



UPPER GASTROINTESTINAL MANIFESTATIONS OF SARS-COV- 2 INFECTION IN THE UNITED STATES: A POPULATION-BASED STUDY



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The authors have no conflict of interest to disclose

INTRODUCTION

- ❖ Extrapulmonary manifestations of SARS-CoV-2 infection are frequently reported and correlate with disease severity and mortality.
- ❖ Our study aimed to assess the association between upper GI disorders and upper GI symptoms with COVID-19 infection.

METHODS

- ❖ We queried a large multi-center database (Explorys Inc,) an aggregate of EHR of 26 different healthcare systems with 360 hospitals. In the last two years, we identified patients with a SNOMED- CT diagnosis of "COVID-19".
- ❖ We compared Demographic data and clinical characteristics of patients with and without a diagnosis of COVID-19.

DISCUSSION

- ❖ In this large population-based study, we found an increased association of upper GI symptoms and upper GI disorders with a diagnosis of COVID-19 infection.
- ❖ It is unclear if patients with a concomitant upper GI etiology have a prolonged or more severe clinical course or prolonged virus shedding in GI specimens. Further prospective studies are required to evaluate this association.

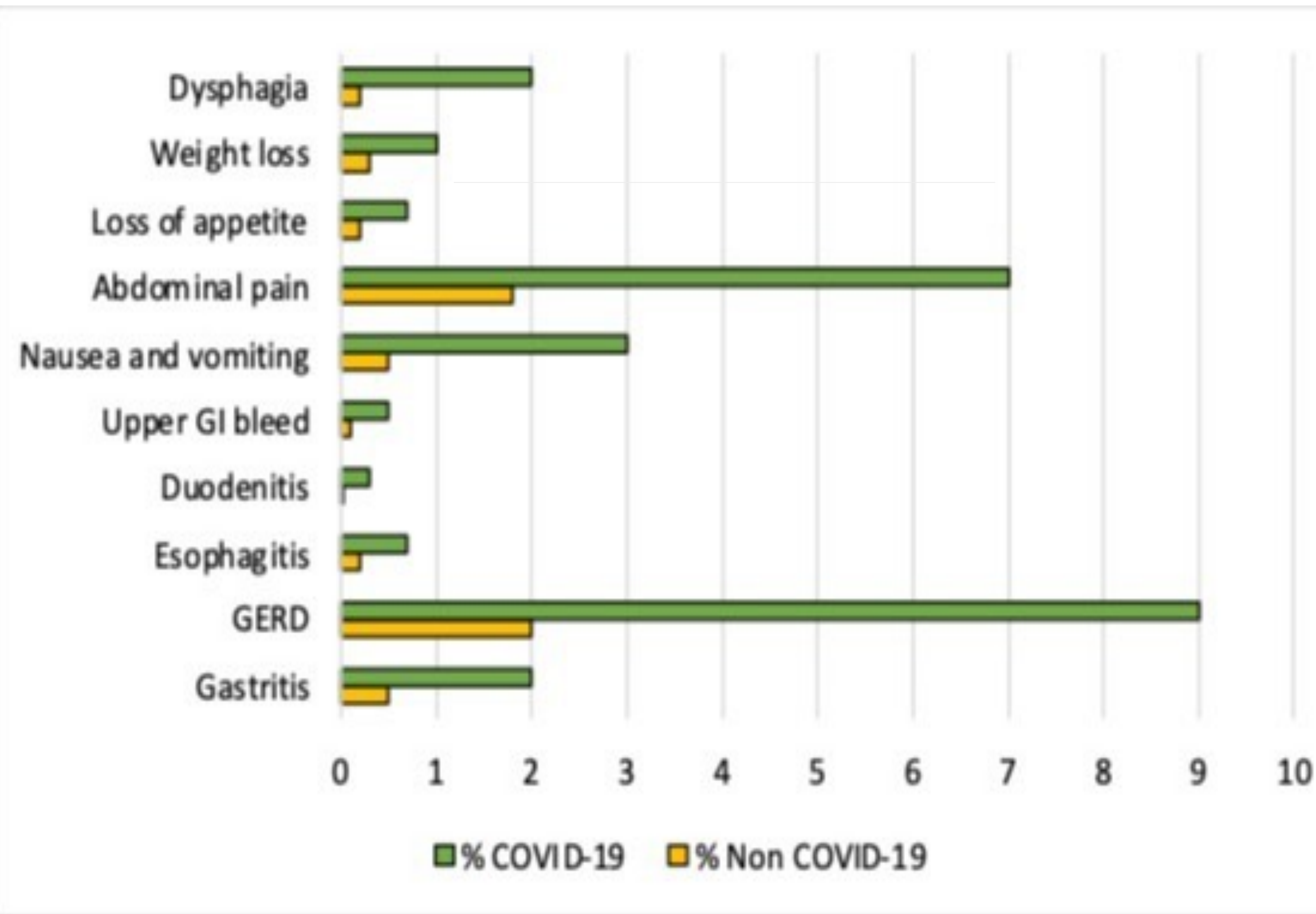


Figure 1: A comparison of the prevalence of upper gastrointestinal symptoms and conditions in patients with and without COVID-19 infection.



RESULTS

- ❖ Among the 70,039,864 individuals included in this database, 34,720 individuals were diagnosed with a COVID-19 infection, a prevalence rate of 493 per 100,000.
- ❖ COVID-19 infection was more commonly associated with patients of age >65 years (OR 1.18, $p < 0.0001$) and in African American (OR 2.90, $p < 0.0001$). There was no statistically significant gender-based differences.
- ❖ COVID-19 patients were more likely to be suffer from upper GI disorders such as gastritis (OR 4.38), (GERD) (OR 6.02), esophagitis (OR 3.84), upper GI bleeding (OR 4.91), and duodenitis (OR 4.95), $p < 0.0001$ to all.
- ❖ COVID-19 patients were also found to be more likely to have upper GI symptoms such as nausea and vomiting (OR 4.12), abdominal pain (OR 3.70), loss of appetite (OR 3.27), weight loss (OR 2.98), and dysphagia (OR 11.84), $p < 0.0001$ to all (figure 1).

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