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Effects of Attention-Deficit/Hyperactivity Disorder on Patients Undergoing Percutaneous Coronary Intervention Procedure: Insights from the National Inpatient Sample


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Background

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that can affect children and adults and is characterized by deficits in attention, self-regulation, and executive functioning. Symptoms can seriously affect daily functioning and may present as hyperactivity, inattentive behaviors, or a combination of both. There are data to suggest patients with ADHD suffer from increased rates of cardiovascular disease, however not much is known specifically regarding the relationship between ADHD and undergoing Percutaneous Coronary Intervention. We sought to examine this relationship in greater detail by perusing the national inpatient sample database to describe in-hospital trends and outcomes among these patients.

Methods

Data were extracted from the National Inpatient Sample (NIS) Database for the years 2019 and 2020. The NIS was searched for hospitalizations of adult patients who Percutaneous Coronary Intervention. Out of this Cohort, ADHD patients were identified. Multivariate logistic was used to adjust for confounders.

In this nationally representative population-based retrospective cohort study, ADHD was associated with worse outcomes including developing arrhythmia, acute kidney injury and congestive heart failure exacerbation among patients who underwent PCI.

We did not find any statistical difference between the two groups when it came to mortality, length of stay and total hospital charges. This is most likely due to the small sample size of patients with ADHD undergoing PCI. More research is needed in this area.

Results

- This study included 181,944 patients who underwent PCI procedure, of which 518 (0.3%) patients were diagnosed with ADHD.
- ADHD patients who underwent a PCI procedure had **higher prevalence of hypertension** (40.1%% Vs 35.7%% p<0.001) compared to patients who just had PCI. However, there was no statistical difference in diabetes mellitus and chronic kidney disease.
- Astonishingly, there was **no in-hospital mortality for ADHD patients who underwent PCI**. There was no statistical difference between the two groups regarding length of stay or total hospital charges.
- On secondary analysis it was shown that ADHD patients who underwent PCI procedure had higher odds of developing **arrhythmia** (OR 1.002, CI 1.002-1.003, p<0.001), **acute kidney injury** (OR 1.001, CI 1.001-1.002, p<0.001), and **congestive heart failure exacerbation** (OR 1.002, CI 1.001-1.003, p<0.001).

