

Introduction

In a subset of Covid19-convalescent patients, a multitude of long-term sequelae are increasingly being reported.

We report four cases with varying GI manifestations after recent COVID-19 infection.

Case 1

23 year old man contracted Covid-19 and had a protracted course of respiratory illness. Despite resolution of respiratory symptoms and dysgeusia, he continued to experience early satiety, postprandial nausea, vomiting and unintentional weight loss.

Gastric Emptying Scan (GES) revealed **gastroparesis** (figure A). Dietary modification and metoclopramide led to symptomatic improvement.

Case 2

39 year old woman with migraines, suffered from Covid-19 infection where anosmia and respiratory symptoms lasted for two weeks. Despite resolution of initial symptoms, she started experiencing **nausea and vomiting**, and reported **stereotypical** symptoms with complete absence of vomiting between episodes. Endoscopic examination, CT head and GES were normal. Urine tox screen was negative for cannabinoids. She responded favorably to amitriptyline and ondansetron.

Case 3

47 year old man started experiencing severe constipation associated with abdominal pain and bloating soon after being diagnosed with Covid-19. Three months after resolution of respiratory symptoms, in addition to constipation, he began reporting postprandial fullness, early satiation and epigastric pain. GES showed **gastroparesis** and a Sitzmarks® Study revealed **delayed colonic transit** (figure B). Prucalopride was started, leading to improvement in symptoms.

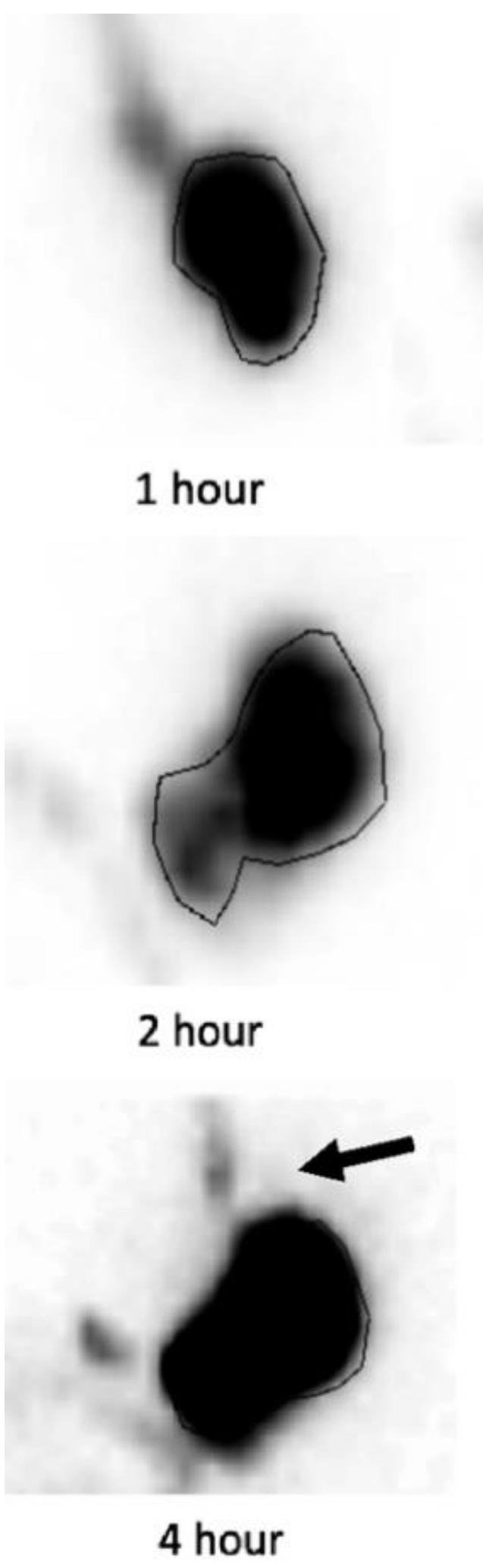


Figure A: . Abnormal gastric emptying study demonstrating delayed emptying and esophageal reflux (arrow)

Case 4

74 year old woman obesity and diabetes was hospitalized and intubated for severe respiratory distress due to Covid-19. After discharge, she had persistent symptoms of brain fog, fatigue, dyspnea as well as **diarrhea and abdominal cramping**, persisting despite loperamide and dicyclomine.

C.difficile toxin, random colonic biopsies and H₂ breath test were unremarkable. Her symptoms eventually improved with rifaximin.



Figure B: Abnormal colonic transit study showing large amount of stool and retention of markers throughout the entire colon on day 7

Summary

	Case 1	Case 2	Case 3	Case 3
Age	23 years	39 years	47 years	74 years
GI Manifestation	Early satiety Nausea Vomiting	Stereotypical emesis	Early satiety Constipation Bloating	Brain fog Diarrhea Cramps
Diagnosis	Gastroparesis	Cyclic Vomiting Syndrome	Pan-gut dysmotility	Post-infectious IBS-D

Conclusions

We report four cases with post-Covid gastroparesis, cyclical vomiting syndrome, pan-gut dysmotility, and post-infectious IBS phenotypes. The pathophysiology of post-infectious-gut-brain disorders is still obscure. The current conceptual framework implicates acquired neuropathy, altered motility, intestinal barrier disruption and persistent intestinal inflammation.

Similar pathophysiology may be involved in COVID-19 infection leading to sustained neurogastroenterological dysfunction and gut dysmotility.