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Cardiovascular medicine use in adults with ADHD: a nationwide study in Australia

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Abstract

Background and Aims: Attention-deficit/hyperactivity disorder (ADHD) is increasingly recognised among adults, and recent evidence suggests that ADHD can double cardiovascular disease incidence in adulthood. However, research on cardiovascular medicine use among adults with ADHD is limited. We investigated cardiovascular medicine use among adults with ADHD.

Design and Methods: Using a nationally representative sample of dispensing claims, we identified 14,753 adults (aged 18+) with ADHD (with ≥2 ADHD medicine dispensings). We randomly selected 1:4 age- and sex-matched adults without ADHD (N=59,012). We estimated the prevalence of cardiovascular medicine use among adults with and without ADHD by sex and age group and by medicine type. We used conditional logistic regression models to examine the association of ADHD with cardiovascular medicine use.

Results: Cardiovascular medicine use was more prevalent among adults with ADHD than without (16.9% vs 9.3%, OR: 2.4, 95%CI:1.4-3.3), with highest difference among adults aged 18-29 (OR: 3.0, 95%CI: 2.7-3.5). Antihypertensives and lipid modifiers were the most common for both adults with and without ADHD. The patterns of cardiovascular medicine use varied by sex, showing elevated use of propranolol, furosemide, and spironolactone among females with ADHD. After excluding propranolol, the difference in cardiovascular medicine use among groups decreased, particularly for adults aged 18-29 (OR: 2.4, 95%CI: 2.1-2.8).

Conclusions: Our findings emphasise monitoring cardiovascular risks and events among people with ADHD from a young age and considering sex- and age-specific risk factors.

Impact: Individual-level dispensing claims can be used to monitor prescribing practice patterns, overall and within population sub-groups to inform health service responses. This study identified that adults with ADHD use cardiovascular medicines more frequently than adults without, reflecting increased cardiovascular morbidity among people with ADHD. The elevated use of cardiovascular medicines among females and young people with ADHD is partly driven by propranolol, a medicine often prescribed off-label for anxiety.