LAPAROSCOPIC CHOLECYSTECTOMY DURING COVID-19 PANDEMIC IN COLOMBIA: CHANGES IN VOLUME, SEVERITY AND OUTCOMES. A SINGLE CENTER RETROSPECTIVE COHORT STUDY

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INTRODUCTION

The rapid spread of COVID-19 created several unprecedented challenges while exploiting problems in health systems in Latin American countries. The first case reported in Colombia was confirmed on March 6, 2020, by March 11 the WHO declared SARS CoV-2 as a pandemic, and the next day a state of health emergency was established in the country, with strict quarantine as of March 25 [1 2].

With the adoption of contingency measures for the pandemic, there were negative collateral effects on the availability of medical and surgical services. These conditions diverted the care setting for patients with benign gallbladder disease from the outpatient to the emergency setting. With the occurrence of peaks throughout the pandemic, the collateral effects were repeated cyclically by diverting infrastructure and human resources for the care of patients with COVID-19 [3].

AIM

To characterize the patients that underwent laparoscopic cholecystectomy in times of pandemic and to identify the impact it has had on the care of these patients in a teaching hospital in Bogotá D.C., Colombia.

METHODS AND PROCEDURES

We reviewed the electronic records of the operating rooms, and took records from March to October of the years 2019 and 2020. This period corresponds to the period in which scheduled procedures were called off by the authorities. The data collected in an Office Excel 2019® spreadsheet and subsequently analyzed using STATA® version 16.1 (College Station, TX StataCorp LLC). ANOVA type analysis and Pearson correlation were performed. Between groups, the distribution of patients was compared by sex, type of hospital admission, ASA level, incidence and severity of cholecystitis, choledocholithiasis, cholangitis, pancreatitis, bile duct intervention (ERCP and/or IOC), transfer time to the OR, approach, the severity of intraoperative findings, surgical time, postoperative LOS, and readmissions.

RESULTS

A total of 557 patients who underwent cholecystectomy were obtained, 343 in 2019 and 214 in 2020. There was no difference between these groups in distribution by age, sex, or ASA classification. There was a greater proportion of admissions to the emergency room (p=0.03), more conservative approaches (p=0.02), and worse intraoperative findings according to the Parkland scale (p<0.01).

		Pandemic	Non pandemic	p Value
AGE				0,06
		53,9 (16-94)	51,1 (18-91)	
SEX				0,809
	Male	87	143	
	Female	127	200	
ADMISSION TYPE				0,034
	ER	140	187	
	Scheduled	69	152	
	Referral	5	4	
ASA				0,894
	I	52	77	
	II	131	217	
	III	29	49	
	IV	2	0	
	V	0	0	
TOKYO				0,448
	No AC	91	217	
	I	61	91	
	II	32	33	
	III	0	2	
CHOLEDOCOLYTHIASIS DIAGNOSIS				0,492
	No	197	321	
	Yes	17	22	
CHOLANGITIS DIAGNOSIS				0,629
	No	209	337	
	Yes	5	6	
PANCREATITIS DIAGNOSIS				0,807
	No	205	330	
	Yes	9	13	
NEED FOR ERCP				0,953
	No	197	317	
	Preoperative	14	21	
	Intraoperative	2	3	
	Postoperative	1	2	
NEED FOR INTRAOPERATIVE CHOLANGIOGRAM				0,43
	No	214	342	
	Yes	0	1	
TIME FROM ER DIAGNOSIS TO SURGERY TIME OUT (HH:MM)				0,951
		24:13 (1:14-102:14)	23:40 (1:29-119:47)	
TYPE OF PROCEDURE				0,028
	Conventional laparoscopy	209	316	
	LESS	4	25	
	Open	0	1	
	Converted	0	3	
	Subtotal converted laparoscopy	1	0	
	Subtotal laparoscopy	0	1	
	Robot	0	1	

		Pandemic	Non pandemic	p Value
PARKLAND GRADING SCALE				0,002
	I	70	170	
	II	28	14	
	III	64	99	
	IV	20	28	
	V	32	32	
SURGICAL TIME (MINUTES)				0,82
		61,49 (22-200)	62,31 (20-730)	
LENGHT OF STAY (HOURS)				0,473
		27,85 (2-211)	30,26 (0-615)	
READMISSION				0,594
	No	206	333	
	Yes	8	10	

No statistically significant differences were found in severity by Tokyo scale, the incidence of choledocholithiasis, pancreatitis, bile duct intervention (ERCP and/or IOC), availability of rooms, surgical time, postoperative stay, nor readmissions.

DISCUSSION

As the COVID-19 pandemic spread, so did fear at first. Without sufficient knowledge about the routes of transmission, effective prevention and treatment measures, the WHO, as well as governments, instituted strict isolation measures to contain the virus.

Meanwhile, the medical community joined forces to develop effective strategies that could resume the provision of medical and surgical services to the general public, while developing management guidelines for the care of the pandemic [4]. Among those recommendations was the prioritization of pathologies that, if not taken to surgery in the short term, could affect the patient's prognosis (eg: oncological surgery) [3]. This had the collateral effect of the delay in the provision of outpatient and emergency service settings, both due to the adequacy of infrastructure and the patient's fear of consulting due to the risk of infection by SARS CoV-25. This delay in attending medical services led to several deferred surgical pathologies presenting with greater severity, and when on inpatient care they required additional screening to provide safe patient care without risk of exposing the surgeon [6 7 8].

This is why, while the pandemic is overcome, it is important to reinforce to the general community the idea that it is important to consult on time, and that hospital care does not present a risk to their health.

REEFERENCES

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