Double prevalence of appendicular peritonitis during COVID times

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INTRODUCTION

The pandemic reduced and delayed visits to the emergency departments for non-respiratory disease, modifying the evolution and treatment of several medical and surgical pathologies . Also, concern regarding the spread of infection during aerosol-generating procedures, such as laparoscopic surgery, has led to changes in treatment recommendations, favouring medical management and open surgery for acute appendicitis.

Obejtive: Compare the prevalence of peritonitis secondary to acute appendicitis during the COVID-19 era.

METHODS

-Observational non-concurrent cohort study.

The study population included all adult patients with acute appendicitis in two different time periods.

The COVID group: from 16 March to 16 August 2020, the period of pandemic lockdown in Chile.

The nonCOVID group: from 16 March to 16 August 2020

RESULTS

N= 245 COVID group: 134 nonCOVID group: 111

-A greater proportion of patients were managed by open surgery in COVID group
-The presence of peritonitis as an intraoperative finding was significantly higher in COVID group
-The intraoperative diagnosis of advanced stages of acute appendicitis was higher in the COVID group than in the non-COVID group.
-There were no differences in length of postoperative hospital stay (LOS), mortality, reintervention or 30-day hospital readmission.
-There was one death of a 76-year-old patient in the COVID group with a diagnosis of septic shock due to peritonitis, without viral infection.

Table 1 Analysis of acute appendicitis in COVID and non-COVID periods

	COVID group (n = 134)	Non-COVID group (n = 111)	p§
Age (years)*	36 (15–91)	34 (15–94)	0.913¶
No. of women	60 (44.8)	48 (43.2)	0.810
ASA grade			0.002
I	101 (75.4)	63 (56.8)	
II	33 (24.6)	44 (39.6)	
III	0 (0)	4 (3.6)	
Surgical approach			0.018
Laparotomy	16 (11.9)	4 (3.6)	
Laparoscopy	118 (88.1)	107 (96.4)	
Peritonitis			
No	98 (73.1)	94 (84.7)	0.029
Yes	36 (26.9)	17 (15.3)	
LOS (days)*	1 (0–29)	1 (1–16)	0.885¶
Clavien–Dindo grade†			0.671
I–II	8 of 10 (40)	7 of 8 (88)	
III–IV	2 of 10 (20)	1 of 8 (13)	
Mortality‡	1 (0.7)	0 (0)	0.362
Reintervention‡	1 (0.7)	0 (0)	0.362
Readmission†	3 (2.2)	2 (1.8)	0.810

Values in parentheses are percentages unless indicated otherwise; *values are median (range). †Percentage based on total complications. ‡At 30-day follow-up. LOS, lengths of stay. §χ^2 test, except ¶Mann–Whitney *U* test.

DISCUSSION

COVID-19 infection analysis gave a total of 11 positive patients (8.2 per cent). Of these, two were admitted to the emergency department with a confirmed diagnosis, eight were diagnosed in the perioperative period following the admission protocol (asymptomatic respiratory), and one was diagnosed after surgery (negative test result on admission).

Of interest, despite the increase in peritonitis, the study found no statistically significant differences in LOS, 30-day morbidity or mortality. This is likely due to optimal surgical management, institutional pressure for a short hospital stay, and strict monitoring by telemedicine.

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