OXFORD

BJS, 2021, **108,** e127–e128
DOI: 10.1093/bjs/znaa158
Advance Access Publication Date: 20 January 2021
Research Letter

Shifting paradigms in two common abdominal surgical emergencies during the pandemic

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Dear Editor

The SARS-CoV-2 pandemic has profoundly affected the activity of surgical services globally, and several measures have been taken to protect patients and surgical staff while ensuring provision of surgical care. A decrease in elective procedures has been estimated to be as high as 90 per cent for benign diseases and 8 per cent for cancer[1,2]. Changes forced by the pandemic contributed to the effect, including the reduced number of consultants available, also owing to fear of contracting the infection[3], and modifications to operating theatres and surgical approaches[4]. The alarming morbidity and mortality rates after surgery in patients with COVID-19 resulted in non-operative management being recommended, especially when resources were limited and predicted outcomes non-favourable, and also in patients with asymptomatic SARS-CoV-2[5].

A systematic review was undertaken to assess the impact of the COVID-19 outbreak on two common surgical emergencies: acute appendicitis and cholecystitis. The protocol is detailed in *Appendix S1*. Thirty-two articles were included, comprising prospective and retrospective cohort studies, as well as surveys (*Table S1*). The findings are to be taken with a grain of salt, given the overall low level of evidence and study quality. The time frame covered was approximately 50 days, during which 41 009 hospital admissions and 8459 operations from 14 nations were reported in the included studies. Compared with prepandemic times, according to available data from the studies, there was a 61 and 52 per cent reduction in the number of hospitalizations and surgical procedures respectively. On the other hand, there was a relative increase (15 per cent) in patients hospitalized during the pandemic, which might be attributed to the fact that the most severely ill patients attended accident and emergency units.

For acute appendicitis, admissions dropped by 38 per cent (1110 before *versus* 693 during pandemic), with an increased use of conservative treatment (33 per cent during *versus* 13 per cent before pandemic). Several studies reported an increase in cases of severe appendicitis, likely resulting from late admission of patients (up to 33 per cent cases of appendicular perforation).

The same trend was observed with acute cholecystitis, for which hospitalization was reduced by 35 per cent (156 *versus* 101) and conservative treatment increased (77 per cent during *versus* 61 per cent before pandemic).

The reduction in admissions to hospitals can be explained by several factors, including the 'stay at home' recommendation from authorities, fear of contracting SARS-CoV-2 infection, at least during the later stages of the pandemic, and the increased use of remote monitoring and telemedicine. Conservative treatment for both conditions has unsurprisingly surged. This strategy, especially for acute appendicitis, has for many years been described as safe and effective in selected patients[6]. However, it was probably underused before the pandemic.

Surgical services needed to be rescheduled and reorganized to face the challenges of SARS-CoV-2[1]. Some of the necessary changes were adopted widely and will likely last beyond the pandemic; these include the use of telemedicine and strategies to reduce unnecessary in-person visits at the hospitals[4], especially for follow-up. The growing trend in conservative management of common general surgical emergencies could be embraced as a potential strategy to adopt in the near future, provided that the long-term results of such approaches are monitored; this means collecting long-term data from patients described in the available studies. Furthermore, it is important that such strategies are delivered under the direct care of doctors, and that self-medication is prevented and firmly proscribed.

Acknowledgements

L.S. and F.M.T. contributed equally to this manuscript.

Disclosure. The authors declare no conflict of interest.

Received: November 29, 2020. **Accepted:** December 4, 2020

Supplementary material

Supplementary material is available at *BJS* online.

References

1. COVIDSurg Collaborative. Elective surgery cancellations due to the COVID-19 pandemic: global predictive modelling to inform surgical recovery plans. *Br J Surg* 2020. doi:10.1002/bjs.11746. Epub ahead of print
2. COVIDSurg Collaborative. Delaying surgery for patients with a previous SARS-CoV-2 infection. *Br J Surg* 2020. doi:10.1002/bjs.12050
3. An Y, Bellato V, Konishi T *et al.* Surgeons' fear of getting infected by COVID19: a global survey. *Br J Surg* 2020. doi:10.1002/bjs.11833. Epub ahead of print
4. Spinelli A, Pellino G. COVID-19 pandemic: perspectives on an unfolding crisis. *Br J Surg* 2020;**107**:785–787
5. Bellato V, Konishi T, Pellino G *et al.* Impact of asymptomatic COVID-19 patients in global surgical practice during the COVID-19 pandemic. *Br J Surg* 2020. doi:10.1002/bjs.11800. Epub ahead of print
6. Ielpo B, Podda M, Pellino G *et al.* Global attitudes in the management of acute appendicitis during COVID-19 pandemic: ACIE Appy Study. *Br J Surg* 2020. doi:10.1002/bjs.11999. Epub ahead of print