

COVID Gastrointestinal Disease

Mazzella F¹ and Bologna C²

¹Ospedale Cotugno, Azienda dei Colli, Napoli, Italy

²Ospedale del Mare, ASL Na 1 centro, Napoli, Italy

Background: The recent coronavirus pandemic (COVID-19) has gained attention especially for the severe acute respiratory syndrome (SARS-CoV-2) caused by the infection.

While the incidence of gastrointestinal symptoms, such as diarrhea, was initially reported as negligible, not exceeding 1-3.8%, a more recent study suggested that approximately 3.5% of patients report vomiting and even 10% nausea and diarrhea. In a Chinese study of 74 patients it was shown that up to 28% of cases presenting nausea, vomiting and diarrhea didn't present respiratory symptoms highlighting that the "gastrointestinal" presentation can also be the only manifestation of the disease.

In patients who underwent endoscopy of the digestive tract, the virus was demonstrable on biopsies of the esophagus, stomach, duodenum and rectum, proving that the virus is present throughout the gastrointestinal tract.²

Several studies have reported that SARS-CoV-2 is isolable in faeces. In a series of 73 hospitalized subjects, the virus was present in the faeces from 1 to 12 days from the beginning of the infection in more than 50% of cases and > 20% of these patients

had a positive search in the faeces even after the virus was no longer demonstrable in the respiratory tract [1].

ACE2 is highly expressed in the small intestine, particularly at the enterocyte level. Discussion: more recently it has been reported that the penetration of SARS-CoV-2 into cells depends not only on ACE-2 but also on the transmembrane serine proteinase [2] which cleaves the protein S of human coronaviruses on the cell membrane, and that therefore they are both critical for viral kinetics. ACE2 and TMPRSS2 are co-expressed not only in alveolar cells but also in the glands of the upper esophagus, ileum and colon, suggesting that the virus can invade the digestive tract.

Prevalence of infection and for stable preventive measures and more effective therapeutic strategies.

References

1. Huang C, Wang Y, Li X, Ren L, Zhao J, et al. (2020) Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 395: 497-506.
2. Lin L, Jiang X, Zhang Z, Huang S, Zhang Z, et al. (2020) Gastrointestinal symptoms of 95 cases with SARS-CoV-2 infection. *Gut* 69.