

N3 Impact of Comorbid Overactive Bladder on Healthcare Resource Utilization and Costs in Patients with Depression: A Retrospective, Matched Case-Control Cohort Analysis

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BACKGROUND: Studies have shown an association between depression and overactive bladder (OAB) and although the economic burden of these conditions has been characterized separately, the burden of co-occurring OAB and depression has not been examined.

OBJECTIVE: To examine healthcare resource utilization (HCRU) and costs among patients with depression with and without OAB.

METHODS: A retrospective, case-control cohort analysis was conducted comparing HCRU and costs among patients with both depression and OAB (cases) to patients with depression but not OAB (controls), using IBM MarketScan claims databases. Cases were matched with a 1:1 ratio to controls using propensity scores based on baseline demographic and clinical characteristics. To be eligible for inclusion, patients had to be aged ≥ 18 years, enrolled in a commercial or Medicare Supplemental health plan, have a diagnosis of depression between October 2011-December 2015 and a prescription claim for antidepressant medication. The first date of an OAB-related event was index for the case cohort; controls were assigned a proxy. HCRU and costs, all-cause and depression-related, were determined with medical and pharmacy claims during the 12 months post-index. Bivariate comparisons of HCRU and costs were conducted. Simple linear regression models using a log-link function were used to assess the relationship between OAB and healthcare costs.

RESULTS: Of the 39,085 cases and 308,736 controls who fulfilled study criteria, 37,997 cases were successfully matched on baseline characteristics to 37,997 controls. The matched cohorts had a mean age of 55 years and were 81% female. During the 12-month post-index period, cases experienced higher all-cause HCRU and costs than controls. Depression-related HCRU was generally similar across cohorts; however, outpatient, emergency room visits and unique depression medications were statistically significantly higher (all $P < 0.05$) among cases. Cases had 32% higher total all-cause and 13% higher total depression-related healthcare costs than controls ($P < 0.0001$ for both comparisons). Total mean (SD) all-cause costs were \$23,617 (\$36,268) for cases vs. \$17,841 (\$29,349) for controls ($P < 0.0001$). Total mean (SD) depression-related costs were \$1,796 (\$4,235) for cases vs. \$1,597 (\$3,863) for controls ($P < 0.0001$).

CONCLUSIONS: While higher all-cause costs and resource utilization is expected among patients with comorbid OAB and depression, this comorbidity was associated with 13% higher depression-related costs.

SPONSORSHIP: Astellas Pharma Global Development.

Q00-Q99 Congenital Malfunctions, Deformations, and Chromosomal Abnormalities (e.g., Spina Bifida, Cleft Palate)

Q1 Pilot Study to Estimate the Healthcare Cost Associated with Clinical Events in Vascular Ehlers-Danlos Syndrome

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BACKGROUND: Ehlers-Danlos syndromes (EDS) are a heritable, heterogeneous group of connective tissue disorders, all of which are included under a single ICD-10 code. The most serious subtype is vascular EDS (vEDS), caused by defective Type III collagen protein, leading to tissue fragility and increased susceptibility to serious, high-cost clinical events including ruptures in arteries and other organs.

OBJECTIVE: To utilize insurance claims patterns to differentiate vEDS patients from other subtypes of EDS and to estimate vEDS-associated clinical event rates and costs.

METHODS: We performed a retrospective analysis of insurance claims for >90 million individuals in the United States to identify vEDS patients from 1/1/2014-12/31/2017. In the absence of a specific vEDS ICD-9/10 code, we identified patients most likely to have vEDS by selecting patients with an EDS diagnosis who also have a history of a vEDS-related clinical event and absence of hypermobility. The rate of clinical events and healthcare cost per event was calculated overall and separately for aneurysm, arterial rupture, intracranial hemorrhage, intestinal perforation, and pneumothorax. We also examined use of anti-hypertension medications.

RESULTS: We identified 3,614 vEDS patients with a mean age of 36 ± 17 years. Of patients in the study, 15.9% had at least one vEDS-related clinical event, and 31.8% of those had more than one event. Of all captured clinical events, 47% involved an arterial aneurysm, 20% arterial dissection/rupture, 8% intestinal perforation, 17% intracranial hemorrhage, and 5% pneumothorax. The average cost per event was >\$15,000 for arterial aneurysm, >\$81,000 for arterial dissection/rupture, >\$80,000 for intracranial hemorrhage, >\$146,000 for intestinal perforation, and >\$30,000 for pneumothorax. 34% of vEDS patients were treated with anti-hypertension medications, but these were not associated with lower event rates.

CONCLUSIONS: This study assessed the clinical burden and healthcare utilization of vEDS patients in the United States. We identified a presumed vEDS population based on phenotypic presentation in administrative claims. The rate of serious clinical events reflects a high clinical burden and healthcare costs for these patients. These data suggest that treatments that reduce the number of events in vEDS patients would have a substantial effect on healthcare resource utilization.

SPONSORSHIP: Acer Therapeutics.