

COVID-19 health crisis: less colorectal resections and yet no more peritonitis or bowel obstruction as a collateral effect?

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Dear Editor,

Because of the rapid worldwide propagation of coronavirus disease 2019 (COVID-19), each healthcare system has had to urgently adapt with all efforts aimed at maximizing the capacity of treatment for infected patients. With this in mind, the President of the French Republic declared on 12 March 2020: 'Non-essential hospital care will be postponed, i.e. surgical procedures that are not urgent'. However, despite the effort deployed by each hospital to provide sufficient capacity of treatment for patients requiring a surgical procedure as an emergency, we have observed that the management of these patients has been very much affected, not because of a lack of resources but because of a surprising lack of patients. Consequently we analysed the surgical activity from 12 March 2020 to 29 April 2020 in 16 adult gastrointestinal surgery departments within 14

French public university hospitals located in Paris or its close suburbs. The first day of this period corresponded to the date of the President's request to postpone planned surgery. The surgical procedures performed during this period were compared to those performed in 2019 over the equivalent period (14 March 2019 to 1 May 2019) and in the same surgical departments.

In 2019, 4678 surgical procedures were carried out *vs* 1847 procedures in 2020 indicating an overall reduction of 61%. Planned surgical activity was reduced, as expected, from 3013 procedures to 987 procedures (67%) with a diminution of 53% for planned colorectal surgery (Table 1). A major reduction was observed for procedures involving restoration of bowel integrity (61%). More surprisingly, emergency surgical procedures decreased by 48% (1665 procedures *vs* 860). Major surgical emergencies such as those patients presenting with peritonitis/intra-abdominal abscess or bowel obstruction, ischaemia or perforation also showed an unexpected decline from 56% to 46%.

The observed 61% reduction in scheduled surgery is very close to recent worldwide estimations predicting a 72% decrease in planned surgery which represents

Table 1 Variation in the number of major planned and emergency surgical procedures between the 2019 and 2020 periods

Subgroup of surgery	2019 period (number of procedures)	2020 period (number of procedures)	Percentage variation (%)
Major planned procedures			
Colorectal surgery	681	322	-53
Segmental colectomy	183	117	-36
Low anterior rectal resection	78	56	-28
Total colectomy or coloproctectomy	14	15	+7
Colostomy/ileostomy closure, reversal of Hartmann's procedure	160	63	-61
Proctology	170	28	-84
Others	76	43	-43
Parietal surgery	567	44	-92
Hepato-bilio-pancreatic surgery (cholecystectomy excluded)	271	164	-39
Bariatric surgery	199	8	-96
Oesogastric surgery excluding bariatric surgery	110	53	-52
Common emergency procedures			
Appendectomy on emergency	335	163	-51
Proctology	226	64	-72
Cholecystectomy on emergency	159	82	-48
Peritonitis or intra-abdominal abscess	149	65	-56
Small or large bowel surgery	114	61	-46
Parietal surgery	93	45	-52
Liver transplantation	54	39	-28
Cutaneous or subcutaneous abscess	75	32	-57
Port-a-cath removal	61	37	-39



28 404 603 operations [1]. However, in parallel with this expected finding, emergency surgery was globally reduced by half during the COVID-19 health crisis in 14 French university hospitals. There are several possible causes which might explain this observation, e.g. the transfer of surgical emergencies to other care centres, in particular to the private system, a decrease in road accidents resulting in fewer polytrauma patients requiring surgery or the adoption of non-surgical treatments of some surgical emergencies such as antibiotic therapy alone to treat uncomplicated acute appendicitis [2]. All these possible causes are, *a priori*, of no consequence for the patients but the observed decrease of surgical emergencies does not seem to be fully explained by these causes and it is highly probable that the fear of patients to enter hospital has played a role [3]. This observation, which has also been reported in other serious emergencies such as myocardial infarction [4] or stroke [5], will have to be considered in the event of a future health crisis in order to prevent avoidable mortality. The impact of the crisis for colorectal cancer prognosis is still unknown and further studies with longer follow-up are mandatory.

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Conflict of interests

None.

M. K. Collard* , **J. H. Lefèvre*** ,
F. Batteux†, **Y. Parc***, the **APHP/Universities/
Inserm COVID-19 Research Collaboration**¹

*Digestive Surgery Department, Saint-Antoine Hospital, APHP, Sorbonne University, Paris, France, and †Department of Strategy and Transformation, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris, France

E-mail: jeremie.lefevre@aphp.fr

 @jeremielefevre

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¹Collaborators of the APHP/Universities/Inserm COVID-19 research collaboration: Pr Frédérique Peschoux, Hôpital Ambroise Paré, AP-HP; Pr Philippe Wind, Hôpital Avicenne, AP-HP; Pr Christophe Tresallet, Hôpital Avicenne, AP-HP; Pr Olivier Soubrane, Hôpital Beaujon, AP-HP; Pr Yves Panis, Hôpital Beaujon, AP-HP; Pr Ibrahim Dagher, Hôpital Antoine Bécère, AP-HP; Pr Christophe Penna, Hôpital Bicêtre, AP-HP; Pr Simon Msika, Hôpital Bichat, AP-HP; Pr Bertrand Dousset, Hôpital Cochin, AP-HP; Pr Marc Pocard, Hôpital Lariboisière, AP-HP; Pr Frédéric Breagnol, Hôpital Louis Mourier, AP-HP; Pr Daniel Sommacale, Hôpital Henri Mondor, AP-HP; Pr René Adam, Hôpital Paul Brousse, AP-HP; Pr Jean-Christophe Vaillant, Hôpital Pitié-Salpêtrière, AP-HP; Pr Fabrice Ménégau, Hôpital Pitié-Salpêtrière, AP-HP; Pr Yann Parc, Hôpital Saint-Antoine, AP-HP; Pr Pierre Cattani, Hôpital Saint-Louis, AP-HP.

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