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CORRESPONDENCE

Digestive surgical emergencies during the COVID-19 pandemic are deeply affected and more advanced



Introduction

The first case of COVID-19 declared in Tunisia was on March 2nd [1], and as the number of infected people escalates the healthcare system was put under pressure, leading to a total containment by March 22nd and hospitals reorganization and restructuring, to improve the management of infected patients' care. We aimed to describe the specificities of surgical management during the COVID-19 pandemic and the different consequences of total containment on patients suffering from acute abdominal conditions requiring surgery.

Materials

We conducted a retrospective review of all patient who was hospitalized and operated in our department for abdominal surgical emergencies during the 42 days of total containment from March 23rd to May 4th and to maintain a comparable time window with the same amount of emergency shifts we reviewed also the same period of work before the containment from January 1st till March 23rd. It should be noted that emergency care was shared between the two departments every other day in the normal days.

Results

During the study period, 214 patients were admitted for abdominal surgical emergencies, the number of the admissions had decreased by almost half with 135 patients (63.1%)

were admitted in the non-COVID period and 79 patients (36.9%) in the COVID period. Among all pathologies, the stage was more advanced (Table 1). Patients with acute appendicitis in the COVID period there had more peritonitis and gangrenous appendicitis (45.4%) than in the non-COVID period (14.3%) ($P < 0.002$). Also, gangrene of the perineum was more frequent in the COVID period (42.6%) vs. (8.6%) in the non-COVID period ($P < 0.002$). The delay of consultation compared to the beginning of the symptomatology was much longer in the COVID period the mean delay 73 hours with a standard deviation of 69 hours, while on the other group the mean delay is 37 hours with a range of 27 hours ($P < 0.0001$).

Discussion

The findings in this study helped us get an idea about the impact of the containment and the COVID-19 outbreak on surgical practice. Compared to the non-COVID period there was an important reduction in the number of admissions during the total containment (36.9%). A plausible explanation of these results is that during the COVID-19 period the fear of the contamination by the virus might have reduced the number of consultants. Moreover our results confirmed that, with a median delay of consultation equal to 73 hours with a range of 69 hours, leading to other dramatic changes such as a very important difference concerning the evolutionary stage of the emergencies. Among all pathologies, the stage was more advanced in the COVID-19 period and patients needed reanimation more often even the length of hospital stay was longer.

Similar findings were reported in other specialties such as urological practice. Motterle et al. [1] concluded that Urgent urology practice was affected during the COVID-19 pandemic with a remarkable reduction in urgent urological consultations.

Table 1 Emergencies and stages data.

	NON-COVID Group		COVID Group		P value
	Early stage: N(%)	Advanced stage: N(%)	Early stage: N(%)	Advanced stage: N(%)	
Acute Appendicitis	30(85.7)	5 (14.3)	12 (54.6)	10 (45.4)	0.002
Acute Cholecystitis	13 (76.5)	4 (23.5)	3 (33.3)	6 (66.7)	0.013
Abscess of the anal margin	32 (91.4)	3 (8.6)	12 (57.1)	9 (42.9)	0.002
Strangulated hernia	10 (83.3)	2 (16.7)	4 (80)	1 (20)	0.879
Intestinal obstruction	7 (100)	0	0	5 (100)	0.0001
Perforated Duodenal ulcer	3 (50)	3 (50)	1 (25)	3 (75)	0.486
Mesenteric ischemia	5 (100)	0	0	3 (100)	0.0001
Gastrointestinal bleeding	9 (64.3)	5 (35.7)	8 (80)	2 (20)	0.772
Delay of consultation compared to the beginning of the symptomatology (standard deviation)	37 hours (27)		73 hours (69)		<0.0001

Conclusion

The COVID-19 period affected deeply the surgical emergencies although the lockdown restrictions do not apply to urgent medical problems. Patients tend to avoid hospitals leading to a more serious and advanced stage of the pathologies.

Disclosure of interest

The authors declare that they have no competing interest.

Reference

- [1] Motterle G, Morlacco A, Iafrate M, Bianco M, Federa G, Xhafka O, et al. World J Urol 2020:1–5, <http://dx.doi.org/10.1007/s00345-020-03264-2>.

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