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Post-infection functional gastrointestinal disorders following Corona Virus Disease-19: A case-control study

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INTRODUCTION

Since acute infective gastroenteritis may cause postinfection irritable bowel syndrome (PI-IBS) and functional dyspepsia (FD) and the Severe Acute Respiratory Syndrome Corona Virus-2 (SARS-CoV-2) affects the gastrointestinal (GI) tract, Corona Virus Disease-19 (COVID-19) may cause PI-functional GI disorders (FGID). However, there is no published study on this yet.

We prospectively studied the frequency and spectrum of PI-FGIDs among COVID-19 and healthy controls, and the risk factors for its development.

AIM

- i. To study the frequency and the spectrum of PI-FGID following COVID-19 and healthy controls
- ii. To study the comparison of the frequency of PI-FGID among symptomatic and asymptomatic patients with COVID-19, and
- iii. To study the factors associated with the development of post-COVID-19 FGIDs

METHOD

- i. 280 (164 [58.6%] symptomatic and 116 [41.4%] asymptomatic) patients with COVID-19 and 264 healthy controls were followed up at 1, and 3 months using Hindi- and Bengali-translated validated Rome Questionnaires for the development of chronic bowel dysfunction (CBD), dyspeptic symptoms, and their overlap and at 6-month for IBS, FD and their overlap.
- ii. Psychological comorbidity was studied using the Rome III Psychosocial Alarm Questionnaire.

RESULTS

- At 1-, and 3-months, 16 (5.7%), 16 (5.7%), 11 (3.9%) and 24 (8.6%), 6 (2.1%), 8 (3.2%) developed CBD, dyspeptic symptoms, and their overlap, respectively; among healthy controls, none developed dyspeptic symptoms and one developed CBD at 3-month (p<0.05).
- At six-month, 15 (5.3%) (Rome III, 14 also fulfilled Rome IV criteria), 6 (2.1%), and 5 (1.8%) of the 280 COVID-19 patients developed IBS, FD, and IBS-FD overlap, respectively and only one healthy control developed IBS at 6-months (p<0.05 for all except IBS-FD overlap).
- iii. The risk factors for post-COVID-19 FGIDs at 6-month included the presence of symptoms, particularly GI, anosmia, ageusia, and presence of CBD, dyspeptic symptoms or their overlap at 1 and 3-months and the psychological comorbidity.

CONCLUSIONS

- The current study findings document the earlier published hypothesis that COVID-19 might lead to post-COVID-19 FGIDs.
- . The current study is the first to document this. Post-COVID-19 FGIDs may pose a significant economic, social, healthcare burden to the world, considering the massive load of COVID-19 during this pandemic.

Fig1. Venn diagrams showing chronic bowel dysfunction symptoms, and their overlap at one, and three months (IBS), functional dyspepsia (FD) and their overlap at size



Fig 2. Kaplan-Meier curves showing the developm gastrointestinal disorders



Organised by:

REFERENCES

- 1. Ghoshal UC, Ghoshal U, Dhiman RK. Gastrointestinal and Hepatic Involvement in Severe Acute Respiratory Syndrome Coronavirus Hepatol 2020;10:622-628.
- 2. Ghoshal UC, Ghoshal U, Mathur A, et al. The Spectrum of Gastrointestinal Symptoms in Patients With Coronavirus Disease-19: Pre Severity, and Outcome. Clin Transl Gastroenterol 2020;11:e00259.
- 3. Schmulson M, Ghoshal UC, Barbara G. Managing the Inevitable Surge of Post-COVID-19 Functional Gastrointestinal Disorders. Am



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on (CBD), dyspeptic and irritable bowel syndrome a months follow-up	Table 1. Relationship between presence of GI symptoms and development of post-COVID-19 GI consequences (CBD, dyspeptic symptoms, IBS, FD and their overlap)				oms s (CBD,
6 months	Parameter s	GI symptoms with or without anorexia (n=8)	Anorexia alone (n=48)	GI symptoms absent (n=144)	P-value
	Presence of CBD, dyspeptic symptoms and their overlap at 1- mo				
IBS ED UBS ED overlan	CBD only	8 (9.1%)	6(12.5%)	2(1.4%)	<0.001
ent of functional	Dyspeptic symptoms only	10 (11.4%)	4(8.3%)	2 (1.4%)	
	Overlap	9 (10.2%)	1 (2.1%)	1 (0.7%)	
No GI symptoms B	None	61 (69.3%)	37 (77.1%)	139 (96.5%)	
P=0.032	Presence of CBD, dyspeptic symptoms and their overlap at 3- mo				
	CBD only	14 (15.9%)	8 (16.6%)	2(1.4%)	<0.001
·	Dyspeptic symptoms only	2 (2.3%)	1(2.1%)	3(2.1%)	
3 4 5 6 month	Overlap	7 (8%)	1(2.1%)	1(0.7%)	
monut	None	65 (73.9%)	38 (79.2%)	138 (95.8%)	
H-mo 1-mo 2-mo 3-mo 4-mo 5-mo 6-mo 88 77 77 75 75 75 0	Presence of IBS, FD and their overlap at 6-mo				
92 181 181 179 179 179 0	IBS	6 (6.8%)	7 (14.6%)	2(1.4%)	0.0002
	FD	2(2.3%)	2 (4.2%)	2(1.4%)	
s 2 Infection: A Review. J Clin Exp edictors, Relationship With Disease	IBS-FD overlap	5 (5.7%)	0(0%)	0(0%)	
n J Gastroenterol 2021;116:4-7.	None	75 (85.2%)	39 (81.2%)	140(97.2%)	

