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SCIENTIFIC LETTER

Impact of the COVID-19 pandemic on treatment adherence in patients with inflammatory bowel disease: Experience of a tertiary hospital in Chile[☆]



Impacto de la pandemia covid-19 en la adherencia al tratamiento en pacientes con enfermedad inflamatoria intestinal: experiencia de un centro terciario en Chile

The current coronavirus (COVID-19) pandemic has limited access to medical care, drugs and endoscopic procedures, which could affect treatment adherence by patients with inflammatory bowel disease (IBD), with the subsequent risk of relapse, deterioration in quality of life, higher financial cost in health care and an increased risk of disability and complications.¹ Furthermore, this pandemic has raised questions about the use of immunomodulators, biologic therapy and small molecules, with regard to patients and medical teams. Although different societies have recommended maintaining these therapies during the pandemic,^{2,3} little is known about treatment adherence in patients with IBD.

To answer this question, we conducted a descriptive, cross-sectional study between 24 August and 10 September 2020 in patients on follow-up on the IBD Programme of the Clínica Las Condes [Las Condes Clinic] (n=1432). A survey was sent out by *e-mail* (REDCap[®]) to find out about the treatment for IBD and adherence, causes of treatment discontinuation or modification and the fear of contracting COVID-19. Demographic and clinical data were obtained from the IBD registry and the statistical analysis was performed using frequency, medians and the Mann-Whitney test ($p < 0.05$). A total of 458 (32%) patients responded to the survey during the study period; 66% were women, 65% had ulcerative colitis (Table 1). The drugs most often used at the beginning of the pandemic were oral and/or topical salicylates (30%) and immunomodulators and/or biologics (27%). 9% of the patients discontinued treatment,

mainly at the patient's own decision (70%), and 22% modified the treatment (62% for medical indication in the context of IBD management, either due to flare-up or modification of treatment on reaching clinical remission). In the univariate analysis, patients on immunomodulator/biologic therapy abandoned treatment less frequently ($p = 0.018$). Treatment adherence was not related to other variables such as age, gender, type of IBD, comorbidities or employment status. 70% of the patients reported fear of contracting COVID-19 due to IBD. Women reported a significantly greater fear of developing the infection (women 73 [IQR 50–90] vs. men 57 [IQR 30–78.7]; $p = 0.0008$). On the other hand, although patients with other comorbidities reported a significantly greater fear of developing COVID-19 (comorbidity 72.5 [IQR 50–90] vs. no comorbidity 69 [IQR 40.5–80]), this was not reflected in a greater rate of discontinuation of therapy. Immunomodulator/biologic therapy treatment was not related to an increased fear of developing COVID-19.

The negative impact of the COVID-19 pandemic on stress and anxiety can affect the clinical outcomes of patients with chronic conditions, as is the case of IBD, whose development and evolution are linked to these factors. As in other studies,⁴ a significant percentage of patients feared developing COVID-19. Despite this, and in line with other studies,^{4,5} our results demonstrate that a high percentage of patients have continued to adhere to their treatment during this pandemic period, which could be attributed in part to ready access by patients to their medical team (nurse specialised in IBD or treating gastroenterologist) by *e-mail*, phone or telemedicine. This has allowed recommendations to be made not only for the prevention of SARS-CoV-2 infection, but also on the need to maintain treatment, thus reducing the possibility of flare-ups, use of corticosteroids or hospitalisations.^{2,3}

It is these communication mechanisms between the medical team and the patient that could explain why, in our results, patients on immunomodulator/biologic therapy, regarded as a more severe group, presented greater treatment adherence than those treated with mesalazine. Additionally, factors such as advanced age and the presence of comorbidities, such as diabetes, hypertension and other cardiovascular diseases, have been associated with an unfavourable evolution in patients with IBD and COVID-19. Although our results show that patients with a comorbidity reported a significantly greater fear of developing COVID-19, this was not reflected in lower treatment adherence, confirming that communication between the medical team and the patient is essential during the pandemic.

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Table 1 Demographic and clinical characteristics of patients with inflammatory bowel disease in relation to discontinuation of treatment during the COVID-19 pandemic.

	Total n = 458 (%)	Discontinued treatment n = 39 (%)	Did not discontinue treatment n = 419 (%)	p-Value
<i>Age (median; range)</i>	38 (18–90)			
<60 years	426	37 (95)	389 (93)	0.634
≥60 years	32	2 (5)	30 (7)	
<i>Sex</i>				
Female	302 (66)	29 (74)	273 (65)	0.246
Male	156 (34)	10 (26)	146 (35)	
<i>Employment status</i>				
No employment activity	168 (37)	14 (36)	156 (37)	0.692
In-person work	78 (17)	5 (13)	73 (17)	
Teleworking	210 (46)	20 (51)	190 (45)	
<i>Diagnosis</i>				
Ulcerative colitis	298 (65)	27 (69)	271 (65)	0.736
Crohn's disease	138 (30)	11 (28)	127 (30)	
Inflammatory bowel disease unclassified (IBDU)	22 (5)	1 (3)	21 (5)	
<i>Smoker</i>	56 (12)	5 (13)	51 (12)	0.905
<i>Treatment at the beginning of the pandemic</i>				–
Oral 5-ASA	224 (49)	21 (54)	203 (48)	
Local 5-ASA	114 (25)	13 (33)	101 (24)	
Biologic therapy	113 (25)	4 (10)	109 (26)	
Azathioprine/mercaptopurine	107 (23)	6 (15)	101 (24)	
Methotrexate	11 (2)	1 (3)	10 (2)	
Prednisone	20 (4)	2 (5)	18 (4)	
Budesonide	15 (3)	3 (8)	12 (3)	
No treatment	47 (10)	0 (0)	47 (11)	
<i>Immunosuppressive treatment</i>				
With immunomodulator/BT	199 (43)	10 (26)	189 (45)	0.018
Without immunomodulator/BT	249 (57)	29 (74)	230 (55)	
<i>Cause of treatment discontinuation</i>	–		–	–
Patient decision		27 (70)		
Medical indication		4 (10)		
Lack of stock		4 (10)		
Financial problems		4 (10)		
<i>Modification of treatment during pandemic</i>	102 (22)	–	–	–
Patient decision	28 (27)			
Medical indication	63 (62)			
Lack of stock	8 (8)			
Financial problems	3 (3)			
<i>Fear of contracting COVID-19 due to inflammatory bowel disease (median; IQR) (scale from 0 to 100, where 0 is no fear and 100 extremely fearful)</i>	70 (43–84)	75 (50–90.5)	70 (47.25–84)	0.190

BT: biologic therapy; IBD: inflammatory bowel disease; IQR: interquartile range; 5-ASA: 5-aminosalicylates.

In this study, whether or not the patient had an IBD flare-up during the pandemic was not included in the variables, which is a limitation since it was not possible to establish an association with lack of treatment adherence.

In conclusion, the results of this survey allow us to adequately estimate the global impact of COVID-19 on treatment adherence in patients with IBD. Education about the relationship between IBD, drugs and COVID-19 is undoubtedly crucial in allaying fears and in maintaining adequate treatment adherence. Clear educational strategies must be

established to reduce the possibility of unnecessary morbidity and mortality through a lack of treatment adherence.

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Rare cause of acute abdomen: Small bowel metastasis from lung cancer[☆]



Causa rara de abdomen agudo: metástasis intestinales de cáncer de pulmón

Lung cancer small bowel metastases are rare.¹ Their diagnosis is difficult, as most of them are asymptomatic, although they can sometimes cause symptoms related to complications. In the presence of abdominal symptoms in patients with lung cancer, we should suspect a lung cancer small bowel metastasis.^{2,3}

We describe 2 cases of patients with acute abdomen secondary to lung cancer small bowel metastasis.

Case 1

58-year-old male, smoker, who presented in the Emergency Room for a seizure. Bilateral supratentorial masses consistent with brain metastases were observed on the brain computed tomography (CT). The chest-abdomen-pelvis CT revealed a pulmonary nodule in the left upper lobe infiltrating the pleura, with mediastinal and intra-abdominal lymphadenopathy. On day 7, a CT scan was performed for abdominal pain, which revealed pneumoperitoneum, distension of the small bowel loops and free fluid (Fig. 1A). Urgent surgery was performed, in which a perforated jejunal tumour and generalised peritonitis were observed. Segmental resection and anastomosis were performed. Subsequently, CT-guided chest puncture histology revealed a lung adenocarcinoma. The patient was discharged 8 days later without complications (Clavien 0, CCI:

0). The histological study of the small intestine showed a poorly differentiated adenocarcinoma consistent with pulmonary origin (Fig. 1B and C). The patient died 2 months after surgery due to tumour progression (Clavien V, CCI: 100).

Case 2

A 46-year-old woman, on immunotherapy with nivolumab for undifferentiated stage IV carcinoma of unknown origin, stable for one year. She was hospitalised for general malaise and vomiting. Intestinal obstruction secondary to jejunal invagination was observed on the abdominal CT (Fig. 1E–G). The surgery confirmed invagination, with a palpable and indurated lesion inside, with no further findings; segmental resection and anastomosis were performed. The histological result was infiltration due to lung adenocarcinoma (Fig. 1H and I). The patient presented with deep vein thrombosis and acute respiratory failure secondary to pleural effusion (Clavien IIIb, CCI: 33.5). She was readmitted one month later for pleural effusion. She received palliative treatment and subsequently died (Clavien V, CCI: 100).

Approximately 50% of lung cancer patients have metastases at diagnosis² and the incidence of locoregional or distant recurrence after treatment is 50% at 2 years.⁴ Lung cancer can spread lymphatically or haematogenously; the liver, brain, adrenal gland and bone are the most common locations,^{2–5} although dissemination patterns vary according to histological type.⁵

Metastatic involvement in other locations is rare (less than 5%), is more frequent in men and usually presents with multiple lesions.^{2,3} It usually appears in terminal patients with disseminated disease in several locations.^{2–4} Of these lesions, gastrointestinal lesions have an incidence of 0.3%–1.7%¹, and are located, in order of frequency, in the oesophagus, small intestine, stomach and colon.^{1,3} In the small intestine, they predominantly affect the jejunum-ileum, as in our patients, and to a lesser extent the duodenum.^{1,3}

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