Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Injury 51 (2020) 2330–2331

Contents lists available at ScienceDirect

Injury

journal homepage: www.elsevier.com/locate/injury

Letter to the Editor

Are emergency surgical patients *"collateral victims"* of COVID-19 outbreak?

To the editor

Acute Care Surgeons might not be on the frontline of COVID-19 patients care but the pandemic has certainly affected their work.

Lazio region had, 7133 COVID-19 confirmed cases and 553 deaths [1]. According to the regional trauma network, hospital organization for COVID19 consisted in hub and spoke centres. The Fondazione Policlinico Universitario A. Gemelli IRCCS-Catholic University of Rome (FPG) hospital has been identified as both medical and surgical hub for COVID19.

The Emergency Department (ED) of FPG set up a dedicated COVID-19 pathway for all patients accessing with fever and/or respiratory symptoms. While waiting for the diagnosis, all suspected COVID19 patients are admitted to a ward called "buffer".

Positive patients are moved to an isolated COVID-19 ward (medical/surgical); negative surgical patients are shifted to a standard surgical setting.

Anyway, patients requiring immediate surgical procedures before the exclusion of COVID-19 infection can undergo surgery in a COVID-19 dedicated theatre.

Overall, from the beginning of the emergency, at FPG 689 out of 3200 patients with fever were COVID-19 positive.

We performed 82 surgical consultations for COVID-19 positive (32) and suspected (54) patients (Table 1). 58 received a non-operative management (NOM) and 24 underwent immediate surgical procedure in the COVID-19 theatre. Of these only 3 (12,5%) resulted positive.

Compared to the same period of the previous year, we observed a significant reduction of surgical emergencies, especially trauma, and an increase of about 40% of NOM especially for appendicitis and cholecystitis.

It was therefore suggested that, on one hand, patients waiting for COVID-19 testing had a clinical improvement during NOM that was finally confirmed as definitive treatment. On the other hand patients often arrived in very severe clinical conditions (e.g. septic shock), perhaps due to the fear of contagion, and thus resuscitation and NOM were the only possible treatment as a bridge to surgery because of a very high surgical risk at presentation.

This approach has of course led to worst patient's outcomes.

In keeping with this scenario, should we consider patients shifted to a NOM and patients with a delayed diagnosis as *"collateral surgical victims"*?

Further studies are needed to elucidate this issue [2].

Table 1
Diseases, treatment, outcomes of COVID19 and no-COVID19 surgical patients.

Disease	Number	Treatment		Outcomes		COVID19	
		NOM	Surgical	Recovery	Mortality	+	-
Cholecystitis	13	11	2	13	0	2	11
Appendicitis	12	7	5	12	0	3	9
Colitis	11	11	0	9	2	7	4
Bowel obstruction	8	5	3	8	0	1	6
Complicated Inguinal Hernia	6	1	5	6	0	0	6
Acute Pancreatitis	4	4	0	4	0	2	2
Diverticulitis	3	3	0	3	0	0	3
Bowel ischemia	3	0	3	1	2	2	1
Acute megacolon	3	1	2	2	1	1	2
Bowel perforation	3	0	3	2	1	1	2
Gastrointestinal bleeding	3	3	0	2	1	1	2
Other	13	12	1	10	3	10	4
Total	82	58	24	72	10	30	52

As far as we know now, all patients admitted to the ED with a surgical disease should follow a normal diagnostic and therapeutic pathway, considering COVID19 only as comorbidity.

Disclosures

Pietro Fransvea, Marta di Grezia, Antonio La Greca, Valerio Cozza and Gabriele Sganga have no conflict of interest to declare. This research did not receive any specific grant from funding agencies in the public, commercial, or not for-profit sectors. The study has been performed in accordance with the ethical standards of the institutional and/or national research committee, and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgments

The authors acknowledge all the brave Healthcare Professionals involved in the management of the epidemics outbreaks at Fondazione Policlinico Universitario A. Gemelli IRCCS at in all hospital facilities all over the world.

https://doi.org/10.1016/j.injury.2020.06.038

References

[1] Civil Protection Department, http://opendatadpc.maps.arcgis.com/apps/opsdashboard/index.html#/b0c68bce2cce478eaac82fe38d4138b1
[2] Rosenbaum L. The untold toll - the pandemic's effects on patients without Covid-19. N Engl J Med 2020(Apr 17).

Pietro Fransvea, Marta Di Grezia
Department of Medical and Surgical Science, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy

Antonio La Greca*
Department of Medical and Surgical Science, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy
Università Cattolica del Sacro Cuore, Rome, Italy

Valerio Cozza
Department of Medical and Surgical Science, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy

Gabriele Sganga
Department of Medical and Surgical Science, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy
Università Cattolica del Sacro Cuore, Rome, Italy

*Corresponding author at: Fondazione Policlinico Universiario A. Gemelli IRCCS- Università Cattolica del Sacro Cuore, Rome, Italy.
E-mail address: antonio.lagreca@policlinicogemelli.it (A. La Greca)