

Anticholinergic and sedative drug burden in elderly patients with cardiovascular diseases

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Background Exposure to anticholinergic and sedative drugs have been associated with adverse health outcomes in the elderly population, which can be measured in an individual patient using Drug Burden Index (DBI). Higher DBI values were associated with poorer cognitive and physical performance, which may negatively influence cardiovascular disease (CVD) therapy outcomes.

Purpose The aim was to assess the anticholinergic and sedative drug prevalence and burden in CVD patients.

Method A retrospective observational study was conducted on the Cardiology ward of University Hospital Medical Center. Data were collected from medical records. DBI was used to calculate the exposure, based on the therapy used before the hospital admission. Descriptive and statistical analysis was performed using IBM SPSS® Statistics ver. 22.

Findings : A total of 254 patients aged ≥ 65 were included in the analysis. Patients were comorbid (Charlson Comorbidity Index, mean \pm S.D., 3.18 ± 1.63), with the average number of drugs above 6 (6.21 ± 2.78). Anticholinergic or sedative drugs were used by 23 (9.1%) patients, with identified 19 different drugs. The highest frequency was observed for doxazosin (6; 2.4%), sertraline (6; 2.4%), memantine (4; 1.6%), clonazepam (3; 1.2%) and diazepam (3; 1.2%). The majority of patients had only one drug (15; 5.9%), 2 patients (0.8%) used 2, 4 patients (1.6%) used 3, and 2 patients (0.8%) used 4 different drugs with anticholinergic or sedative effects. Patients who were exposed to those drugs had longer length of hospital stay (15.74 vs 9.41 days, $p < 0.05$), and higher total number of drugs (7.61 vs 6.07, $p < 0.05$). The average DBI value equalled 1.11 ± 0.74 (total range 0.33-2.60). DBI < 1 was present in 13 (5.1%) patients, and higher DBI ≥ 1 in 10 (4%) patients.

Conclusion The study revealed lower than expected exposure to anticholinergic or sedative drugs. The results could be seen as beneficial, as the minimization of anticholinergic burden in CVD patients is highly recommended.