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REVISTAS GERIÁTRICAS

Drugs and Aging

Hand Grip Strength May Affect the Association Between Anticholinergic Burden and Mortality Among Older Patients Discharged from Hospital

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Abstract

Background and Objective

The relationship between anticholinergic burden and mortality is unclear, and the impact of anticholinergic burden on prognosis may vary in the presence of other conditions common in old age. We aimed to investigate the role of hand grip strength as a potential effect modifier in the association between anticholinergic burden and 1-year mortality in older patients discharged from hospital.

Methods

Our series consisted of 620 older patients consecutively admitted to seven geriatric and internal medicine acute care wards in the context of a prospective multicenter observational study. Overall anticholinergic burden was assessed by Anticholinergic Cognitive Burden (ACB) score. Hand grip strength was assessed by the use of a North Coast medical hand dynamometer and categorized by using sex-specific cut-offs (women < 15 kg, men < 20 kg). The study outcome was 1-year mortality. Statistical analysis was performed by Cox regression analysis.

Results

After adjusting for potential confounders, the co-occurrence of an ACB score of 2 or more and low hand grip strength was significantly associated with mortality (hazard ratio [HR] = 2.30, 95% confidence interval [CI] 1.07–6.01). Stratified analysis confirmed that an ACB score of 2 or more was associated with mortality among patients with low (HR = 2.15, 95% CI 1.08–5.02), but not normal hand grip strength (HR = 0.88, 95% CI 0.13–3.52). The association was confirmed among patients with low hand grip strength after adjusting for the ACB score at the 3-month follow-up (HR = 2.20; 95% CI 1.09–4.87), as well as when considering the ACB score as a continuous variable (HR = 1.24, 95% CI 1.03–1.48).

Conclusions

The ACB score at discharge may predict mortality among older patients discharged from an acute care hospital with low hand grip strength. Hospital physicians should be aware that prescribing anticholinergic medications in such a vulnerable population may have negative prognostic implications.

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International Journal of Geriatric Psychiatry

Predictors of quetiapine extended release formulation Add-On in older patients exposed to antidepressant drugs: A Danish Register-Based cohort study.

Hadia Hashimi , Morten Andersen, Maurizio Sessa

Abstract

Objectives

This study investigated which comorbidities or comedications increased the probability of receiving quetiapine extended release formulation (quetiapine XR) as an add-on treatment.

Methods

Danish administrative registers were used as data sources. The study period was from January 1, 2011 to July 1, 2017. New users of Selective Serotonin Reuptake Inhibitors (SSRI), Serotonin and Norepinephrine Reuptake Inhibitors (SNRI), Atypical Antidepressants (AAD) and Tricyclic Antidepressants (TCA) aged ≥65 years were included in the study population. A multivariable Cox regression model was used to find predictors for receiving quetiapine XR add-on within the first year of antidepressant therapy.

Results

123 655 new users of SSRI, SNRI, TCA and AAD were eligible. The study population was composed of 57.7% females and the mean age was 77.2 years (SD 7.9 years). SSRIs users comprised 49.6% of the study population. Among users of antidepressants, 171 (0.14%) patients received quetiapine XR as add-on treatment. In the adjusted analyses, female patients (HR 0.70; 95%CI 0.52-0.95) and glucocorticoid users (HR 0.41; 95%CI 0.21-0.80) had a significantly lower hazard of receiving quetiapine XR. Patients with dementia (HR 2.43; 95%CI 1.52-3.87) had a significantly higher hazard of receiving quetiapine XR than patients without this condition. When compared to SSRI users, AAD (HR 1.80; 95%CI 1.31-2.46) and TCA users (HR 0.18; 95%CI 0.06-0.49) had an increased/reduced hazard of receiving quetiapine XR, respectively.

Conclusions

This study suggests that the choice of prescribing quetiapine add-on is driven by patient's differences in comorbidities, comedications and the type of antidepressant drug.

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Journal of gerontology A biol sci med sci

Comparative Effects of Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers on Response to a Physical Activity Intervention in Older Adults: Results From the Lifestyle Interventions and Independence for Elders Study

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Abstract

Background

Angiotensin-converting enzyme inhibitors (ACEis) and angiotensin receptor blockers (ARBs) may protect against aging-related decline. This study directly compared ACEis and ARBs on associations with risk of mobility disability in older adults when combined with a physical activity intervention.

Methods

This was a secondary analysis of the Lifestyle Interventions and Independence for Elders (LIFE) trial. Participants aged 70–89 years were randomized to a physical activity or health education intervention. Outcomes included incident and persistent major mobility disability, injurious falls, short physical performance battery, and gait speed. For this analysis, only participants who reported ACEi or ARB use at baseline were included. Baseline differences between ACEi and ARB groups were adjusted for using inverse probability of treatment weights. Weighted Cox proportional hazard models and analysis of covariance models were used to evaluate the independent effects of medications and interaction effects with the intervention on each outcome.

Results

Of 1,635 participants in the Lifestyle Interventions and Independence for Elders study, 796 used either an ACEi (496, 62.3%) or ARB (300, 37.7%). Compared with ACEi users, ARB users had 28% lower risk (hazard ratio [HR] = 0.72 [0.60–0.85]) of incident major mobility disability and 35% (HR = 0.65 [0.52–0.82]) lower risk of persistent major mobility disability whereas no interaction between medication use and intervention was observed. Risk of injurious falls and changes in short physical performance battery or gait speed were not different between ARB and ACEi users.

Conclusions

These results suggest that ARBs may protect from major mobility disability by other mechanisms than improving physical performance.

Disponible en: https://academic.oup.com/biomedgerontology/article-abstract/75/5/1010/5487474?redirectedFrom=fulltext

REVISTAS FARMACÉUTICAS

THE ANNALS OF PHARMACOTHERAPY

Characterizing the Safety Profile of Apixaban Versus Warfarin in Moderate to Severe Chronic Kidney Disease at a Veterans Affairs Hospital

Kylie Herndon, , Tommie Jo Guidry, Katelyn Wassell.

Abstract. Objectives

Warfarin has been the cornerstone of therapy for patients with stage 4 and 5 chronic kidney disease (CKD) requiring anticoagulation. These patients were omitted from landmark clinical trials involving apixaban. Apixaban's safety profile is still largely unclear in this population. Objectives: To compare major bleeding, secondary bleeding outcomes, stroke, and thromboembolism in veterans with CKD stage 4, with CKD stage 5, and on dialysis on apixaban

Methods

A retrospective chart review identified veterans with CKD stage 4 and stage 5, and on dialysis who received either apixaban or warfarin from 2013 to 2019 at the Memphis Veterans Affairs Medical Center. The primary outcome was incidence of major bleeding. Secondary outcomes were clinically relevant nonmajor and minor bleeding, composite bleeding, venous thromboembolism (VTE), and stroke.

Results

A total of 111 patients were included in this study (warfarin group, n = 57; apixaban group, n = 54). Primary and secondary outcomes were analyzed using the χ2 or Fisher exact tests as appropriate. There was no difference in major bleeding between groups (14% vs 7%, P = 0.362). There were increased rates of minor bleeding (26% vs 6%, P = 0.004) and composite bleeding (46% vs 20%, P = 0.004) in patients receiving warfarin. There were no differences in rates of stroke or VTE between the 2 groups.

Conclusions

There was no difference in major bleeding in patients who received apixaban compared with warfarin. Apixaban may be a reasonable alternative to warfarin in veterans with CKD stage 4 and 5, including those on dialysis.

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CLINICAL THERAPEUTICS

Drug-related Problems in Home-dwelling Older Adults: A Systematic Review

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Abstract. Objectives

The complex combination of medicines associated with age-related physiological alterations leads older adults to experience drug-related problems (DRPs). The goal of this study was to review the frequency and type of DRPs and DRP risk factors in home-dwelling older adults.

Methods

A MEDLINE PubMed and EMBASE scientific databases search was performed. Articles published from January 2000 through December 2018 reporting DRPs in home-dwelling older adults were included.

Results

From 668 articles screened, 13 met the inclusion criteria and were included in this study. Overall, the studies included 8935 home-dwelling patients. The mean number of DRPs per patient observed was 4.16 (1.37–10). The main causes of DRPs were “drug selection” (51.41%), “dose selection” (11.62%), and “patient related” (10.70%) problems. The drug classes more frequently associated with DRPs were “cardiovascular system,” “alimentary tract and metabolism,” and “nervous system,” and they represented 32.1%, 29.4%, and 16.5% of all drug selection problems, respectively. Respiratory system medicines accounted for 6.65% of all DRPs, of which “patient related” problems accounted for 97.28%.

Conclusions

Despite the heterogeneity of methodology of the included studies and the heterogeneity of tools used to identify DRPs, this analysis clearly shows the high prevalence of DRPs in home-dwelling older adults and highlights the need for interventions to improve medicine use in this population. This work also provides useful information for the development of strategies to improve medication use in home-dwelling older adults.

Disponible en: https://www.clinicaltherapeutics.com/article/S0149-2918(20)30107-7/fulltext

Comparing Outcomes Between Thiazide Diuretics and Other First-line Antihypertensive Drugs in Long-term Nursing Home Residents

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Abstract. Objectives

Hypertension occurs in >50% of US nursing home (NH) residents, but it is unclear which antihypertensive classes offer the best balance of benefits and risks in this population. The objectives of this study were to describe the patterns of antihypertensive medication treatment in this population, focusing on thiazide diuretics, and to determine the association between thiazide diuretics (DIURs) and outcomes important to NH patients

Methods

This observational cohort study was conducted in long-term NH residents treated for hypertension in the second quarter (Q2) of 2013, from all US NHs. The primary exposure was the frequency of use of antihypertensive treatment class (DIURs, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers [ARBs], calcium channel blockers, and β-blockers) according to Medicare Part D dispensing data. Because DIUR-related urinary symptoms were a focus, residents receiving nonthiazide diuretics were excluded. We ascertained continued medication use by class from Q2 to Q4 of 2013, and ascertained 6-month incontinence and hospitalization using data from Medicare claims and the Minimum Data Set.

Results

Of 152,902 NH residents treated for hypertension, 52.2% were treated with β-blockers (22% as a single agent), 39.7% with calcium channel blockers (14% as a single agent), 38.8% with angiotensin-converting enzyme inhibitors (14% as a single agent), 14.2% with DIURs (2% as a single agent), and 13.2% with ARBs (4% as a single agent). Overall, 55.1% were treated with 1 drug; 33.2%, with 2 drugs; and 11.8%, with 3 or more drugs. From Q2 to Q4, DIURs were more likely to have been discontinued than any other class (19.4% vs 14.1%–16.1% for each of the other 4 classes; all, $p < 0.05$) and less likely to have been started than any other class except ARBs (1.4% vs 3.8%–5.3% for each of the other 3 classes). Urinary incontinence occurred in 76.6% of the sample. In a multivariate logistic regression model, new DIUR use from Q2 to Q4 of 2013 was not significantly associated with urinary incontinence in Q4, and none of the antihypertensive drug classes were associated with 6-month hospitalization.

Conclusions

In 2013, long-term NH residents treated for hypertension were least likely to receive, more likely to discontinue, and less likely to start a new DIUR than any other first-line antihypertensive medication. DIURs were not associated with increased incontinence or hospitalization, so in the absence of indications for other drugs, DIURs may be a reasonable first-line choice for hypertension treatment in this population.

Disponible en: https://www.clinicaltherapeutics.com/article/S0149-2918(20)30118-1/fulltext

REVISTAS DE MEDICINA GENERAL

JAMA INTERNAL MEDICINE

Evaluation of a Common Prescribing Cascade of Calcium Channel Blockers and Diuretics in Older Adults With Hypertension

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Background:

Calcium channel blockers (CCBs) are commonly prescribed agents for hypertension that can cause peripheral edema. A prescribing cascade occurs when the edema is misinterpreted as a new medical condition and a diuretic is subsequently prescribed to treat the edema. The extent to which this prescribing cascade occurs at a population level is not well understood.

Objective:

To measure the association between being newly dispensed a CCB and subsequent dispensing of a loop diuretic in older adults with hypertension.

Design:

A population-based cohort study was performed using linked health administrative databases of community-dwelling adults 66 years or older with hypertension and new prescription drug claims from September 30, 2011, to September 30, 2016, in Ontario, Canada. The dates of analysis were September 1, 2018, to May 30, 2019.

Exposures

Individuals who were newly dispensed a CCB were compared with the following 2 groups: (1) individuals who were newly dispensed an angiotensin-converting enzyme inhibitor or angiotensin II receptor blocker and (2) individuals who were newly dispensed an unrelated medication

Results:

The cohort included 41 086 older adults (≥66 years) with hypertension who were newly dispensed a CCB, 66 494 individuals who were newly dispensed another antihypertensive medication, and 231 439 individuals who were newly dispensed an unrelated medication. At

index (ie, the dispensing date), the mean (SD) age was 74.5 (6.9) years, and 191 685 (56.5%) were women. Individuals who were newly dispensed a CCB had a higher cumulative incidence at 90 days of being dispensed a loop diuretic than individuals in both control groups (1.4% vs 0.7% and 0.5%, P < .001). After adjustment, individuals who were newly dispensed a CCB had increased relative rates of being dispensed a loop diuretic compared with individuals who were newly dispensed an angiotensin-converting enzyme inhibitor or angiotensin II receptor blocker (HR, 1.68; 95% CI, 1.38-2.05 in the first 30 days after index [days 1-30]; 2.26; 95% CI, 1.76-2.92 in the subsequent 30 days [days 31-60]; and 2.40; 95% CI, 1.84-3.13 in the third month of follow-up [days 61-90]) and individuals who were newly dispensed unrelated medications (HR, 2.51; 95% CI, 2.13-2.96 for 1-30 days after index; 2.99; 95% CI, 2.43-3.69 for 31-60 days after index; and 3.89; 95% CI, 3.11-4.87 for 61-90 days after index). This association persisted, although slightly attenuated, from 90 days to up to 1 year of follow-up and when restricted to a subgroup of individuals who were newly dispensed amlodipine.

Conclusion:

Many older adults with hypertension who are newly dispensed a CCB subsequently receive a loop diuretic. Given how widely CCBs are prescribed, interventions are needed to raise clinicians' awareness of this common prescribing cascade to reduce the prescribing of potentially unnecessary medications that may cause harm..

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