEM score ≤ 70. Exclusion criteria are the regular use of pain treatment, allergies to the study drugs, severe liver insufficiency or disease, use of > 4 units of alcohol/day, weight < 50 kg, and/or concomitant use of flucloxacillin. The two treatment periods of six weeks each (paracetamol and corresponding placebo) will be separated by a washout period of seven days. Primary outcome is effect on QoL (QUALIDEM and DS-DAT) and secondary outcome is effect on neuropsychiatric symptoms, ADL function, pain, care dependency, and (change in) use of psychotropic and pain medication (all compared to baseline).

Discussion

If regular treatment with paracetamol proves to be beneficial for QoL, this could have major implications for daily practice in long-term care. Information from this study may help professionals in their decision making regarding the prescription of pain medication to improve the QoL of persons with dementia and a low QoL.

The trial was registered on the Netherlands Trial Register (NTR6766); Trial registration date: 20th October, 2017.

Disponible en: https://bmcgeriatr.biomedcentral.com/track/pdf/10.1186/s12877-018-0974-1

Unplanned Readmission prevention by Geriatric Emergency Network for Transitional care (URGENT): protocol of a prospective single centre quasi-experimental study

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Abstract

Background

International guidelines recommend adapting the classic emergency department (ED) management model to the needs of older adults in order to ameliorate post-ED outcomes among this vulnerable group. To improve the care for older ED patients and especially prevent unplanned ED readmissions, the URGENT care model was developed.

Methods

The URGENT care model is a nurse-led, comprehensive geriatric assessment based care model in the ED with geriatric follow-up after ED discharge. A prospective single centre quasi-experimental study (sequential design with two cohorts) is used to evaluate its effectiveness on unplanned ED readmission compared to usual ED care. Secondary outcome measures are hospitalization rate, ED length of stay, in-hospital length of stay, higher level of care, functional decline and mortality.

Discussion

URGENT builds on previous research with adaptations tailored to the local context and addresses the needs of older patients in the ED with a special focus on transition of care. Although the selected approaches have been tested in other settings, evidence on this type of innovative care models in the ED setting is inconclusive.

Trial registration

The study protocol is registered retrospectively with ISRCTN (ISRCTN91449949).

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DRUGS AND AGING

Current Methods for the Treatment and Prevention of Drug-Induced Parkinsonism and Tardive Dyskinesia in the Elderly

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Abstract

Drug-induced parkinsonism (DIP) and tardive dyskinesia (TD) are iatrogenic consequences of antidopaminergic drugs. Both are particularly prevalent among the elderly and those with dementia. However, despite their prevalence, these disorders are often overlooked. Both entities share risk factors, physiopathological mechanisms and, to some degree, therapeutic approaches. Withdrawing the causal agent, reducing the dose or switching to a less potent antidopaminergic drug should be the first therapeutic options. Here we review both entities and emerging therapies including the recently approved drugs deutetrabenazine and valbenazine. We discuss relevant aspects for clinical practice such as new diagnostic techniques and the latest advances in the understanding of DIP and TD.

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The Role of Deprescribing in Older Adults with Chronic Kidney Disease

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Abstract

Older adults with chronic kidney disease (CKD) often experience polypharmacy, a recognized predictor of prescribing problems including inappropriately dosed medications, drug–drug and drug–disease interactions, morbidity and mortality. Polypharmacy is also associated with nonadherence, which leads to recurrent hospitalizations and poorer hemodialysis outcomes in CKD patients. Further complicating medication management in this vulnerable population are the physiologic changes that occur with both age and CKD. This guide for pharmacists and prescribers offers considerations in medication evaluation and management among older adults with CKD. Careful prescribing with the aid of tools such as the American Geriatrics Society Beers Criteria can support safe medication use and appropriate prescribing. Polypharmacy may be systematically addressed through ‘deprescribing,’ an evidence-based process that enables identification and elimination of unnecessary or inappropriate medications. Detailed guidance for deprescribing in older adults with CKD has not been published previously. We highlight three specific targets for medication optimization and deprescribing in older adults with CKD: (1) proton pump inhibitors, (2) oral hypoglycemic agents, including newer classes of agents, and (3) statins. These medication classes have been chosen as they represent three of the most commonly prescribed classes of medications in the United States. For each area, we review considerations for medication use in older adults with CKD and provide strategies to avoid, modify, or discontinue these medications when clinically indicated. By utilizing deprescribing techniques, pharmacists are well positioned to help decrease the medication burden in older adults with CKD, thereby potentially reducing the risk of morbidity and mortality associated with polypharmacy.

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Effect of Exercise on Drug-Related Falls Among Persons with Alzheimer's Disease: A Secondary Analysis of the FINALEX Study

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Abstract

Introduction

No study has investigated how exercise modifies the effect of fall-related drugs (FRDs) on falls among people with Alzheimer's disease (AD).

Objective

The aim of this study was to investigate how exercise intervention and FRDs interact with fall risk among patients with AD.

Methods

In the FINALEX trial, community-dwelling persons with AD received either home-based or group-based exercise twice weekly for 1 year (n =129); the control group received normal care (n =65). The number of falls was based on spouses' fall diaries. We examined the incidence rate ratios (IRRs) for falls among both non-users and users of various FRDs (antihypertensives, psychotropics, drugs with anticholinergic properties [DAPs]) in both control and combined intervention groups.

Results

Between the intervention and control groups, there was no difference in the number of falls among those without antihypertensives or psychotropics. In the intervention group taking antihypertensives, the IRR was 0.5 falls/person-year (95% confidence interval [CI] 0.4–0.6), while in the control group, the IRR was 1.5 falls/person-year (95% CI 1.2–1.8) [$p < 0.001$ for group, $p = 0.067$ for medication, $p < 0.001$ for interaction]. Among patients using psychotropics, the intervention group had an IRR of 0.7 falls/person-year (95% CI 0.6–0.9), while the control group had an IRR of 2.0 falls/person-year (95% CI 1.6–2.5) [$p < 0.001$ for group, $p = 0.071$ for medication, $p < 0.001$ for interaction]. There was a significant difference in falls between the intervention and control groups not using DAPs (0.6, 95% CI 0.5–0.7; 1.2, 95% CI 1.0–1.4), and between the intervention and control groups using DAPs (1.1, 95% CI 0.8–1.3; 1.5, 95% CI 1.0–2.1) [$p < 0.001$ for group, $p = 0.014$ for medication, $p = 0.97$ for interaction].

Conclusion

Exercise has the potential to decrease the risk for falls among people with AD using antihypertensives and psychotropics.

Trial Registration

ACTRN12608000037303.

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EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY

Use of benzodiazepines and cardiovascular mortality in a cohort of women aged over 50 years

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Abstract
Purpose

To assess the association between use of benzodiazepines (including the Z-drugs zopiclone and zolpidem) and cardiovascular mortality in women aged over 50 years.

Methods

We used data from the E3N cohort. Data self-reported in biennial questionnaires was matched with drug reimbursement and vital status/causes of death data. In Cox models, exposure to benzodiazepines was fitted using time-varying variables, the reference category being women with no benzodiazepine delivery since January 2004.

Results

Among 85,353 women born 1925–1950 and followed between 2004 and 2011, 506 cardiovascular deaths occurred. Exposure to benzodiazepines was associated with increased cardiovascular mortality when hazard ratios (HRs) were adjusted only for age (HRever use 1.65; 95% CI 1.39, 1.97), but not when further adjusted for antidepressant use (HRever use 1.15; 95% CI 0.94, 1.40), nor in the multivariable model (HRever use 0.93; 95% CI 0.75, 1.16). Exposure to hypnotic benzodiazepines remained associated with increased cardiovascular mortality (HRever use 1.23; 95% CI 1.01, 1.51), but with no consistent trend across duration/dose or time since last use, while exposure to anxiolytic benzodiazepines was not (HRever use 0.83; 95% CI 0.67, 1.02).

Conclusion

In our study, adjustment for antidepressant use strongly attenuated any benzodiazepine–cardiovascular mortality association. Whether the modest association observed with hypnotic benzodiazepines is due to residual confounding deserves further investigation.

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INTERNATIONAL JOURNAL OF CLINICAL PHARMACY

Validation of pharmacist–physician collaboration in psychiatry: ‘the Eichberger-model’

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Abstract

Background
Collaboration between physicians and pharmacists can increase medication safety. In the "Eichberger model" a clinical pharmacist is employed and working full time in a psychiatric hospital. Objective The aim of this study was to determine the expected type of expertise from a clinical pharmacist in psychiatry and the acceptance of the pharmacist's recommendations.
Method
All email requests to the clinical pharmacist from January 1st to April 30th 2015 were screened retrospectively and type of requester and content of request were extracted. Maintenance rate of drug therapy was analyzed by reviewing patient charts 2 weeks after medication prescription.
Results
A total of 147 requests were included. 85 (57.8%) requests were from attending physicians and 62 (42.2%) from residents. 82.1% of all physicians were contacting the clinical pharmacist during the study period. Most common reasons for requests were: appropriate drug selection (31.3%), drug interactions (25.2%), possible adverse drug events (17%) and switching drugs (12.2%). The acceptance rate by the physicians was 100%, with an implementation and maintenance rate of both 98.6%.
Conclusion
We found a high acceptance level of the pharmacist's recommendations. The pharmacist's skills were requested by the majority of physicians and included a in a large variety of specific questions. A pharmacist can play an important role to optimize patient care in collaboration with the physician in psychiatry.

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JAMDA: JOURNAL OF THE AMERICAN MEDICAL DIRECTORS ASSOCIATION

Deprescribing Medications for Chronic Diseases Management in Primary Care Settings: A Systematic Review of Randomized Controlled Trials

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Abstract

Objectives
Perform a systematic review to evaluate the outcome of deprescription compared with standard care. The focus was on chronic medical and mental health conditions managed in primary care.
Design
The databases searched include PubMed, Medline, EMBASE, the Cochrane Library, Scopus, and Web of Science. Each study was assessed for bias with the Cochrane Collaboration tool.
Settings and Participants

This review included outpatient, assisted living, nursing home, and acute care settings (if medications for chronic disease were deprescribed). Subjects were non–terminally ill adults 18 years and older.

Measures

Primary outcome was successful deprescription, defined as a statistically significant reduction in medication burden between the intervention group and the standard care or control group, or when more than 50% of intervention subjects were able to tolerate medication discontinuation compared with control by the end of the study.

Results

Fifty-eight articles met the study criteria. Thirty-three (58%) had a high risk of bias. Studies varied in duration from 4 weeks to 5 years and were conducted across a diverse array of primary health care settings. The most successful interventions used pharmacist-led educational interventions and patient-specific drug recommendations. Cardiovascular drugs including antihypertensives/diuretics and nitrates were the most successfully deprescribed class of drugs. Psychotropic medications and proton-pump inhibitors were the classes most resistant to deprescribing, despite intense intervention.

Conclusions/Implications

Deprescription may be successful and effective in select classes of drugs, with collaboration of clinical pharmacists for patient and provider education, and patient-specific drug recommendations, complemented by close clinical follow-up to detect early signs of exacerbation of chronic diseases. This review also suggests that deprescription may (1) require expensive intensive, ongoing interventions by clinical teams; (2) not lead to expected outcomes such as improved falls rate, cognition, and quality of life, or a lower admission rate; and (3) have unexpected adverse outcomes affecting patients' quality of life.

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Safety of Direct Oral Anticoagulants and Vitamin K Antagonists in Oldest Old Patients: A Prospective Study

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Abstract

Objective

The safety of direct oral anticoagulants (DOACs) in oldest old patients with nonvalvular atrial fibrillation (NVAF) in daily clinical practice has not been systematically assessed. This study examined the safety of DOACs and dicumarol (a vitamin K antagonist) in NVAF geriatric patients.

Design

Prospective study from January 2010 through June 2015, with follow-up through January 2016.

Setting

Geriatric medicine department at a tertiary hospital.

Participants

A total of 554 outpatients, 75 years or older, diagnosed of NVAF and starting oral anticoagulation.

Measurements

The main outcome was bleeding, which was classified into major (including those life-threatening) and nonmajor episodes. Statistical analyses were performed with Cox regression.

Results

A total of 351 patients received DOACs and 193 dicumarol. Patients on DOACs were older, with more frequent comorbidities, mobility limitation and disability in activities of daily living, as well as higher mortality, than those treated with dicumarol. The incidence of any bleeding was 19.2/100 person-years among patients on DOACs and 13.7/100 person-years on dicumarol; corresponding figures for major bleeding were 5.2 for those on DOACs, and 3.3 for those on dicumarol. In crude analyses, hazard ratios (95% confidence intervals) for any bleeding, and for mayor bleeding in patients on DOACs vs dicumarol were 1.60 (1.04-2.44) and 2.22 (0.88-5.59), respectively. Excess risk of bleeding associated with DOACs vs dicumarol disappeared after adjustment for clinical characteristics, so that corresponding figures were 1.19 (0.68-2.08) and 1.01 (0.35-2.93). Results did not vary across subgroups of high-risk patients.

Conclusion

In very old patients with NVAF, the higher risk of bleeding associated with DOACs vs dicumarol could be mostly explained by the worse clinical profile of patients receiving DOACs. Risk of bleeding was rather high, and warrants close clinical monitoring.

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Association Between Potentially Inappropriate Medications and Frailty in the Early Old Age: A Longitudinal Study in the GAZEL Cohort

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Abstract

Objectives

High-risk prescribing can have deleterious effects on the health of older people. This study aimed to assess the role of inappropriate prescribing on changes in frailty status over 3 years of follow-up.

Design, setting

This is a prospective observational study nested in the GAZEL cohort.

Participants

The study sample included 12,405 community-dwelling people aged 58 to 73 in 2012, and followed for 3 years.

Measurement

Polypharmacy and potentially inappropriate medications (PIMs) were assessed from reimbursement data by the French National Health Insurance. Frailty was evaluated each year with the Strawbridge questionnaire. PIMs were defined according to the Laroche list plus additional criteria dealing with inappropriate prolonged use of medications. The relationship between PIMs and changes in frailty status (incident frailty and recovery) was analyzed with Markov multistate modeling.

Results
The prevalence of frailty increased from 14% in 2012 to 17% in 2014, whereas the frequency of PIMs was 29% in 2012 and 23% in 2014. Polypharmacy (5-9 drugs: aHR 1.31, 95% CI 1.14-1.50; and 10 drugs or more: aHR 1.57, 95% CI 1.28-1.92) and potentially inappropriate use of nonsteroidal anti-inflammatory drugs (aHR 1.33, 95% CI 1.04-1.71) were significantly associated with incident frailty, when the presence of at least 1 PIM presented a small association with the risk of becoming frail (aHR 1.15, 95% CI 1.01-1.32).
Conclusions/Implications
This study brings new elements to our knowledge regarding the association between inappropriate prescribing and frailty in older adults, which support research development to alert on inappropriate prescribing and to improve drug prescribing among old people, especially with polypharmacy.

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Frailty and Clinical Outcomes in Heart Failure: A Systematic Review and Meta-analysis

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Abstract

Objective
Frailty is a known risk factor for adverse outcomes after cardiac interventions. However, the extent to which it increases the likelihood of adverse outcomes in heart failure (HF) patients remains unexplored. Therefore, we conducted this systematic review and meta-analysis to quantify the impact of frailty on prognosis in this patient population.
Design
Meta-analysis.
Setting and Participants
PubMed and Embase were searched for studies that investigated the relationship between frailty and outcomes in patients with HF. The search period was from the beginning of the databases through to December 3, 2017.
Measures
A total of 342 and 919 entries were retrieved from PubMed and Embase, respectively. Of these, 20 met our inclusion criteria and were therefore included.
Results
Frailty significantly increased the risk of all-cause mortality [hazard ratio (HR) = 1.59, 95% confidence interval (CI) = 1.39-1.82, P < .0001, I2 = 55%] and hospitalizations (HR = 1.31, 95% CI = 1.21-1.42, P < .0001, I2 = 0%). Moreover, it was predictive of all-cause mortality after ventricular assist device implantation for advanced HF (HR = 1.62, 95% CI = 1.35-1.94, P < .0001, I2 = 2%).
Conclusions/Implications
Frailty is a significant predictor of all-cause mortality and hospital readmissions in HF. Assessment and close monitoring of frailty status of heart failure patients can potentially better guide clinical management of this population.

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