Gastrointestinal Medication Burden Among Persons with the Ehlers-Danlos Syndromes

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Background:

The Ehlers-Danlos Syndromes (EDS) are a group of heritable disorders of connective tissue associated with an increased prevalence of both structural and functional gastrointestinal (GI) conditions.[1-3] Despite the evidence for increased GI symptoms[1-3] and a previous study reporting increased use of acid suppressants, as well as drugs for vomiting and constipation among persons with EDS,[3] we were unable to find published data quantifying the full range of prescription claims for GI drugs across sexes and both children and adults. We hypothesized that there would be a higher proportion of GI drug prescription claims among persons with EDS compared to their matched controls. Secondary goals were: a) to compare prescription claims within specific GI drug groups; b) to examine patterns across age and sex; and c) to evaluate drug burden herein defined as the cumulative number of prescription claims across drug groups during a two-year period of observation.

Methods:

We used 10 years (2005–2014) of administrative claims data comprised of 4,294 people with clinician-diagnosed EDS, ages 5–62 years, and compared their frequency of GI drug prescription claims to their age-, sex-, state of residence-, and earliest claim date-matched controls. To be included, individuals had to be continuously enrolled for 2 years after the earliest claim date in a MarketScan-covered insurance plan.

Results:

Prescription claims for at least one GI drug group were reported in 38.6% of persons with EDS compared to 16.4% of controls. The difference was significant both in children (25.7% EDS children vs. 7.4% controls; $P<0.0001$) and adults (45.1% EDS adults vs. 20.9% controls; $P<0.0001$); and among women (44.0% EDS vs. 19.2% controls; $P<0.0001$) and men (25.3% EDS vs. 9.6% controls; $P<0.0001$). Among persons with EDS, the most commonly prescribed GI drugs

were acid suppressants (23.4% EDS vs. 8.8% controls; P<0.0001), followed by anti-emetic/prokinetic medications (16.7% EDS vs. 4.9% controls; P<0.0001), and irritable bowel syndrome (IBS) drugs (15.9% EDS vs. 6.7% controls; P<0.0001). Exploratory analyses of prescription claims for visceral hypersensitivity (VHS) drugs were also higher among persons with EDS compared to controls. (19.3 % EDS vs. 3.4% controls, P<0.0001).

In general, we observed a steady increase in most GI prescription claims with age among women and men with EDS compared to their sex-matched controls. Compared to controls, persons with EDS had higher prescription claims for one, two, and three GI drug groups over the two-year observation period.

Conclusions:

Prescription claims for acid suppressants, anti-emetics, IBS drugs, and VHS drugs are significantly higher in persons with EDS as compared to matched controls. Predominant medication burden occurs in women with EDS, and there is a striking rise in claims for anti-emetic, prokinetic, and VHS medications among adolescent females with EDS.

Our study highlights the important issue of high GI medication prescriptions underscoring that GI dysmotility is common among people with EDS. GI prescription claims especially increase among women with EDS in the adolescent years, which suggests a critical time window on which to focus future research and possible interventions.

References

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Conflict of Interest:

None