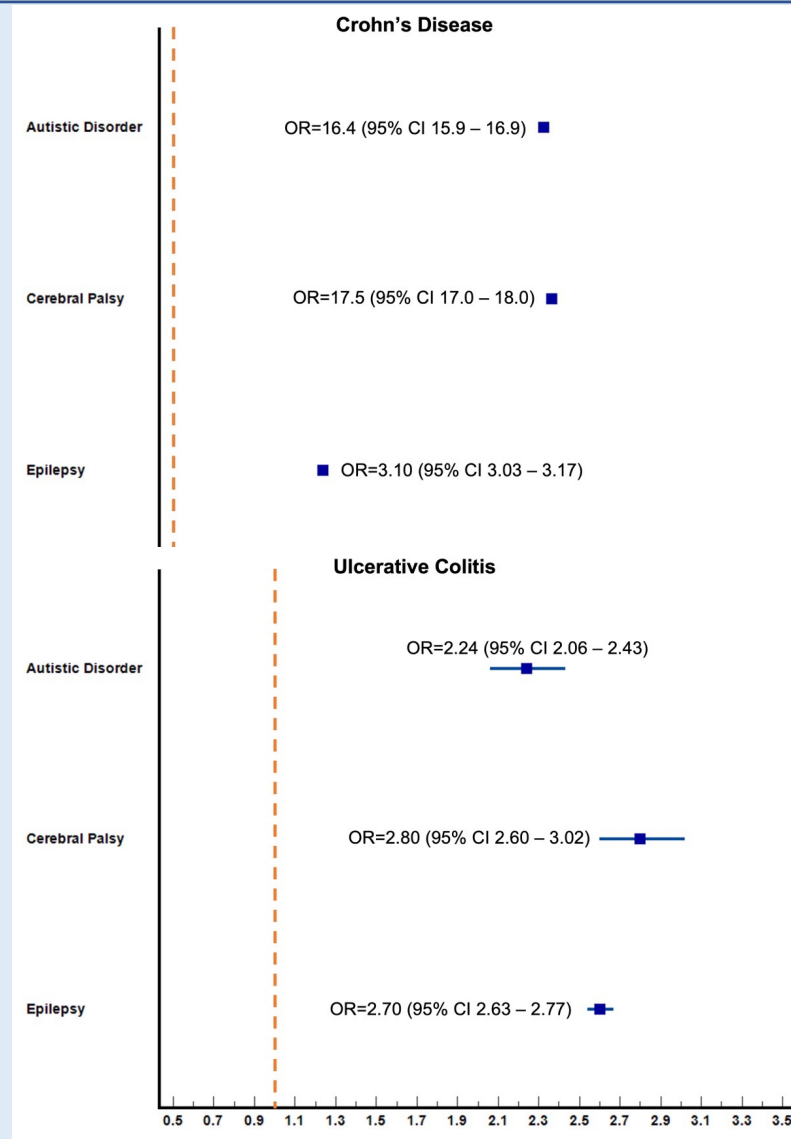


Background:

- Patients with neurodevelopmental disorders (NDD) were much more likely to report gastrointestinal symptoms
- Inflammatory bowel disease (IBD) is known to induce gut inflammation and microbiota dysbiosis.
- We investigated the prevalence of inflammatory bowel disease (IBD) among patients with neurodevelopmental disorders.

Methods:

- Commercial database (Explorys Inc, Cleveland, OH) with 26 major integrated US healthcare systems.
- Inclusion criteria
 - Age >18
 - Diagnosed with either autism spectrum disorder (ASD), cerebral palsy (CP), or epilepsy.
 - Diagnoses of Crohn's disease (CD) and ulcerative colitis (UC)



Univariate analysis of IBD risk in neuro-developmental disorders. OR; odds ratio, CI; confidence interval

Results:

- A total of 889,540 patients with NDD were identified.
- 12,730 (1.43%) and 6,700 (0.75%) developed either CD or UC compared to 0.57% in individuals without NDD.
- Patients with NDD had a significantly higher risk of CD [OR: 4.25; 95% CI: 4.17 – 4.33] and UC [OR: 2.60; 95% CI: 2.54 – 2.67] compared to patients without NDD.
- Patients with ASD [OR: 16.4; 95% CI: 15.9 – 16.9] and CP [OR: 17.5; 95% CI: 17.0 – 18.0] were associated with the highest risk of CD.

Discussion:

- Patients with NDD had a significantly higher risk of IBD.
- CP and ASD patients were associated with a disproportionately high risk of CD.
- These findings may suggest a bi-directional relationship between neurological disorders and IBD.