The synergistic effect of anticholinergic burden and depression on fall risk in older persons.

Raymond Salet[1], Nathalie van der Velde[2], Didi Rhebergen[3], Bob Van de Loo[4], Lotta Seppala[5], Natasja M. van Schoor[4], B H Stricker[6], and Marieke Henstra[2]

[1]UMC Utrecht
[2]Amsterdam UMC Locatie AMC
[3]Mental Health Care Institute GGZ Centraal
[4]Amsterdam Public Health Research Institute
[5]Amsterdam UMC Locatie Meibergdreef
[6]Affiliation not available

January 28, 2025

Abstract

\received

DD MMMM YYYY \acceptedDD MMMM YYYY Aim: Both anticholinergic burden (ACB) and depression are known to increase fall risk in older persons, next to increasing morbidity and mortality. However, the effect of depression on fall risk associated with ACB is unclear. This is relevant because most antidepressants have anticholinergic effects. The aim of this study was to assess the relationship between ACB and falls, and the impact of depression on this relationship. Methods: We cross-sectionally examined the relationship between both ACB and clinical depression and falls in the past 12 months, in a harmonized cohort of Dutch community dwelling persons (n=7884). For all analyses, we calculated adjusted odds ratios (ORs) and their 95% confidence intervals. We also investigated the impact of depression on the relationship between ACB and falls, by calculating interaction on both an additive and multiplicative scale. Results: Both a high ACB score ([?]3) and clinical depression were independently significantly associated with falls in the past 12 months. Additionally, there was a statistically significant interaction (p=0.038) between ACB and clinical depression on fall risk, both on an additive and multiplicative scale (1.13 and 1.44 respectively). Conclusion: In older persons, the presence of clinical depression strengthened the association between ACB and falls. We dissuade bluntly withholding pharmacological treatment to avoid falls, despite the ACB of antidepressants. In case of depression, we recommend considering non-pharmacological alternatives; choose pharmacological interventions with the lowest risk of adverse events; assess and treat other fall risk-factors; and perform multidisciplinary a medication review to minimize (accumulation of) ACB.

Hosted file

`The synergistic effect of ACB and depression on fall risk.docx` available at https://authorea.com/users/885397/articles/1263603-the-synergistic-effect-of-anticholinergic-burden-and-depression-on-fall-risk-in-older-persons