REVISIÓN BIBLIOGRÁFICA MAYO 2018:
preselección de artículos

AGE AND AGEING

Pain assessment in the older population: what the literature says

Pat Schofield Aza Abdulla

Abstract

Assessment of pain in the older adult presents a number of challenges, especially related to communication. This commentary summarises the revised evidence-based Guidelines on the Assessment of Pain in Older Adults which have been developed by the British Pain Society and British Geriatrics Society. The guideline summarises the pain assessment tools that have been developed and validated for use in the older population. Recommendations are made for use of specific tools in older people and in those with dementia. The need for education and training of health care professionals is emphasised. Gaps in the evidence are identified as subjects for future research. It is hoped that the guideline will improve recognition of pain in older people, and help to drive the future research agenda.

Disponible en: https://watermark.silverchair.com/afy018.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAAaQwggGgBgkqhkiG9w0BBwagggGRMIIBjQIBADCCAYYGCSqGSIb3DQEHATAeBglghkgBZQMEAS4wEQQM6nbbKq6_F2TCNTynAgEQgIIBV46ALw267fgdmYkitno7v5n-8DiffAZKOloEWWqsjEQyLfOF1bBOfi7219GsAjFwE3fc-VgQcSrVBZm4xQqUtlzQYAcquaWAHHb_Q6jM5h3YUGAT9mwLolWoJHHZLXst7BU5p5mgMg5-kWmXNbB7mURjxC2kd7oT8MjqwBSGGoElsYTVNauvEJ0nNuhmAlONegDwywWMMgYwW-GnwrdR-ElAXAgg1hqXiWNU58ukdF1WqNU995sCPpdu2qrGlIleaxRPF6YeHovHVsUQwzxzfyHt25iIT7PKRxrcfhbKbjk6CtcL4zTHaq8k92GfSIdVvh8YS28kHsePVtxLX8V8f-vze4rr4djLMC9IaFGHLvCh1GfeowXvGdTWmphK_EQZqjlvC2_GkOerl5W0GWWH9JTZtk0SxFtVWSJbuh4S1yqTQu4LJsI15mLWkaZKGXxBxK70uUiwcgE

Association between pain and the frailty phenotype in older men: longitudinal results from the Concord Health and Ageing in Men Project (CHAMP)

Rodrigo Z Megale Manuela L Ferreira Paulo H Ferreira Vasi Naganathan Robert Cumming Vasant Hirani Louise M Waite Markus J Seibel David G Le Couteur David J Handelsman Fiona M Blyth

Abstract

Objectives

to determine whether pain increases the risk of developing the frailty phenotype and whether frailty increases the risk of developing chronic or intrusive pain, using longitudinal data.
Design/Setting
longitudinal data from the Concord Health and Ageing in Men Project (CHAMP), a prospective population based cohort study.
Participants
a total of 1,705 men aged 70 years or older, living in an urban area of New South Wales, Australia.
Measurements
data on the presence of chronic pain (daily pain for at least 3 months), intrusive pain (pain causing moderate to severe interference with activities) and the criteria for the Cardiovascular Health Study (CHS) frailty phenotype were collected in three waves, from January 2005 to October 2013. Data on age, living arrangements, education, smoking status, alcohol consumption, body mass index, comorbidities, cognitive function, depressive symptoms and history of vertebral or hip fracture were also collected and included as covariates in the analyses.
Results
a total of 1,705 participants were included at baseline, of whom 1,332 provided data at the 2-year follow-up and 940 at the 5-year follow-up. Non-frail (robust and pre-frail) men who reported chronic pain were 1.60 (95% confidence interval (CI): 1.02–2.51, *P* = 0.039) times more likely to develop frailty at follow-up, compared to those with no pain. Intrusive pain did not significantly increase the risk of future frailty. Likewise, the frailty status was not associated with future chronic or intrusive pain in the adjusted analysis.
Conclusions
the presence of chronic pain increases the risk of developing the frailty phenotype in community-dwelling older men.

Disponible en: https://academic.oup.com/ageing/article-abstract/47/3/381/4883304?redirectedFrom=fulltext

The effect of biannual medication reviews on the appropriateness of psychotropic drug use for neuropsychiatric symptoms in patients with dementia: a randomised controlled trial

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Abstract
Objective
We studied the efficacy of biannual structured medication reviews to improve the appropriateness of psychotropic drug (PD) prescriptions for neuropsychiatric symptoms (NPS) in nursing home patients with dementia.
Study Design and Setting
In this randomised controlled trial, the intervention encompassed a structured multidisciplinary medication review by physician, pharmacist and nurse. During this 18-month study, the patient's medical files were assessed every 6 months. The primary outcome was the appropriateness of PD prescriptions defined by the Appropriate Psychotropic drug use In Dementia (APID) index sum score, lower scores indicating more appropriate use.
Results

At baseline, 380 patients were included, of which 222 were randomised to the intervention group. Compared to the control group, the APID index sum score in the intervention group improved significantly for all PD prescriptions (−5.28, *P*= 0.005).

Conclusion

We advise the implementation of a structured, repeated medication review with the essential roles of pharmacist, physician and nurse, into daily practice. This work was supported and funded by the Netherlands Organisation for Health Research and Development (ZonMw). Netherlands Trial Register (NTR3569).

Disponible en: https://academic.oup.com/ageing/article-abstract/47/3/430/4843987?redirectedFrom=fulltext

ARCHIVES OF GERONTOLOGY AND GERIATRICS

Efficacy of a tool to predict short-term mortality in older people presenting at emergency departments: Protocol for a multi-centre cohort study

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Abstract

Background

Prognostic uncertainty inhibits clinicians from initiating timely end-of-life discussions and advance care planning. This study evaluates the efficacy of the CriSTAL (**Cri**teria for **S**creening and **T**riaging to **A**ppropriate a**L**ternative care) checklist in emergency departments.

Methods

Prospective cohort study of patients aged ≥65 years with any diagnosis admitted via emergency departments in ten hospitals in Australia, Denmark and Ireland. Electronic and paper clinical records will be used to extract risk factors such as nursing homeresidency, physiological deterioration warranting a rapid response call, personal history of active chronic disease, history of hospitalisations or intensive care unit admission in the past year, evidence of proteinuria or ECG abnormalities, and evidence of frailty to be concurrently measured with Fried Score and Clinical Frailty Scale. Patients or their informal caregivers will be contacted by telephone around three months after initial assessment to ascertain survival, self-reported health, post-discharge frailty and health service utilisation since discharge. Logistic regression and bootstrapping techniques and AUROC curves will be used to test the predictive accuracy of CriSTAL for death within 90 days of admission and in-hospital death.

Discussion

The CriSTAL checklist is an objective and practical tool for use in emergency departments among older patients to determine individual probability of death in the short-term. Its validation in this cohort is expected to reduce clinicians' prognostic uncertainty on the time to patients' death and encourage timely end-of-life conversations to support clinical decisions with older frail patients and their families about their imminent or future care choices.

Disponible en: https://www.sciencedirect.com/science/article/pii/S0167494318300347

Clinical application of the basic definition of malnutrition proposed by the European Society for Clinical Nutrition and Metabolism (ESPEN): Comparison with classical tools in geriatric care

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Abstract

Background

Malnutrition is a prevalent condition related to adverse outcomes in older people. Our aim was to compare the diagnostic capacity of the malnutrition criteria of the European Society of Parenteral and Enteral Nutrition (ESPEN) with other classical diagnostic tools.

Methods

Cohort study of 102 consecutive in-patients ≥70 years admitted for postacute rehabilitation. Patients were considered malnourished if their Mini-Nutritional Assessment-Short Form (MNA-SF) score was ≤11 and serum albumin <3 mg/dL or MNA-SF ≤ 11, serum albumin <3 mg/dL, and usual clinical signs and symptoms of malnutrition. Sensitivity, specificity, positive and negative predictive values, accuracy likelihood ratios, and kappa values were calculated for both methods: and compared with ESPEN consensus.

Results

Of 102 eligible in-patients, 88 fulfilled inclusion criteria and were identified as “at risk” by MNA-SF. Malnutrition diagnosis was confirmed in 11.6% and 10.5% of the patients using classical methods,whereas 19.3% were malnourished according to the ESPEN criteria. Combined with low albumin levels, the diagnosis showed 57.9% sensitivity, 64.5% specificity, 85.9% negative predictive value,0.63 accuracy (fair validity, low range), and kappa index of 0.163 (poor ESPEN agreement). The combination of MNA-SF, low albumin, and clinical malnutrition showed 52.6% sensitivity, 88.3% specificity, 88.3%negative predictive value, and 0.82 accuracy (fair validity, low range), and kappa index of 0.43 (fair ESPEN agreement).

Conclusions

Malnutrition was almost twice as prevalent when diagnosed by the ESPEN consensus, compared to classical assessment methods: Classical methods: showed fair validity and poor agreement with the ESPEN consensus in assessing malnutrition in geriatric postacute care.

Disponible en: https://www.sciencedirect.com/science/article/pii/S0167494318300438

DRUGS AND AGING

Medications and Prescribing Patterns as Factors Associated with Hospitalizations from Long-Term Care Facilities: A Systematic Review

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Abstract

Background

Residents of long-term care facilities (LTCFs) are at high risk of hospitalization. Medications are a potentially modifiable risk factor for hospitalizations.

Objective

Our objective was to systematically review the association between medications or prescribing patterns and hospitalizations from LTCFs.

Methods

We searched MEDLINE, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and International Pharmaceutical Abstracts (IPA) from inception to August 2017 for longitudinal studies reporting associations between medications or prescribing patterns and hospitalizations. Two independent investigators completed the study selection, data extraction and quality assessment using the Joanna Briggs Institute Critical Appraisal Tools.

Results

Three randomized controlled trials (RCTs), 22 cohort studies, five case–control studies, one case-time-control study and one case-crossover study, investigating 13 different medication classes and two prescribing patterns were included. An RCT demonstrated that high-dose influenza vaccination reduced all-cause hospitalization compared with standard-dose vaccination (risk ratio [RR] 0.93; 95% confidence interval [CI] 0.88–0.98). Another RCT found no difference in hospitalization rates between oseltamivir as influenza treatment and oseltamivir as treatment plus prophylaxis (treatment = 4.7%, treatment and prophylaxis = 3.5%; $p = 0.7$). The third RCT found no difference between multivitamin/mineral supplementation and hospitalization (odds ratio [OR] 0.94; 95% CI 0.74–1.20) or emergency department visits (OR 1.05; 95% CI 0.76–1.47). Two cohort studies demonstrated influenza vaccination reduced hospitalization. Four studies suggested polypharmacy and potentially inappropriate medications (PIMs) increased all-cause hospitalization. However, associations between polypharmacy (two studies), PIMs (one study) and fall-related hospitalizations were inconsistent. Inconsistent associations were found between psychotropic medications with all-cause and cause-specific hospitalizations (11 studies). Warfarin, nonsteroidal anti-inflammatory drugs, pantoprazole and vinpocetine but not long-term acetylsalicylic acid (aspirin), statins, trimetazidine, digoxin or *β*-blockers were associated with all-cause or cause-specific hospitalizations in single studies of specific resident populations. Most cohort studies assessed prevalent rather than incident medication exposure, and no studies considered time-varying medication use.

Conclusion

High-quality evidence suggests influenza vaccination reduces hospitalization. Polypharmacy and PIMs are consistently associated with increased all-cause hospitalization.

Disponible en: https://link.springer.com/article/10.1007/s40266-018-0537-3

An Analysis of the Inclusion of Medications Considered Potentially Inappropriate in Older Adults in Chemotherapy Templates for Hematologic Malignancies: One Recommendation for All?

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Abstract

Background

There remains a paucity of data regarding the use of potentially inappropriate medications (PIMs) in the supportive management of older adults undergoing chemotherapy. Raising awareness among healthcare providers regarding the frequency of their use and potential toxicities may help to minimize the risks to patients.

Objective

The aim of this study was to evaluate the frequency of six specific classes of medications considered PIMs by the American Geriatrics Society Beers Criteria that are commonly included

in the National Comprehensive Cancer Network (NCCN) chemotherapy order templates for hematologic malignancies. The six PIMs evaluated are first-generation antihistamines, benzodiazepines, corticosteroids, H2-receptor antagonists, metoclopramide, and antipsychotics.

Methods

A total of 311 unique chemotherapy order templates published online by the NCCN for the treatment of hematologic malignancies were reviewed to determine the frequency that these six specific PIMs were recommended for supportive care.

Results

Approximately 45% of the NCCN chemotherapy templates for hematologic malignancies specifically recommended the use of at least one of the six PIMs examined. The remainder of the templates evaluated referred exclusively to the NCCN Guidelines® on Oncology for Antiemesis, which also included the use of at least one of the six PIMs evaluated.

Conclusions

These findings demonstrate that PIMs are frequently used as supportive therapy in the treatment of hematologic malignancies. Increasing healthcare provider awareness of their potential side effects may minimize the risks associated with their use in older adults with hematologic malignancies undergoing chemotherapy.

Disponible en: https://link.springer.com/article/10.1007/s40266-018-0538-2

EUROPEAN GERIATRIC MEDICINE

The adverse drug reaction risk in older persons (ADRROP) prediction scale: derivation and prospective validation of an ADR risk assessment tool in older multi-morbid patients

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Abstract

Background

Adverse drug reactions (ADRs) cause serious morbidity and mortality in multi-morbid older adults. Reliable ADR risk prediction would improve patient safety in this at-risk population. We aimed to derive and validate a new predictive tool for assessing ADR Risk in Older People (acronym ADRROP).

Design

We combined four databases describing 2217 older people hospitalized with acute illness in order to determine risk factor variables significantly associated with ADRs. We identified the independent ADR risk factors from 1687 patients (derivation cohort) and used them to construct the ADRROP scale. We prospectively validated ADRROP using data from 530 patients (validation cohort). We applied area under the curve (AUC) analysis to test ADRROP's ADR predictive power. We also compared ADRROP's performance to the GerontoNet ADR risk scale.

Results

Eight independent ADR risk factors were identified in the derivation patient cohort: female gender, age > 70 years, estimated GFR < 30 ml/min/1.73 m2, assistance required for ≥ 1 daily activity, ≥ 4 co-morbidities, liver disease, presence and number of STOPP criteria-defined potentially inappropriate medications, and ≥ 1 fall in the previous year. The ADRROP predictive

scale constructed from these combined variables ranged from 0 to 27. The derivation cohort AUC value was 0.623 (95% CI 0.598–0.665); the validation cohort AUC was 0.592 (95% CI 0.532–0.652). Applying the GerontoNet ADR risk scale to the combined cohorts yielded an AUC of 0.566 (95% CI 0.537–0.596).

Conclusions and relevance

Neither ADRROP nor the GerontoNet ADR risk scale predicted ADRs to a high level in hospitalized older people with multi-morbidity.

Disponible en: https://link.springer.com/article/10.1007/s41999-018-0030-x

REVISTA ESPAÑOLA DE GERIATRÍA Y GERONTOLOGÍA

Evaluación de las complicaciones clínicas de los pacientes con fractura de cadera y sus factores asociados en una Unidad de Agudos de Ortogeriatría

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Resumen

Introducción

Las complicaciones clínicas en pacientes con fractura de cadera (FC) son elevadas y variables por su heterogéneo registro. El objetivo del estudio fue evaluar las complicaciones clínicas y sus factores asociados en pacientes con FC ingresados en la Unidad de Ortogeriatría de un hospital universitario de 283 camas que atiende un promedio de 200 FC/año.

Material y métodos

Se incluyó a 383 pacientes ingresados consecutivamente en 2013 y en 2014 en un estudio analítico observacional prospectivo. Las complicaciones clínicas se definieron según recomendaciones avaladas por la AOTrauma Network (Red de Trabajo de la Asociación Internacional de Traumatólogos para el estudio de la osteosíntesis).

Resultados

Doscientos setenta y tres pacientes (71,28%) presentaron alguna complicación. Las principales fueron el delirium (55,4%), la insuficiencia renal (15,4%) y las complicaciones cardiacas (12,3%). Se asociaron a la presencia de alguna complicación la clasificación ASA III-IV (OR=1,962; IC del 95%, 1,040-3,704; p = 0,038), un índice de Barthel al alta inferior (b = –3,572;IC del 95%, –0,866 a –0,104; p = 0,01), el incremento en la estancia media (b = 2,683; IC del 95%, 3,522-0,325; p < 0,001) y preoperatoria (OR = 1,165; IC del 95%, 1,050-1,294; p = 0,004).

Conclusiones

Las complicaciones clínicas más frecuentes son el delirium, la insuficiencia renal y las complicaciones cardiacas. Una puntuación en la escala de ASA III-IV, una peor situación funcional al alta, así como una estancia preoperatoria y media prolongada, son factores asociados a la presencia de alguna complicación clínica. Las complicaciones cardiacas, pulmonares y digestivas son las principales causas de mortalidad en la unidad.

Disponible en: http://www.elsevier.es/es-revista-revista-espanola-geriatria-gerontologia-124-articulo-evaluacion-las-complicaciones-clinicas-los-S0211139X18300040

JOURNAL OF CLINICAL INTERVENTIONS IN AGING

Development and validation of the Medication Regimen Simplification Guide for Residential Aged CarE (MRS GRACE)

Chen EYH, Sluggett JK, Ilomäki J, Hilmer SN, Corlis M, Picton LJ, Dean L, Alderman CP, Farinola N, Gailer J, Grigson J, Kellie AR, Putsey PJC, Yu S, Bell JS

Abstract

Background: Residents of aged care facilities use increasingly complex medication regimens. Reducing unnecessary medication regimen complexity (eg, by consolidating the number of administration times or using alternative formulations) may benefit residents and staff.
Objective: To develop and validate an implicit tool to facilitate medication regimen simplification in aged care facilities.
Method: A purposively selected multidisciplinary expert panel used modified nominal group technique to identify and prioritize factors important in determining whether a medication regimen can be simplified. The five prioritized factors were formulated as questions, pilot-tested using non-identifiable medication charts and refined by panel members. The final tool was validated by two clinical pharmacists who independently applied the tool to a random sample of 50 residents of aged care facilities to identify opportunities for medication regimen simplification. Inter-rater agreement was calculated using Cohen's kappa.
Results: The Medication Regimen Simplification Guide for Residential Aged CarE (MRS GRACE) was developed as an implicit tool comprising of five questions about 1) the resident; 2) regulatory and safety requirements; 3) drug interactions; 4) formulation; and 5) facility and follow-up considerations. Using MRS GRACE, two pharmacists independently simplified medication regimens for 29/50 and 30/50 residents (Cohen's kappa=0.38, 95% CI 0.12–0.64), respectively. Simplification was possible for all residents with five or more administration times. Changing an administration time comprised 75% of the two pharmacists' recommendations.
Conclusions: Using MRS GRACE, two clinical pharmacists independently simplified over half of residents' medication regimens with fair agreement. MRS GRACE is a promising new tool to guide medication regimen simplification in aged care.

Disponible en: https://www.dovepress.com/development-and-validation-of-the-medication-regimen-simplification-gu-peer-reviewed-article-CIA

Association between a frailty index based on common laboratory tests and QTc prolongation in older adults: the Rugao Longevity and Ageing Study

Ma T, Cai J, Zhu Y, Chu X, Wang Y, Shi G, Wang Z, Yao S, Wang X, Jiang XY

Abstract

Background: Risk factors for heart rate-corrected QT interval (QTc) proglongation should be explored to stratify high-risk individuals to aid the prevention of incident cardiovascular events and mortality. The diversity of risk factors for QTc prolongation suggests that use of the frailty index (FI), indicating general health deficits, may be an effective approach, especially in the elderly, to identify the risk of QTc prolongation.

Methods: We used the data of 1,780 individuals aged 70–87 years from the Rugao Longevity and Ageing Study (RuLAS), a community-based longitudinal study. The FI was constructed using 20 routine laboratory tests, plus the body mass index and measures of systolic and diastolic blood pressures (FI-Lab).
Results: The mean FI-Lab value was 0.24±0.09. The mean heart rate-corrected QT interval (QTc) was 407±38 ms. The prevalence of QTc prolongation was 5.2% in elderly community populations aged 70–87 years. A higher FI-Lab value was associated with a higher risk for QTc prolongation. Each 10% increase in the FI-Lab value increased the odds ratio (OR) by 33% (OR: 1.33; 95% CI: 1.07–1.64). Compared with the lowest quartile, the top quartile FI-Lab score was associated with a 2.50-fold QTc prolongation risk in elderly individuals (95% CI: 1.21–5.19).
Conclusion: An FI based on routine laboratory data can identify older adults at increased risk for QTc prolongation. The FI approach may therefore be useful for the risk stratification of QTc prolongation.

Disponible en: https://www.dovepress.com/association-between-a-frailty-index-based-on-common-laboratory-tests-a-peer-reviewed-article-CIA

Review of antimicrobial use and considerations in the elderly population

Giarratano A, Green SEL, Nicolau DP

Abstract: Pharmacologic management of infections in elderly patients presents multiple challenges to health care professionals due to variable pharmacokinetics, pharmacodynamics, and immune function. Age is a well-established risk factor for infection, but furthermore is a risk factor for prolonged length of hospital stay, increased incidence of complications, and significant and sustained decline in baseline functional status. In 2014, 46.2 million Americans were aged ≥65 years, accounting for 14.5% of the total population. By 2033, for the first time, the population of persons aged ≥65 years is projected to outnumber the people <18 years of age. According to the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey, 154 million prescriptions for antimicrobials were estimated to have been written in doctors' offices and emergency departments during a 1-year time period. In 2014, 266.1 million courses of antimicrobials were dispensed to outpatients by US community pharmacies. A study that evaluated 2007–2009 Medicare Part D data found that patients aged ≥65 years used more antimicrobials, at 1.10 per person per year, compared to 0.88 antimicrobials used per person per year in patients aged 0–64 years. With the abundance of antimicrobial prescriptions and the current growth in the number and proportion of older adults in the US, it is essential that health care providers understand appropriate antimicrobial pharmacotherapy in the elderly patient. This review focuses on the use and implications of antimicrobial agents in the elderly population.

Disponible en: https://www.dovepress.com/review-of-antimicrobial-use-and-considerations-in-the-elderly-populati-peer-reviewed-article-CIA

GERIATRICS AND GERONTOLOGY INTERNATIONAL

Anticholinergic burden and 1-year mortality among older patients discharged from acute care hospital

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Abstract

Aim

The association between anticholinergic burden and mortality is controversial. We aimed to investigate whether the anticholinergic cognitive burden (ACB) score predicts 1-year mortality in older patients discharged from acute care hospitals.

Methods

Our series consisted of 807 hospitalized patients aged ≥65 years. Patients were followed up for 12 months after discharge. All-cause mortality was the outcome of the study. The ACB score at discharge (0, 1, ≥2) and increasing ACB score from admission to discharge (no increase, +1, +2 or more) were calculated and used as exposure variables. Cox proportional hazards models adjusted for potential confounders were used for the analysis. Interactions between the ACB score and cognitive impairment or history of falls were also investigated.

Results

During the follow-up period, 177 out of 807 participants (21.9%) died. After adjusting for potential confounders, a discharge ACB score of ≥2 (HR 1.69, 95% CI 1.09–2.65) was significantly associated with the outcome, whereas the association between increasing ACB score of +2 or more and mortality was weaker (HR 1.30, 95% CI 0.95–1.92). The interaction between the ACB score at discharge or increasing ACB score and cognitive impairment was statistically significant (P = 0.003 and P = 0.004, respectively), whereas that between the ACB score and falls was not.

Conclusions

The ACB score at discharge and, to a lesser extent, an increasing ACB score during hospital stay are associated with an increased risk of 1-year mortality in older patients discharged from hospital. Such an association is stronger among patients with cognitive impairment.

Disponible en: https://onlinelibrary.wiley.com/doi/abs/10.1111/ggi.13234

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY

Measuring anticholinergic exposure in patients with dementia: A comparative study of nine anticholinergic risk scales

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Abstract

Objective

To describe the prevalence and concordance of anticholinergic exposure according to 9 published scales, to quantify the relative weight of the drug subtypes included in each scale, and to identify clinical variables related to anticholinergic exposure.
Methods
Observational and cross-sectional study using 5323 cases of dementia diagnosed in the 7 hospitals of the public health care system of the Health Region of Girona (Spain) between 2007 and 2014 and registered by the Registry of Dementias of Girona (ReDeGi). We used the Pharmacy database that includes all the drugs prescribed by specialist and primary care physicians and dispensed in pharmacies. We calculated the anticholinergic exposure using the scoring rules of each scale. Age, gender, place of residence, dementia subtype, Clinical Dementia Rating score, Mini-Mental Status Examination score, and Blessed Dementia Rating Score at the moment of dementia diagnose were retrieved from the ReDeGi.
Results
Prevalence of the annual anticholinergic exposure ranged from 36.3% to 69.0% according to the different scales, the concordance among scales was poor to moderate, and the central nervous system drugs accounted the most for anticholinergic exposure. Being in a nursing home, having depressive symptoms, having a non-Alzheimer's dementia subtype, the number of drug treatments, and the severity of dementia were main determinants of anticholinergic exposure.
Conclusions
There is a large difference in outcomes among the 9 anticholinergic risk scales. Clinicians and researchers should be aware of these differences when using these instruments in patients with dementia.

Disponible en: https://onlinelibrary.wiley.com/doi/abs/10.1002/gps.4844

JOURNAL OF GERONTOLOGY

What Is the End of Life Period? Trajectories and Characterization Based on Primary Caregiver Reports

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Abstract
Background
As the population lives longer, end of life (EOL) is emerging as a distinct life phase, about which there is still limited understanding. Characterizing this important period is vital for clarifying issues regarding trajectory and decline at EOL and for health service planning on an institutional, communal, and societal level. In this article, we aim to characterize the EOL period, examining the duration and number of EOL stages, as well as functional, attitudinal, and emotional trajectories.
Methods
In this cross-sectional study, 70 primary caregivers of deceased persons were interviewed. Standardized rates of functional, attitudinal, and emotional change across the EOL period were calculated. Frequencies were compared using the McNemar statistical test.
Results
EOL period was found to have a median length of 3.25 years, and an average of approximately three progressive stages. The duration of EOL stages tended to decrease as death approached.

Unexpected events (eg new medical diagnosis/accident) served as the precipitating event for the EOL period for approximately half of the deceased persons, and changes in existing conditions (eg health status/cognitive state) were also reported to precipitate EOL for a similar proportion. Reports of functionality across stages found the steepest decline in the "physical" domain and the most moderate decline in the "social" domain. With each stage, positive indicators, such as "will to live," showed a progressive decline, whereas negative indicators, including "suffering" and "dependence level," progressively increased.

Conclusions

Results help characterize EOL trajectories and should inform care planning and decision making at various levels. In addition, they suggest a methodology for better understanding EOL.

Disponible en: https://academic.oup.com/biomedgerontology/article-abstract/73/5/695/4473987?redirectedFrom=fulltext

EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY

Reported time to onset of neurological adverse drug reactions among different age and gender groups using metoclopramide: an analysis of the global database Vigibase®.

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Abstract

Purpose

Despite FDA and EMA warnings of long-term use, little is known regarding the time to onset (TTO) of neurological adverse drug reactions (ADR) for metoclopramide. The aims of this study were, first, to evaluate whether neurological ADRs are more commonly reported for metoclopramide than for other medications, and second, to describe how time to onset of neurological ADRs differs by age and gender.

Methods

All ADR reports with metoclopramide as the suspected/interacting drug were extracted from the WHOs Global ADR database Vigibase® between 1967 and May 2016. Cox proportional hazards models were fit using TTO of neurological ADRs as the outcome and age, gender, and type of ADR as predictors. Proportional Reporting Ratios (PRRs) for neurological ADRs were compared across age and gender. Lawyer reports were excluded in the analysis.

Results

Over 47,000 ADR reports with metoclopramide were identified. Over one third (35.6%) of the reports came from lawyers. The majority of ADRs in general and neurological ADRs in specific occurred within the first 5 days of metoclopramide use (median 1 day). TTO increased with age. Neurological ADRs were reported two to four times as frequently for metoclopramide than for other drugs, with the highest PRRs observed in children (PRR = 4.24 for girls and 4.60 for boys).

Conclusions

Most adverse drug reactions occur within the first 5 days of treatment with metoclopramide. Patients requiring use of metoclopramide should be carefully monitored for neurological ADRs during the first days of treatment.

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FARMACIA HOSPITALARIA

Impacto de la automatización en la seguridad de la dispensación de medicamentos a centros sociosanitarios

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Resumen
Objetivo: Comparar la incidencia y la gravedad de los errores de dispensación notificados cuando la dispensación a centros sociosanitarios se realiza con un sistema de pastilleros frente a un sistema automatizado de dispensación específicamente seleccionado.
Método: Estudio retrospectivo observacional pre-post en siete centros sociosanitarios geriátricos. Se comparan los errores de dispensación comunicados voluntariamente de dos periodos distintos: dispensación en pastilleros semanales (año 2013) y dispensación semanal con un sistema automatizado de dosificación personalizada Xana 4001U2 Tosho® para medicamentos orales sólidos, acompañada de dispensación manual para otras formas farmacéuticas (año 2015). Se analizan datos de funcionalidad, cognición y farmacológicos de los residentes atendidos en ambos periodos.
Resultados: La media de edad (83,9 y 83,6 años; p>0,05) y la función física (índice de Barthel 41,8 y 44,2; p>0,05) de los residentes fueron comparables, mientras que existieron diferencias estadísticamente significativas en la función cognitiva (MEC-35 20,3 y 21,7; p< 0,0,5). Se comunicaron 408 errores de dispensación con la dispensación manual, comparada con los 36 que se comunicaron con la dispensación automatizada, lo que supone una reducción relativa de un 91%. De estos errores, 43 frente a 6 alcanzaron al residente, respectivamente, y 5 errores frente a 1 requirieron al menos seguimiento.
Conclusiones: La implantación de un sistema automatizado de dosificación personalizada ha permitido mejorar significativamente la seguridad en la dispensación y posterior administración de medicamentos sólidos a centros sociosanitarios. La comunicación voluntaria de errores de medicación ha permitido comparar la seguridad en cuanto a la dispensación de dos sistemas diferentes de dispensación a centros sociosanitarios.

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Aproximación al desarrollo de un índice de fragilidad basado en la valoración integral geriátrica en centros sociosanitarios

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Resumen
Objetivo: Realizar una aproximación al desarrollo de un índice de fragilidad en centros sociosanitarios y analizar su posible repercusión en el desarrollo de una farmacoterapia adecuada a la situación del paciente.
Método: El índice de fragilidad se elaboró a partir de la información incluida en la valoración integral geriátrica y se aplicó de forma retrospectiva a los pacientes de dos centros a partir de la última valoración de cada uno de ellos.
Resultados: Se seleccionaron 17 variables, que incluyeron 27 déficits. El análisis se realizó a 269 pacientes (edad media, 82,9±8,8 años). El índice de fragilidad consideró frágiles al 86% de los pacientes, estando el 60% de estos en un nivel de fragilidad moderado-avanzado.

Conclusiones: El índice de fragilidad resulta sencillo, rápido de aplicar y parece tener capacidad discriminatoria en la cuantificación del grado de fragilidad, pudiendo ser de ayuda para establecer la intensidad terapéutica más adecuada para cada paciente.

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Interacciones potenciales en una cohorte de pacientes VIH positivos de edad avanzada

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Resumen
Objetivo: El aumento de la esperanza de vida conduce a un nuevo modelo de paciente VIH positivo, con enfermedades crónicas y, en ocasiones, polimedicado. Pretendemos con este estudio conocer la complejidad de los tratamientos e identificar potenciales interacciones entre antirretrovirales y medicación domiciliaria de nuestros pacientes, con objeto de tenerlas identificadas y poder prevenirlas.
Método: Estudio descriptivo, retrospectivo, en una cohorte de pacientes con tratamiento antirretroviral mayores de 50 años en un hospital de tercer grado.
Resultados: Se incluyeron 242 pacientes, de los que 148 (61%) recibían algún otro tratamiento. Detectamos 243 potenciales interacciones: 197 consideradas moderadas y 46 graves; afectando a 110 pacientes. De las graves, 35 (76%) se relacionaron con inhibidores de proteasa potenciados. La principal consecuencia fue un aumento de las concentraciones plasmáticas del tratamiento domiciliario (48%). Las estatinas (24%) fueron el grupo especialmente implicado en las interacciones graves, seguidas de los corticoides inhalados (15%).
Conclusiones: Prácticamente la mitad de los pacientes estaban polimedicados, observándose un elevado número de potenciales interacciones moderadas o graves. El farmacéutico de hospital debe jugar un papel crucial en su detección, manejo y comunicación precoz.

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Iatrogenic risk factors associated with hospital readmission of elderly patients: A matched case-control study using a clinical data warehouse

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Summary
What is known
Hospital readmission within 30 days of patient discharge has become a standard to judge the quality of hospitalizations. It is estimated that 14% of the elderly, people over 75 years old or those over 65 with comorbidities, are at risk of readmission, of which 23% are avoidable. It may be possible to identify elderly patients at risk of readmission and implement steps to reduce avoidable readmissions.

Objective
The aim of this study was to identify iatrogenic risk factors for readmission. The secondary objective was to evaluate the rate of drug-related readmissions (DRRs) among all readmissions and compare it to the rate of readmissions for other reasons.
Methods
We conducted a retrospective, matched, case-control study to identify non-demographic risk factors for avoidable readmission, specifically DRRs. The study included patients hospitalized between 1 September 2014 and 31 October 2015 in an 800-bed university hospital. We included patients aged 75 and over. Cases consisted of patients readmitted to the emergency department within 30 days of initial discharge. Controls did not return to the emergency department within 30 days. Cases and controls were matched on sex and age because they are known as readmissions risk factors. After comparison of the mean or percentage between cases and controls for each variable, we conducted a conditional logistic regression.
Results
The risk factors identified were an emergency admission at the index hospitalization, returning home after discharge, a history of unplanned readmissions and prescription of nervous system drugs. Otherwise, 11.4% of the readmissions were DRRs, of which 30% were caused by an overdose of antihypertensive. The number of drugs at readmission was higher, and potentially inappropriate medications were more widely prescribed for DRRs than for readmissions for other reasons.
What is new and conclusion
In this matched case-control retrospective study, after controlling for gender and age, we identified the typical profile of elderly patients at risk of readmission. These patients had an unplanned admission at the index hospitalization and prescribed nervous system drugs at discharge from the index admission; they have a history of unplanned readmission within 30 days and return home after discharge.

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Treatment of Cardiovascular Diseases Among Elderly Residents of Long-term Care Facilities

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Abstract
Background
The prevalence of cardiovascular diseases among nursing home residents is high but little is known whether pharmacologic therapy recommended by actual medication guidelines is followed by facility's staff.
Aim: To evaluate the adherence to actual guidelines for treatment of cardiovascular diseases among older adult residents of long-term care (LTC) facilities.
Material and methods
The cross-sectional study was performed from December 2009 to November 2010 among 189 elderly residents aged ≥60 years in 3 LTC facilities in Poland: 1 long-term care hospital (LTCH)

and 2 nursing homes (NHs). The initial evaluation included analysis of medical documentation (all diagnosed diseases and used drugs), blood pressure (BP) measurements and performance of Mini Nutritional Assessment Short-Form (MNA-SF), Abbreviated Mental Test Score (AMTS), Activities of Daily Living (ADL) score, and Barthel Index. Prescribed medication for hypertension (HT), heart failure (HF), and coronary heart disease (CHD) were compared to current European Cardiology Society (ESC), and European Society of Hypertension (ESH) medication guidelines. Residents were divided into 3 subgroups: with HT, HF, and CHD. Results were presented as means and standard deviation. Groups were compared using Mann-Whitney *U* test for nonparametric data and chi-square test to assess differences in distribution of categorical variables. *P* values <.05 were considered statistically significant.

Results

CHD was diagnosed among 114 residents (60.3%) but only 60.5% of them were treated with aspirin (ASA), 45.6% with beta-blockers (BBs), 60.5% with angiotensin-converting enzyme inhibitor (ACEI), and 24.6% with statins. HF observed in 75% of cases was treated by using ACEI (54.7%), BBs (45.3%), loop diuretics (LDs, 36%), mineralocorticoid-receptor antagonists (MRAs, 21.3%). HT was diagnosed among 98 study participants (51.9%) and in the majority of cases (76.6%) was well controlled (mean BP: 133.7 ± 17.6/73.8 ± 10.2 mmHg). The most popular antihypertensive drugs were ACEIs (77.6%), BBs (40.8%) and calcium channel blockers (CCBs, 26.5%) whereas thiazides, alpha-blockers (ABs), and angiotensin receptor blockers (ARBs) were used less frequently.

Conclusion

In summary, the study showed that insufficient treatment of cardiovascular diseases among elderly residents of LTC facilities could be a potential risk factor of poor prognosis.

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Frailty in Hospitalized Older Adults: Comparing Different Frailty Measures in Predicting Short- and Long-term Patient Outcomes

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Abstract

Objectives

Data for the assessment of frailty in acutely ill hospitalized older adults remains limited. Using the Frailty Index (FI) as "gold standard," we compared (1) the diagnostic performance of 3 frailty measures (FRAIL, Clinical Frailty Scale [CFS], and Tilburg Frailty Indicator [TFI]) in identifying frailty, and (2) their ability to predict negative outcomes at 12 months after enrollment.

Design: Prospective cohort study.

Participants: We recruited 210 patients (mean age 89.4 ± 4.6 years, 69.5% female), admitted to the Department of Geriatric Medicine in a 1300-bed tertiary hospital.

Measurements

Premorbid frailty status was determined. Data on comorbidities, severity of illness, functional status, and cognitive status were gathered. We compared area under receiver operator characteristic curves (AUC) for each frailty measure against the reference FI. Multiple logistic regression was used to examine the independent association between frailty and the outcomes of interest.

Results

Frailty prevalence estimates were 87.1% (FI), 81.0% (CFS), 80.0% (TFI), and 50.0% (FRAIL). AUC against FI ranged from 0.81 (95% confidence interval [CI] 0.72–0.90: FRAIL) to 0.91 (95% CI 0.87–0.95: CFS). Only FRAIL was associated with higher in-hospital mortality (6.7% vs 1.0%, *P* = .031). FRAIL and CFS were significantly associated with increased length of hospitalization (10 [6.0–17.5] vs 8 [5.0–14.0] days, *P* = .043 and 9 [5.0–17.0] vs 7 [4.25–11.75] days, *P* = .036, respectively). CFS and FI were highly associated with mortality at 12-month (CFS, frail vs nonfrail: 32.9% vs 2.5%, *P* < .001, and FI, frail vs nonfrail: 30.6% vs 3.7%, *P* < .001). CFS also conferred the greatest risk of 12-month mortality (odds ratio [OR] 5.78, 95% CI 3.19–10.48, *P* < .001) and composite outcomes of institutionalization and/or mortality (OR 3.69, 95% CI 2.31–5.88, *P* < .001), adjusted for age, sex, and severity of illness.

Conclusion

Our study affirms the utility of frailty assessment tools among older persons in acute care. FRAIL conferred highest risk of in-hospital mortality. However, CFS had greatest risk of mortality and institutionalization within 12 months.

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