

THE IMPACT OF COVID-19 ON ANXIETY, DEPRESSION, AND STRESS IN WOMEN WITH INFLAMMATORY BOWEL DISEASE: A CROSS-SECTIONAL SURVEY

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Background: Women with inflammatory bowel disease (IBD) are at an increased risk of mental-health illness and reduced fertility.

Aims: To determine the impact of the coronavirus disease 2019 (COVID-19) pandemic on the mental-health and pregnancy plans of women with IBD.

Methods: Women with IBD (age 18-45) were asked to anonymously complete surveys on baseline demographics, IBD characteristics, and mental health comorbidities. They were also asked to comment on prior symptoms consistent with COVID-19 and whether they were tested for the virus. Finally, patients were asked to complete three mental health surveys to reflect on anxiety (Generalized Anxiety Disorder-7 (GAD7)), depression (Patient Health Questionnaire-9 (PHQ9)), and stress (Perceived Stress Scale (PSS)) symptoms prior to and during the pandemic. Total scores were reported as continuous variables and means with standard deviations (SD) were compared using paired T-tests.

Results: Twenty-nine patients (12 UC, 17 CD) were included. 14 patients were preconception, 12 were pregnant, and 3 were post-partum. The mean age was 31.4 (SD 3.7). Fifteen of 29 (51.7%) of patients were on anti-tumor necrosis factor therapy. Twelve (41.4%) and 6 (20.7%) patients had pre-morbid anxiety and depression prior to the pandemic. COVID-19 symptoms were reported in 8 patients (27.5%). Six patients had undergone COVID-19 testing, all of whom had a negative test. Four patients indicated that COVID-19 had negatively affected their plans for pregnancy, with reasons reported including fear of the hospital (n=1), fear of COVID-19 impact on the fetus (n=2), and uncertainty on the duration of COVID-19 (n=1). During the pandemic, fourteen of 28 (50%) patients experienced symptoms of anxiety (GAD score > 5), with a majority (70%) experiencing mild symptoms (score 5-9). During the pandemic, 60.7% (17/28) and 71.4% (20/28) reported symptoms of depression (PHQ9 > 4) and at least moderate stress (PSS > 14) respectively. Furthermore, compared to pre-pandemic, 57.1% (16/28) and 67.9% (19/28) had an increase in depression and stress symptoms during the pandemic respectively. This appeared to only apply to

those with CD, but not UC (Table 1). Compared to pre-pandemic, those with stricturing CD appeared to have higher stress scores whereas those with fistulizing and perianal disease appeared to have higher depression scores during the COVID-19 pandemic (Table 1). A lower house-hold income and a reduction in exercise during the COVID-19 pandemic appeared to increase the risk of stress, depression, and anxiety symptoms.

Conclusions: Over half of women with IBD indicate worsening of anxiety, depression, and stress symptoms during the COVID-19 pandemic. It remains critical that health-care professionals address these mental health concerns during these otherwise difficult times.

Perceived Stress Scale Score (mean, SD)				
	Before COVID19	During COVID19	Mean difference	P
IBD	15.9 (4.4)	18.7 (6.2)	2.7 (3.9)	0.001
CD	16.3 (4.7)	20.3 (6.6)	3.9 (4.1)	0.002
Stricturing	17.1 (5.2)	21.6 (8.0)	4.4 (3.9)	0.024
Fistulizing	15.1 (2.9)	19.3 (6.7)	4.2 (4.2)	0.060
Perianal	15.5 (3.1)	20.8 (7.4)	5.3 (4.7)	0.112
UC	15.4 (4.1)	16.6 (5.3)	1.2 (3.1)	0.215
Patient Health Questionnaire-9 Score (mean, SD)				
	Before COVID19	During COVID19	Mean difference	P
IBD	4.7 (4.5)	6.6 (4.7)	2.1 (4.1)	0.012
CD	5.1 (5.4)	7.9 (4.7)	2.7 (4.5)	0.032
Stricturing	5.8 (9.5)	9.5 (6.9)	3.7 (3.8)	0.06
Fistulizing	3.0 (2.4)	8.0 (3.9)	5.0 (3.1)	0.011
Perianal	2.8 (2.2)	9.5 (2.3)	6.8 (1.5)	0.003
UC	3.8 (3.1)	5.1 (4.3)	1.3 (3.4)	0.224

Table 1: The impact of the COVID-19 pandemic on overall stress (quantified by the perceived stress scale) and depression (quantified by the patient health questionnaire-9)

Funding Agencies: None